FREEPORT-McMoRAN

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June 15, 2023

Mr. Daniel Czecholinski
Director, Air Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

RE: Class I Permit Renewal Application
Freeport-McMoRan Morenci Inc.
Class I Air Quality Permit #72683

Dear Mr. Czecholinski:

Freeport-McMoRan Morenci Inc. (FMMI) operates a copper and molybdenum ore mining and processing facility in Morenci, Arizona as authorized by Class I Air Quality Permit #72683, issued by the Arizona Department of Environmental Quality (ADEQ) on December 21, 2018. As per Title 18, Chapter 2, Section 304.D.2 (R18-2-304.D.2) of the Arizona Administrative Code (A.A.C.), FMMI is submitting the enclosed application for renewal of its Class I Air Quality Permit. Additionally, as part of the application, FMMI requests to make various corrections, clarifications, and updates to permit conditions, equipment details, and emission calculations.

If you have any questions concerning this application or need additional details, please contact Chris West of my staff at (928) 865-7478, or you can contact me directly at (928) 865-6484.

Sincerely,

Brent Fletcher
Manager, Environmental Services Department

Freeport-McMoRan Morenci Inc.
Class I Permit Renewal Application
Class I Air Quality Permit #72683
Morenci, Arizona

Prepared for:
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June 15, 2023

SIGN-OFF SHEET

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Prepared by: ______________________________
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Amber Summers

Reviewed by: Kathy Houed
(signature)

Kathy Houed

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EXECUTIVE SUMMARY

Freeport-McMoRan Morenci Inc. (FMMI) operates a copper and molybdenum ore mining and processing facility in Morenci, Arizona as authorized by Class I Air Quality Permit #72683, issued by the Arizona Department of Environmental Quality (ADEQ) on December 21, 2018. As per Title 18, Chapter 2, Section 304.D.2 (R18-2-304.D.2) of the Arizona Administrative Code (A.A.C.), FMMI is submitting the enclosed application for renewal of its Class I Air Quality Permit. Additionally, as part of the application, FMMI requests to make various corrections, clarifications, and updates to permit conditions, equipment details, and emission calculations (see Section 2).

Key elements of the application are presented below along with a table identifying all components of the application. ADEQ's application administrative completeness checklist is presented in Appendix I.

Overview of Operations

The FMMI facility is a large industrial complex located in Greenlee County in eastern Arizona and is comprised of mining, ore processing, and multiple support operations. The five major operations at the FMMI facility include:

- Operation 001: Mining Operations;
- Operation 002: Morenci Concentrator;
- Operation 003: Mine-for-Leach (MFL) Fine Crushing Plant;
- Operation 009: Solution Extraction/Electrowinning (SX/EW) Operations; and
- Operation 017: Metcalf Concentrator.

FMMI also has fourteen supporting operations. These operations include:

- Operation 004: Lime Slaking Plants and Lime Transloading;
- Operation 005: Metcalf Power Plant;
- Operation 006: Copper Concentrate Processing Operations;
- Operation 010: Concrete Batch Plant;
- Operation 011: Storage Tanks;
- Operation 013: Grizzly Operations;
- Operation 014: Concentrate Leach Plant;
- Operation 015: Diesel Emergency Engines;
- Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations;
- Operation 021: Propane and Natural Gas Emergency Engines;

- Operation 022: Prill Bins;
- Operation 023: Tailings Operations;
- Operation 024: Miscellaneous Fuel Burning Equipment; and
- Operation 025: Diesel Non-Emergency Engines.

The standard industrial classification (SIC) for FMMI's primary activity is metal mining of copper ores, SIC Code 1021. Copper (concentrate and cathodes) is the primary product of the FMMI facility, with molybdenum concentrate as a secondary product. The facility operates continuously for 24 hours per day (hr/day) and 365 days per year (day/yr).

Potential to Emit Summary

The operations at the FMMI facility have the potential to emit (PTE) the following regulated air pollutant emissions: particulate matter (PM); particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}); particulate matter less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$); condensable particulate matter (CPM), which is always included in the PTE of PM_{10} and $PM_{2.5}$; carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); volatile organic compounds (VOCs); sulfuric acid mist (H_2SO_4); hydrogen sulfide (H_2S); hazardous air pollutants (HAPs); and greenhouse gases (GHGs or CO_2e)[1], including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). CO_2e emissions are calculated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). The GWP of CO_2 is 1, the GWP of CH_4 is 25, and the GWP of N_2O is 298.

The PTE of the entire FMMI facility is presented in Table ES.1 (in tons per year [tpy]). The primary activity of the FMMI facility is mining and ore processing operations, which is not a "categorical source", or a "Section 302(j) category" source as defined in A.A.C. R18-2-101.23 and R18-2-101.129, respectively. Therefore, only non-fugitive emissions are included in the determination of the facility-wide PTE of regulated air pollutants (except HAPs) for permitting purposes. All HAP emissions are included in the determination of the facility-wide PTE regardless of their fugitive or non-fugitive classification.

As shown in Table ES.1, the PTE of facility-wide operations is above the Class I (Title V) "major source" permitting thresholds for PM_{10}, $PM_{2.5}$, CO, and NO_X, but below the Prevention of Significant Deterioration (PSD) "major source" thresholds for all regulated air pollutants (for a non-categorical source in an attainment/unclassifiable area). Additionally, FMMI's facility-wide PTE is below the HAP "major source" threshold. Consequently, FMMI's facility-wide operations are a "major source" for purposes of the Title V operating permit program, a "minor source" for purposes of the PSD program, and an "area source" for purposes of the HAPs program.

[1] While GHGs are not included under the definition of "regulated air pollutant" at A.A.C. R18-2-101.122, they are considered a "regulated NSR pollutant" under the PSD program at 40 CFR 52.21(b)(50) and therefore included here for informational purposes.

Compliance Assurance Monitoring (CAM) Applicability

The results of a CAM applicability analysis demonstrate that there are no Pollutant-Specific Emission Units (PSEUs) associated with the FMMI facility that meet the criteria of 40 Code of Federal Regulations (CFR) 64.2(a). Consequently, CAM requirements do not apply, and CAM plans are not necessary.

Information Required as Part of a Class I Permit Renewal Application

A.A.C. R18-2-304.B states that applicants applying for a Class I renewal permit must “complete the applicable standard application form provided by the Director and supply all information required by the form’s filing instructions.” An application for a Class I renewal permit must also include the information required by A.A.C. R18-2-304.F.

Identification of the information included in this application, including the Standard Permit Application Form, information required by the filing instructions, and application components from ADEQ’s Application Packet for a Class I Permit are presented in Table ES.2. The section or appendix where the information can be located in this document is also presented in Table ES.2.

Table ES.1 Potential to Emit and Threshold Comparison

Regulated Air Pollutant Emitted	PTE of Facility-Wide Operations [a]	Thresholds (tpy)		
		Title V Major Source Permitting	PSD Major for a Non-Categorical Source in an Attainment/ Unclassifiable Area	HAP Major Source
PM (w/ CPM)	196.19	--	--	--
PM (w/o CPM)	191.37	--	250	--
PM_{10}	169.30	100	250	--
$PM_{2.5}$	157.72	100	250	--
CO	122.63	100	250	--
NO_X	232.08	100	250	--
SO_2	1.93	100	250	--
VOC	63.71	100	250	--
H_2SO_4	4.60	100	250	--
H_2S	2.06	100	250	--
CO_2e	94,538	--	--	--
Greatest Single HAP (Xylenes)	5.77	--	--	10
Lead	0.35	--	250	10
Total HAPs	15.44	--	--	25

[a] The facility-wide operations are a non-categorical source. Therefore, except for HAPs, the PTE includes all non-fugitive emission units and fugitive emission units from embedded categorical sources. For HAPs, the PTE includes all non-fugitive and fugitive emission units.

Table ES.2 Information Included in the Application

Required Application Component	Location in the Application
Standard Class I Permit Application Form Including the Compliance Certification and Certification of Truth, Accuracy, and Completeness	Appendix A
Description of the Process to be Carried Out in Each Unit (including Source Classification Codes)	Section 3.1
Description of Product(s)	Section 3.2
Description of Alternate Operating Scenario (including Source Classification Codes)	Section 4.1
Description of Alternate Operating Scenario Product(s)	Section 4.2
Flow Diagram for All Processes	Appendix D
Material Balance for All Processes (optional, only if emission calculations are based on a material balance)	Appendix E
Emissions Related Information	Section 6 and Appendices C, E, and F
Citation and Description of All Applicable Requirements Including Voluntarily Accepted Limits Pursuant to A.A.C. R18-2-306.01	Sections 8 and 9.1
Explanation of Any Proposed Exemptions from Otherwise Applicable Requirements	Section 9.2
Information Needed to Determine or Regulate Emissions or to Comply with the Requirements of A.A.C. R18-2-306.01	Section 7
Description of All Process and Control Equipment for which Permits are Required	Section 3.3 and Appendix B
Insignificant and Trivial Activity Information	Section 10
Stack Information	Section 11
Site Diagram	Section 12
Air Pollution Control Information	Section 5
Compliance Plan	Section 13
Compliance Certification	Section 14
Acid Rain Program Compliance Plan	Section 15
New Major Source or Major Modification Information	Section 16

Table ES.2 Information Included in the Application

Required Application Component	Location in the Application
Minor NSR Applicability Determination	Section 17
CAM Analysis	Section 18 and Appendices G and H
Description of Various Corrections, Clarifications, and Updates	Section 2
Suggested Draft Permit Language	Not Required (may be submitted following the application)
Identification of Confidential Information	Section 19
Calculations on which All Information Requested in this Application is Based	Appendices E, F, G, and H

ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ANFO	Ammonium Nitrate Prill and Fuel Oil Mixture
AOS	Alternate Operating Scenario
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition
A.R.S.	Arizona Revised Statutes
Btu	British Thermal Units
CAM	Compliance Assurance Monitoring
CBP	Concrete Batch Plant
CCD	Counter-Current Decantation
CFR	Code of Federal Regulations
CH_4	Methane
CI	Compression Ignition
CLP	Concentrate Leach Plant
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Greenhouse Gases Expressed as Carbon Dioxide Equivalent Calculated by Summing the Individual Greenhouse Gas Emissions Multiplied by Their Global Warming Potential
COSB	Coarse Ore Storage Bin
CPM	Condensable Particulate Matter
dscf	Dry Standard Cubic Feet
dscfm	Dry Standard Cubic Feet per Minute
EPA	U.S. Environmental Protection Agency
EW	Electrowinning
FFDC	Cartridge Filter Dust Collector
FMMI	Freeport-McMoRan Morenci Inc.
FMSI	Freeport-McMoRan Safford Inc.
FOIS	Fine Ore Intermediate Stockpile
FOSB	Fine Ore Storage Bin
ft^2	Square Feet
ft^3	Cubic Feet
g	Gram
gal	Gallon

ABBREVIATIONS (cont'd)

GDF	Gasoline Dispensing Facility
GHG	Greenhouse Gas
gr	Grains
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
H_2SO_4	Sulfuric Acid
HAP	Hazardous Air Pollutant
hp	Horsepower
hr	Hour
HRC/HPGR	Hydraulic Roll Crusher/High Pressure Grinding Roll
ICE	Internal Combustion Engine
IOS	Intermediate Ore Stockpile
IPCC	In-Pit Crushing and Conveying
K	Kelvin
kW	Kilowatt
lb	Pound
m^2	Square Meter
MFL	Mine for Leach
MM	Million
mph	Miles Per Hour
MPR	Minor Permit Revision
MTHSB	Metcalf Track Hopper Storage Bin
MW	Megawatt
N_2O	Nitrous Oxide
NaHS	Sodium Hydrosulfide
NaOH	Sodium Hydroxide
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O&M	Operation and Maintenance
PLS	Pregnant Leach Solution
PLV	Pressure Leach Vessel
PM	Particulate Matter

ABBREVIATIONS (cont'd)

PM_{10}	Particulate Matter Less Than or Equal to 10 Microns in Aerodynamic Diameter
$PM_{2.5}$	Particulate Matter Less Than or Equal to 2.5 Microns in Aerodynamic Diameter
ppm	Parts per Million
ppm_v	Parts per Million by Volume
PSD	Prevention of Significant Deterioration
PSEU	Pollutant-Specific Emission Unit
PTE	Potential to Emit
R	Rankine
S	Sulfur
SCC	Source Classification Code
scf	Standard Cubic Feet
s	Second
SI	Spark Ignition
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
SPR	Significant Permit Revision
SX	Solution Extraction
TCSB	Tertiary Crushing Surge Bin
tph	Tons per Hour
tpy	Tons per Year
TSP	Total Suspended Particulate
VLE	Very Large Equipment
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
Yr	Year
°F	Degrees Fahrenheit

1 INTRODUCTION

Freeport-McMoRan Morenci Inc. (FMMI) operates a copper and molybdenum ore mining and processing facility in Morenci, Arizona as authorized by Class I Air Quality Permit #72683, issued by the Arizona Department of Environmental Quality (ADEQ) on December 21, 2018. As per Title 18, Chapter 2, Section 304.D.2 (R18-2-304.D.2) of the Arizona Administrative Code (A.A.C.), FMMI is submitting the enclosed application for renewal of its Class I Air Quality Permit. Additionally, as part of the application, FMMI requests to make various corrections, clarifications, and updates to permit conditions, equipment details, and emission calculations.

The following sections of this document provide the information required by A.A.C. R18-2-304 for a permit renewal application for a Class I source as set forth in ADEQ's Application Packet for a Class I Permit. Detailed information about the various corrections, clarifications, and updates to permit conditions, equipment details, and emission calculations are presented in Section 2. ADEQ's Standard Class I Permit Application Form and the Emission Source Form are presented in Appendix A and Appendix C, respectively. ADEQ's Application Administrative Completeness Checklist is provided in Appendix I.

2 VARIOUS CORRECTIONS, CLARIFICATIONS, AND UPDATES

As part of this renewal application, FMMI proposes to work with ADEQ to correct, clarify, and streamline several conditions and the equipment list in Class I Air Quality Permit #72683. In general, the requested changes are intended to: (a) confirm sources subject to permitting and correctly identify equipment details; (b) confirm applicable requirements; (c) update emission calculations based on best available information; (d) clarify regulatory obligations and associated compliance demonstrations; and (e) confirm operations under alternate operating scenarios (AOS). Examples of proposed changes are presented in the following sections, although additional items may be identified during ADEQ's processing and issuance of the Class I renewal permit. The remainder of this application incorporates all requested changes.

2.1 CONFIRM SOURCES SUBJECT TO PERMITTING AND CORRECTLY IDENTIFY EQUIPMENT DETAILS

In preparation for this application, FMMI personnel completed a full comparison of the equipment and emission sources: (1) currently operated and/or located at the FMMI facility; (2) expressly identified in FMMI's Class I Air Quality Permit #72683; and (3) typically included in air quality permits for copper mining facilities. Based on the results of the comparison, FMMI proposes to make the following changes to properly identify equipment subject to permitting and to correctly identify associated equipment details.

- ~~Class I Air Quality Permit #72683 refers to Operation 003 as the Metcalf Mine-for-Leach (MFL) Plant. This was also the name used at the FMMI facility prior to the installation of the Metcalf Concentrator. To avoid confusion with the Metcalf Concentrator, FMMI renamed the Metcalf MFL Plant as the MFL Fine Crushing Plant. FMMI proposes to do the same in its Class I renewal permit.~~

- ~~Attachment "E" of Class I Air Quality Permit #72683 includes Prill Bin Vents 1 through 7 (no filters). Because the bin vents are not emission units, do not capture or control emissions, and are not subject to any specifically applicable requirements, FMMI proposes to remove them from its Class I renewal permit.~~

- ~~Although FMMI is currently authorized to operate a crushing and screening plant under Operation 020, the equipment has been removed from the FMMI facility. Consequently, FMMI proposes to remove Operation 020 from its renewal permit.~~

- Attachment "E" of Class I Air Quality Permit #72683 includes multiple equipment with similar or identical names, or names different than what is used by other departments at the FMMI facility. To minimize confusion, FMMI proposes to make the following name changes.
    - ~~Conveyor Belts 4A, 4B, 4C, 5, and 11 associated with the MFL Fine Crushing Plant are proposed to be renamed MFL Conveyor Belts 4A, 4B, 4C, 5, and 11.~~

  - ~~The Aggregate Conveyor Belt associated with the Concrete Batch Plant (CBP) is proposed to be renamed the CBP Aggregate Conveyor Belt.~~
  - ~~Secondary Crushers 1 and 2 and Ball Mills 1 and 2 associated with the Metcalf Concentrator are proposed to be renamed Metcalf Secondary Crushers 1 and 2 and Metcalf Ball Mills 1 and 2.~~
  - Equipment associated with the Metcalf Concentrator is proposed to be renamed as described below. ~~Additionally, the maximum capacity of the crusher is proposed to be updated to 7,300 tons per hour (tph).~~
    - ~~The Roll Crusher is proposed to be renamed the Hydraulic Roll Crusher/High Pressure Grinding Roll (HRC/HPGR) Crusher.~~
    - ~~The Roll Crusher Surge Bin is proposed to be renamed the Crusher Surge Bin.~~
    - ~~The B8-A Roll Crusher Belt Feeder 1 is proposed to be renamed the B8-A Crusher Belt Feeder.~~
    - ~~The B8-B Roll Crusher Belt Feeder 2 is proposed to be renamed the B8-B Crusher Belt Feeder.~~
    - ~~The B9 Crusher Feed Conveyor 1 is proposed to be renamed the B9 Crusher Feed Conveyor.~~
    - ~~The Crusher Feed Hopper 1 is proposed to be renamed to Crusher Feed Hopper.~~
    - ~~The Roll Crusher Cartridge Filter Dust Collector (FFDC) is proposed to be renamed the HRC/HPGR Crusher FFDC.~~
    - ~~The B10 Roll Crusher Discharge Conveyor is proposed to be renamed the B10 Crusher Discharge Conveyor.~~

- ~~In 2019, FMMI submitted a facility change without revision to replace Regrind Mill 1 associated with the Morenci Concentrator. Consequently, FMMI proposes to update the make, model, serial number, and date of manufacture in Attachment "E" of Class I Air Quality Permit #72683 to correspond to the new mill.~~

- ~~FMMI is currently authorized to operate In-Pit Crusher 1 with associated overland conveying operations that feed either the Mill Intermediate Ore Stockpile (IOS) or the Metcalf MFL Plant. These operations, consisting of Process #s 001-186, 001-353, 001-354, 001-355, and 001-356, were going to be an upgrade to FMMI's previous Crusher 1 operations. However, the upgrades were never completed, and In-Pit Crusher 1 has now been removed from the FMMI facility. Therefore, FMMI proposes to remove Process #s 001-186, 001-353, 001-354, 001-355, and 001-356 from its Class I renewal permit.~~

- ~~Under Process #s 014-235 and 014-341, FMMI is authorized to operate the Concentrate Leach Plant (CLP) Feed Hopper, CLP Feed Conveyor, and associated equipment to transfer filtered copper concentrate to the CLP. However, this equipment is not used because FMMI more efficiently transfers the copper concentrate in slurry form. Consequently, FMMI proposes to omit Process #s 014-235 and 014-341 in its Class I renewal permit.~~

- ~~FMMI utilizes a variety of small natural gas and propane space heaters and boilers for human comfort purposes. The combined heat input for these units as listed in Class I Air Quality Permit #72683 is 61.09 million British thermal units per hour (MMBtu/hr). In the past five years, FMMI has completed replacement of many of these small fuel burning units with electric units. An updated inventory of the small natural gas and propane space heaters and boilers shows a combined heat input of 30.87 MMBtu/hr. FMMI proposes to incorporate this update into its Class I renewal permit.~~

- ~~Emergency and non-emergency engines that are not related to a specific operation at the FMMI facility are listed under Operation 015 (diesel emergency engines), Operation 021 (propane and natural gas emergency engines), and Operation 025 (diesel non-emergency engines). A full review of the engines identified several updates needed to the engine names, horsepower, make, model, serial number, and date of manufacturer. The review also identified the addition of two engines that have been inadvertently omitted from previous applications (Process #s 021-509 [GSC Natural Gas Emergency Generator] and 021-510 [Metcalf Mine Office Propane Emergency Generator GNO24B]) and the removal of two engines (Process #s 021-376 [Metcalf Robot Shack Propane Emergency Generator] and 021-378 Shannon Shack Propane Emergency Generator]). Finally, Stargo MFL Emergency Diesel Pump Engine LS-234 (Process #015-429) should be added back into FMMI's air quality permit, as it has resumed operation as a stationary engine after previously changing status to a nonroad engine in SPR #89504. FMMI proposes to incorporate the updates, additions, and removals in its Class I renewal permit.~~

- ~~FMMI completed a full review of organic tanks used in the solution extraction (SX) operations and proposes to incorporate all open tanks and closed tanks greater than 40,000 gallons into its Class I renewal permit. Additionally, the surface areas of the SX settlers have been updated.~~

2.2 CONFIRM APPLICABLE REQUIREMENTS

~~Following review of the background information document for the promulgation of the New Source Performance Standards (NSPS) under Subpart LL, FMMI has determined that ball mills and grinding mills are not affected facilities. FMMI proposes to correct the applicable requirement reference for the following mills associated with the Morenci and Metcalf Concentrators because Class I Air Quality Permit #72683 mistakenly references 40 Code of Federal Regulations (CFR) 60 Subpart LL. The correct applicable requirement reference is A.A.C. R18-2-721.~~

- ~~Ball Mill 30 (Process #002-074);~~
- ~~Ball Mill 31 (Process #002-075);~~
- ~~Ball Mill 32 (Process #002-076); and~~
- ~~Metcalf Ball Mills 1 and 2 and Metcalf Regrind Mills 1 and 2 (Process #017-327).~~

2.3 UPDATE EMISSION CALCULATIONS

As part of this application, FMMI proposes to make several updates to the calculation methodologies used to determine potential facility-wide emissions. The updates are to ensure FMMI is calculating emissions using the best information reasonably available. The full updated emission calculation methodology is presented in Appendix E. A summary of the changes is described below.

- Emission calculations for certain emission units (e.g., material transfer points, stockpiles, and vehicle travel on unpaved roads) are dependent on meteorological inputs such as mean ambient wind speed, number of days with precipitation ≥ 0.01 inches, and percentage of time with mean wind speed greater than 12 miles per hour (mph). Previous emission calculations used meteorological data from 2013-2017. Emission calculations are updated to use meteorological data from 2017-2022.

- Metal-based hazardous air pollutant (HAP) emissions are calculated from all particulate matter emission sources that process material containing metal compounds. These emissions are also incorporated into facility-wide potential to emit (PTE) totals.

- Volatile organic compound (VOC) and HAP emissions from FMMI's SX facilities have been calculated following the procedure in the document called *Hydrometallurgy of Copper* (i.e., BHP study). An input in the calculation is concentration of VOC at the surface of the SX vessels. Instead of using default concentrations (as had previously been done), the emission calculations have been updated to correspond to reasonable worst-case diluent and extractant chemicals used in FMMI's four SX facilities.

- The EPA TANKS Program was previously used to calculate VOC and HAP emissions from the organic tanks in the SX operations that are subject to permitting. The calculation methodology has now been updated to use the procedure in *Hydrometallurgy of Copper*. This methodology better corresponds to how the organic tanks are operated and allows for consideration of closed and open top tanks.

- The methodology in *Hydrometallurgy of Copper* is also used to calculate emissions from FMMI's raffinate ponds. Although these emissions have been included in annual inventories, they have not been expressly quantified for permitting purposes.

- FMMI uses Agglomerating Units 1 and 2 as part of the MFL Fine Crushing Plant. Emissions from the agglomerating units have not previously been able to be quantified and were assumed to be negligible. Testing has since been completed on the agglomerating units at the Freeport-McMoRan Safford Inc. (FMSI) facility. Although emissions from agglomerating units may differ due to the type of ore processed, the result of the testing completed at the FMSI facility is assumed to be a best estimate of emissions from the agglomerating units at the FMMI facility (corrected for equipment capacity differences). As previously thought, emissions are minimal, but have nonetheless been included in this application.

- Wind erosion emissions from tailings are based in part on the acreage of the active tailings areas susceptible to wind erosion (i.e., drying area). It was previously believed that this area should not include those areas with controls applied (i.e., areas with polymer and/or magnesium chloride, areas with hay, etc.). After further review of the methodology used to calculate wind erosion emissions (Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition [AP-42] Section 13.2.5), the entire drying area of the tailings should be used to determine emissions regardless of the controls applied.

- Emission calculations from engines are updated to be based on the certification values for the engine family numbers (when available). This methodology provides the best engine-specific emission rates.

- VOC emissions from FMMI's bulk flotation operations have not previously been able to be quantified and were assumed to be negligible. Freeport-McMoRan has since completed testing at the Henderson Mill to provide an estimate of VOC emissions from flotation. The results of the test are assumed to be a best estimate of emissions from organic reagent usage in FMMI's bulk flotation operations.

- Potential emissions from several emission units at the FMMI facility are dependent on the facility mine plan. The mine plan includes details such as number of blasts, quantity of blasting materials, quantity of material mined, haul routes, fuel usage, quantity of vehicles, etc. Because the mine plan is updated periodically depending on geology and market conditions, potential emission calculations may need to be updated as well. A review of the mine plan was completed in conjunction with an analysis of recent operations to develop updated usage and throughput information for calculation of potential emissions from drilling operations, blasting operations, vehicle travel on unpaved roads, and fuel tanks.

- The application for Significant Permit Revision (SPR) #99132 requested to revise the voluntary natural gas usage limit applicable to Small Industrial Natural Gas Boilers 1, 2, 3, 4, and 5 in Class I Air Quality Permit #72683, Attachment "B" Condition II.B.3.a. The revised limit corresponds to 625,000 MMBtu per 12-month rolling total. Emission calculations in this application reflect the requested revision.

2.4 CLARIFY REGULATORY OBLIGATIONS AND ASSOCIATED COMPLIANCE DEMONSTRATIONS

2.4.1 Condition I.C.2 of Attachment "B"

Condition I.C.2 of Attachment "B" of Class I Air Quality Permit #72683 includes periodic opacity monitoring requirements for certain emission units at the FMMI facility. Condition I.C.2.a states that "the Certified EPA Reference Method 9 observer shall conduct, surveys of visible emissions from all the emission ~~units identified in the following sections, when in operation, unless specified otherwise." FMMI proposes to expressly clarify that only the emission units specifically identified in subsequent sections of Class I Air Quality Permit #72683 must undergo surveys of visible emissions. The subsequent sections use language such as "the Permittee shall conduct the periodic opacity monitoring method specified in Condition I.C of Attachment "B" on a quarterly basis for the diesel fired equipment" to identify when the surveys of visible emissions must be conducted.~~

FMMI therefore proposes to revise the language of Condition I.C.2.a to state "the Certified EPA Reference Method 9 observer shall conduct, surveys of visible emissions from the emission units identified *as subject to periodic opacity monitoring* in the following sections, when in operation, unless specified otherwise" (emphasis added).

2.4.2 Condition III.B.5.f of Attachment "C"

Condition III.B of Attachment "C" of Class I Air Quality Permit #72683 includes the requirements of 40 CFR 60 Subpart LL applicable to the affected facilities associated with the MFL Fine Crushing Plant. Because the opacity requirements of 40 CFR 60.382(a)(2) exclude stack emissions that are discharged from an affected facility using a wet scrubbing emission control device, it should not be required to conduct periodic opacity monitoring for the processes controlled by scrubbers. Consequently, FMMI proposes to revise Condition III.B.5.f to state, "the Permittee shall conduct the periodic opacity monitoring method specified in Condition 0 of Attachment "B" on a bi-weekly basis for all emission units subject to *an opacity standard in* Condition III.B" (emphasis added).

2.5 CONFIRM OPERATIONS UNDER AOS

Class I Air Quality Permit #72683 currently contains five AOS. The intent of each AOS is to provide authorization for changes at the FMMI facility that may be on hold or have an unpredictable construction date while simultaneously providing authorization for existing operations. FMMI proposes several changes to each AOS as discussed in the following sections.

2.5.1 AOS1: Morenci Concentrator Crushing Operations

As part of Minor Permit Revision (MPR) #56315, FMMI was authorized to upgrade the Morenci Concentrator Crushing Operations by installing the east and west quaternary crushing systems, replacing Conveyor Belt 4A, and extending Conveyor Belts 3, 3A, and 5A. These operations are classified under Process #s 002-033, 002-034, 002-035, 002-036, 002-326, 002-311, 002-312, 002-313, 002-314, 002-315, 002-316, 002-038, 002-039, and 002-040. Because FMMI believed construction was to begin shortly after permitting, the quaternary crushing systems were established under baseline operations, while AOS1 included existing operations plus the operation of the Very Large Equipment (VLE) Pilot Plant. This strategy was used to easily remove AOS1 from FMMI's air quality permit following construction of the quaternary crushing systems.

Due to the delay in the construction of the quaternary crushing systems, listing the existing operations under AOS1 has resulted in some confusion in understanding the requirements in Class I Air Quality Permit #72683. Therefore, FMMI proposes to switch the quaternary crushing systems to be classified under AOS1 and move the existing Morenci Concentrator Crushing Operations under the baseline operations. Additionally, the VLE Pilot Plant is no longer used at the FMMI facility, so it can be removed from FMMI's Class I renewal permit. To reflect these changes, AOS1 should be renamed Morenci Concentrator Quaternary Crushing Operations.

~~2.5.2 AOS2: Morenci Concentrator Bulk Flotation Operations~~

~~As part of MPR #56315, FMMI was authorized to optimize the operation of the bulk flotation operations associated with the Morenci Concentrator. The optimized bulk flotation operations are included in Process #002-321 and include the following:~~

- ~~Operation of 109 Bulk Rougher Cells with one Hydro Cone Cluster;~~
- ~~Operation of two Regrind Mills;~~
- ~~Operation of four Cleaner Cells;~~
- ~~Operation of forty-eight Scavenger Cells;~~
- ~~Operation of three Primary Column Cells; and~~
- ~~Operation of three Secondary Column Cells.~~

~~FMMI's existing design of the Morenci Concentrator bulk flotation operations are included in Process #002-352 (AOS2) and include the following:~~

- ~~Operation of 109 Bulk Rougher Cells with six Hydro Cone Clusters;~~
- ~~Operation of six Regrind Mills;~~
- ~~Operation of forty-eight Cleaner and Scavenger Cells; and~~
- ~~Operation of four Recleaner Column Cells.~~

~~Similar to AOS1, the strategy to include the existing operations under AOS2 was to allow it to be easily removed from Class I Air Quality Permit #72683 following construction of the optimized design of the bulk flotation operations. Then, FMMI could operate seamlessly according to baseline operation. Because FMMI has not yet completed construction of the optimized bulk flotation operations, there are no plans in the near future to complete the optimizations, and there is no advantage to retaining authorization for the optimized design, FMMI proposes to remove AOS2 from its Class I renewal permit.~~

~~2.5.3 AOS3: Metcalf Concentrator Tertiary Crushing Operations~~

~~AOS3 corresponds to the operation of the Metcalf Concentrator tertiary crushing operations using two crushers instead of the existing single crusher (proposed to be renamed the HRC/HPGR Crusher in Section 2.1).[1] AOS3 was established because, at the time of construction, the HRC/HPGR Crusher was a relatively new technology and FMMI had limited information about its sustained performance in terms of product size and throughput capacity. In the event that the HRC/HPGR Crusher did not perform as required, FMMI was authorized through AOS3 to replace the HRC/HPGR Crusher with more~~

~~[1] In AOS3, the dual crushers are referred to as HPGR crushers while the single crusher is referred to as a roll crusher. While FMMI is proposing in Section 2.1 to rename the roll crusher as HRC/HPGR crusher, this does not mean that FMMI is currently operating according to AOS3. There has just been a switch to the naming convention, where the manufacturer of the roll crusher refers to it as an HRC (hydraulic roll crusher) series, HPGR crusher. More generally, AOS3 refers to operation of two crushers while baseline refers to operation of a single crusher.~~

~~conventional and reliable dual crushers. AOS3 allowed for the potential change in crushers without delays due to the permitting process.~~

~~FMMI has been operating the HRC/HPGR Crusher since 2014. Because FMMI is confident in its capacity, product size, and reliability, it is proposed to remove AOS3 from its Class I renewal permit.~~

~~2.5.4 AOS4: Combined Molybdenum Flotation with Carbon Dioxide (CO_2) Injection~~

~~AOS4 corresponds to the operation of the Combined Molybdenum Flotation Operations (Operation 018) with injection of CO_2 into the molybdenum rougher and cleaner flotation cells. CO_2 helps to optimize the flotation process by decreasing the pH of the Combined Molybdenum Flotation Operations. However, a low pH may cause a release of hydrogen sulfide (H_2S) emissions from the sodium hydrosulfide (NaHS) that is added to various locations in the flotation process. NaHS is used to depress copper while allowing the flotation of molybdenum. Because H_2S is highly toxic, FMMI operates a series of scrubbers during AOS4, referred to as the H_2S Scrubber System, to reduce worker's potential exposure to H_2S emissions when CO_2 is being injected.~~

~~FMMI is currently operating under AOS4. Additionally, FMMI has installed an interlock on the scrubber when NaHS is being used. Consequently, it is not possible to operate the Combined Molybdenum Flotation Operations without the H_2S Scrubber System when NaHS is being used. This eliminates the need to differentiate between AOS4 operations (use of NaHS and CO_2 with operation of the H_2S Scrubber System) and non-AOS4 operations (no CO_2 and no operation of the H_2S Scrubber System). Instead, FMMI proposes to remove the non-AOS4 operations from its Class I renewal permit and incorporate the AOS4 operations into baseline operations.~~

~~2.5.5 AOS5: Primary Crushing and Overland Conveying Operations~~

~~AOS5 corresponds to the operation of portable crushing and conveying systems when the in-pit crushers are down for maintenance or repair or when the conveying systems are unable to deliver ore to Mill IOS or MFL IOS. The portable crushing and conveying systems will be used to process and transfer ore to a conveyor or stockpile downstream of the failed component of the in-pit crushing and conveying (IPCC) system. The portable crushing and conveying systems may be rented or brought in from another Freeport-McMoRan Copper & Gold facility but will not have a capacity greater than the capacity of the permitted In-Pit Crushers and/or the associated overland conveying systems being replaced.~~

~~FMMI proposes to retain the operations under AOS5, but due to other AOS removals, it can be renamed AOS3.~~

~~2.5.6 New AOS: CLP Upgrades~~

~~SPR #96391 authorized FMMI to upgrade the CLP by making the following changes:~~

- ~~Increase the maximum hourly capacity of the Pressure Leach Vessels (PLVs) from 29.1 tph total to 20 tph each;~~

- ~~Add an additional cooling tower to support the Oxygen Plant; and~~
- ~~Replace the existing 2-Stage Scrubber with a two-train control system (one for each PLV).~~

~~Because the upgrades are now on hold, FMMI proposes to establish a new AOS for the facility changes in order to maintain authorization for existing operations. With the removal of existing AOS2 as described in Section 2.5.2, the new AOS for the CLP upgrades can be called AOS2.~~

3 PROCESS DESCRIPTION, PRODUCT DESCRIPTION, AND IDENTIFICATION OF EQUIPMENT SUBJECT TO PERMITTING

3.1 DESCRIPTION OF THE PROCESS TO BE CARRIED OUT IN EACH UNIT

The FMMI facility is a large industrial complex located in Greenlee County in eastern Arizona and is comprised of mining, ore processing, and multiple support operations. The five major operations at the FMMI facility include:

- Operation 001: Mining Operations;
- Operation 002: Morenci Concentrator;
- Operation 003: MFL Fine Crushing Plant;
- Operation 009: Solution Extraction/Electrowinning (SX/EW) Operations; and
- Operation 017: Metcalf Concentrator.

FMMI also has fourteen supporting operations. These operations include:

- Operation 004: Lime Slaking Plants and Lime Transloading;
- Operation 005: Metcalf Power Plant;
- Operation 006: Copper Concentrate Processing Operations;
- Operation 010: Concrete Batch Plant;
- Operation 011: Storage Tanks;
- Operation 013: Grizzly Operations;
- Operation 014: Concentrate Leach Plant;
- Operation 015: Diesel Emergency Engines;
- Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations;
- Operation 021: Propane and Natural Gas Emergency Engines;
- Operation 022: Prill Bins;
- Operation 023: Tailings Operations;
- Operation 024: Miscellaneous Fuel Burning Equipment; and
- Operation 025: Diesel Non-Emergency Engines.

The standard industrial classification (SIC) for FMMI's primary activity is metal mining of copper ores, SIC Code 1021. Copper (concentrate and cathodes) is the primary product of the FMMI facility, with molybdenum concentrate as a secondary product. The facility operates continuously for 24 hours per day (hr/day) and 365 days per year (day/yr).

The operations at the FMMI facility have the potential to emit the following regulated air pollutant emissions: particulate matter (PM); particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}); particulate matter less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$); condensable particulate matter (CPM), which is always included in the PTE of PM_{10} and $PM_{2.5}$; carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); VOCs; sulfuric acid mist (H_2SO_4); H_2S; HAPs; and greenhouse gases (GHGs or CO_2e)[1], including CO_2, methane (CH_4), and nitrous oxide (N_2O). CO_2e emissions are calculated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). The GWP of CO_2 is 1, the GWP of CH_4 is 25, and the GWP of N_2O is 298.

Descriptions of all major and supporting operations at the FMMI facility are presented in the following sections. The process flow diagram showing an overview of the FMMI facility-wide operations is presented in Figure D.1 of Appendix D. Process flow diagrams depicting the individual operations are presented in Figures D.2 through D.43 of Appendix D.

3.1.1 Operation 001: Mining Operations

Process flow diagrams of Mining Operations are presented in Figures D.2 through D.5, D.21, and D.22 of Appendix D. Descriptions of processes associated with Mining Operations are presented in the following sections.

3.1.1.1 Drilling, Blasting, and Ore Hauling

Mining Operations begin with drilling and blasting of ore. At the anticipated mining location, blast holes are drilled to an appropriate depth using a fleet of mobile drills. The blast holes are filled with either a traditional ammonium nitrate prill and fuel oil mixture (ANFO) or an ANFO emulsion. ANFO emulsion has a Vaseline-like consistency and is used when water is located in the blast holes because its density allows it to sink to the bottom of the blast hole as opposed to traditional ANFO which will float. Stemming is used to cap the blast holes and then the blast area is evacuated for the blast. Following a blast, electric and hydraulic shovels are used to load the blasted material into haul trucks. The haul trucks then transport the ore to either the IPCC system or the leaching/storage areas.

Emissions from vehicle travel on unpaved roads in the mine are controlled by water trucks or the application of chemical dust suppressants.

3.1.1.2 In-Pit Crushing and Conveying System

Process flow diagrams of the IPCC system are presented in Figures D.2 and D.3 of Appendix D. The IPCC system includes two in-pit crushers (In-Pit Crushers 2 and 3). Ore is delivered to the crushers via haul trucks, which dump ore into dump pocket feed hoppers associated with each crusher (Dump

[1] While GHGs are not included under the definition of "regulated air pollutant" at A.A.C. R18-2-101.122, they are considered a "regulated NSR pollutant" under the PSD program at 40 CFR 52.21(b)(50) and therefore included here for informational purposes.

Pocket Feed Hoppers 2 and 3). Ore is reclaimed from the feed hoppers by apron feeders (Apron Feeders AF2 and AF3), which regulate the flow of ore to the in-pit crushers.

Discharge Conveyor DC2 receives crushed ore from In-Pit Crusher 2 and can feed either Conveyor Belt P5 or Conveyor Belt P9 via Diverter Gate 2. Conveyor Belt P5 feeds Conveyor Belt P6, which discharges to the Mill IOS. Conveyor Belt P9 feeds Conveyor Belt P10, which discharges to the MFL Intermediate Ore Stockpile (MFL IOS). Ore from the MFL IOS is processed by the MFL Fine Crushing Plant.

Feeder Belt FB3 receives crushed ore from In-Pit Crusher 3 and discharges to Discharge Conveyor P11. Discharge Conveyor P11 can feed either Conveyor Belt P5 for transfer to the Mill IOS using Conveyor Belt P6 or Conveyor Belt P12 for transfer to the MFL IOS using Conveyor Belt P10.

During operation of the IPCC system, some material may inadvertently be discharged from the conveyors, making it necessary to periodically clean under the conveyors and reintroduce ore back into the system. The Portable Cleanup Conveyor is used for this purpose to allow the discharged ore to be reintroduced to the IPCC system at the appropriate location. The Portable Cleanup Conveyor is operated and moved to different locations using an internal combustion engine (ICE). The ICE qualifies as a “nonroad engine” and is therefore not subject to air quality permitting for stationary sources.

As shown in Figures D.2 and D.3 of Appendix D, emissions from the IPCC system are controlled by the following pollution control devices:

- In-Pit Crusher 2 FFDC (exhausted to the atmosphere);
- In-Pit Crusher 3 and FB3/P11 FFDC (exhausted to the In-Pit Crusher 3 Building);
- P11/P5 and P11/P12 FFDC (exhausted to the atmosphere);
- P5/P6 FFDC (exhausted to the atmosphere);
- DC2/P9 and P9/P10 FFDC (exhausted to the atmosphere); and
- DC2/P5 FFDC (exhausted to the atmosphere).

Additionally, as shown in Figure D.2 of Appendix D, water sprays and surfactant are used to control emissions at the following locations of the IPCC system:

- Material transfer point from the haul trucks to Dump Pocket Feed Hopper 2;
- Material transfer point from the haul trucks to Dump Pocket Feed Hopper 3;
- Material transfer point from Apron Feeder AF2 to In-Pit Crusher 2;
- Material transfer point from Apron Feeder AF3 to In-Pit Crusher 3;
- Material transfer point from Conveyor Belt P12 to Conveyor Belt P10;
- Discharge of Conveyor Belt P6 to the Mill IOS (when water sprays are used, the water is applied directly at the transfer point to the Mill IOS; when surfactants are used, the surfactants are applied at the transfer point from Conveyor Belt P5 to Conveyor Belt P6); and

- Discharge of Conveyor Belt P10 to MFL IOS (when water sprays are used, the water is applied directly at the transfer point to the MFL IOS; when surfactants are used, the surfactants are applied at the transfer points from Conveyor Belt P9 to Conveyor Belt P10 and Conveyor Belt P12 to Conveyor Belt P10).

FMMI is currently operating the IPCC system as shown in in Figure D.2 of Appendix D. However, FMMI has the option to operate portable crushing and conveying systems under Alternate Operating Scenario 3 (AOS3) when the permanent in-pit crushers are down for maintenance or repair or when the conveying systems are unable to deliver ore to Mill IOS or MFL IOS (see Section 3.1.3).

3.1.1.3 Mill IOS and MFL IOS Reclaim

Process flow diagrams of the Mill IOS reclaim are presented in Figures D.4 and D.5 of Appendix D. Process flow diagrams of the MFL IOS reclaim are presented in Figures D.21 and D.22 of Appendix D.

Ore is reclaimed from the Mill IOS using seven reclaim feeders (Reclaim Feeders 1 through 7). Reclaim Feeders 1 through 4 deposit ore onto Conveyor Belt R1A, while Reclaim Feeders 5 through 7 deposit ore onto Conveyor Belt R1B. Conveyor Belts R1A and R1B can each feed Conveyor Belt R7 for processing by the Morenci Concentrator (Operation 002 - see Section 3.1.2) or Conveyor Belts R2 and R11, in series, for processing by the Metcalf Concentrator (Operation 017 - see Section 3.1.13).

Ore is reclaimed from the MFL IOS using two apron feeders (Apron Feeders 1 and 2). The apron feeders deposit ore onto Conveyor Belt R8, which feeds Conveyor Belt R9 for processing by the MFL Fine Crushing Plant (Operation 003 - see Section 3.1.3).

As shown in Figures D.4 and D.5 of Appendix D, emissions from the Mill IOS reclaim are controlled by the following pollution control devices:

- Mill IOS/R1A FFDC (exhausted to the atmosphere);
- Mill IOS/R1B FFDC (exhausted to the atmosphere);
- R1A and R1B/R7 FFDC (exhausted to the atmosphere);
- R1A and R1B/R2 Bag Collector 1 (exhausted to the atmosphere); and
- R2/R11 FFDC (exhausted to the atmosphere).

As shown in Figures D.21 and D.22 of Appendix D, emissions from the MFL IOS reclaim are controlled by the following pollution control devices:

- MFL IOS/R8 FFDC (exhausted to the atmosphere); and
- R8/R9 FFDC (exhausted to the atmosphere).

3.1.1.4 Routine Adjustments

The relocation of process and control equipment in order to minimize the distance the haul trucks travel is a routine part of Mining Operations. These types of changes do not require authorization, are not addressed as an AOS, and are encompassed within the estimated emission calculations presented in this application. Any changes to Mining Operations requiring authorization will be properly addressed through the permitting rules.

3.1.2 Operation 002: Morenci Concentrator

Process flow diagrams of the Morenci Concentrator are presented in Figures D.4 through D.11 of Appendix D. Descriptions of the Morenci Concentrator processes are presented in the following sections.

3.1.2.1 Coarse Ore Storage and Conveying

Process flow diagrams of the Morenci Concentrator coarse ore storage and conveying operations are presented in Figures D.4 and D.5 of Appendix D. The Morenci Concentrator operations begin at Conveyor Belt R7 (although it is noted that for applicability of 40 CFR 60 Subpart LL purposes, “at the mill or concentrator” starts with the reclaim from the Coarse Ore Storage Bin (COSB)). Conveyor Belt R7 feeds Conveyor Belts 1A and 1B via the Coarse Ore Splitter, which deposit ore into the COSB. Ore is reclaimed from the COSB by four sets of four apron feeders (Apron Feeders A1 through A4, B1 through B4, C1 through C4, and D1 through D4). Each set of four apron feeders feeds a conveyor (Conveyor Belts 2A, 2B, 2C, and 2D) to split the ore into four fine crushing lines (Fine Crushing Lines A, B, C, and D).

As shown in Figures D.4 and D.5 of Appendix D, emissions from the coarse ore storage and conveying operations are controlled by the following pollution control devices:

- R7/1A and 1B FFDC (exhausted to the Morenci Concentrator Building);
- 1A/COSB FFDCs 1 through 9 (exhausted to the COSB);
- 1B/COSB FFDCs 1 through 9 (exhausted to the COSB);
- COSB/AFA/2A FFDC (exhausted to the Morenci Concentrator Building);
- COSB/AFB/2B FFDC (exhausted to the Morenci Concentrator Building);
- COSB/AFC/2C FFDC (exhausted to the Morenci Concentrator Building); and
- COSB/AFD/2D FFDC (exhausted to the Morenci Concentrator Building).

3.1.2.2 Fine Crushing Lines

Process flow diagrams of the Morenci Concentrator fine crushing line operations are presented in Figures D.6 and D.7 of Appendix D. The four fine crushing lines (Fine Crushing Lines A, B, C, and D) are used to reduce the size of ore prior to processing by the ball mills and the bulk flotation plant. Each fine crushing line consists of the following operations: (a) size separation using a vibrating grizzly; (b) secondary crushing of the oversize ore from the vibrating grizzly; (c) size separation of the ore processed by the secondary crusher and the undersize ore from the vibrating grizzly using four shaker screens; and (d) tertiary crushing of the oversize ore from the shaker screens. The product from the Fine Crushing Lines is then discharged to Conveyor Belts 3, 3A, and 3B and transferred to Conveyor Belts 4 or 4A.

As shown in Figures D.6 and D.7 of Appendix D, emissions from the crushers and screens of the four fine crushing lines and the discharge points to Conveyor Belts 3, 3A, and 3B are controlled by the following pollution control devices:

- Morenci Fine Crushing Line A FFDC 1 (exhausted to the Morenci Concentrator Building);
- Morenci Fine Crushing Line A FFDC 2 (exhausted to the Morenci Concentrator Building);
- Morenci Fine Crushing Line B FFDC 1 (exhausted to the atmosphere);
- Morenci Fine Crushing Line B FFDC 2 (exhausted to the Morenci Concentrator Building);
- Morenci Fine Crushing Line C FFDC 1 (exhausted to the atmosphere);
- Morenci Fine Crushing Line C to 3B to 3 FFDC (exhausted to the atmosphere);
- Morenci Fine Crushing Line C to 3B to 3A FFDC (exhausted to the atmosphere);
- Morenci Fine Crushing Line D FFDC 1 (exhausted to the atmosphere); and
- Morenci Fine Crushing Line D FFDC 2 (exhausted inside).

FMMI is currently operating the Fine Crushing Lines with discharge to Conveyor Belts 4 or 4A. However, FMMI has the option to operate quaternary crushing systems under Alternate Operating Scenario 1 (AOS1) when additional crushing is needed (see Section 4.1.1).

3.1.2.3 Fine Ore Storage

Process flow diagrams of the Morenci Concentrator fine ore storage operations are presented in Figures D.9 and D.10 of Appendix D. Ore is conveyed from the four fine crushing lines to the Fine Ore Storage Bin (FOSB) using Conveyor Belts 3, 4, and 5 in series and Conveyor Belts 3A, 4A, and 5A in series.

As shown in Figures D.8, D.9, and D.10 of Appendix D, emissions from the material transfer points to the FOSB are controlled by the following pollution control devices:

- 3/4/5 FFDC (exhausted inside);
- 3A/4A/5A FFDC (exhausted inside);
- 5/FOSB FFDCs 1 through 9 (exhausted to the FOSB); and
- 5A/FOSB FFDCs 1 through 9 (exhausted to the FOSB).

3.1.2.4 Ball Milling

The process flow diagram of the Morenci Concentrator ball milling operations is presented in Figure D.9 of Appendix D. The ball milling operations begin with ore being reclaimed from the FOSB by sixty belt feeders (Belt Feeders 1E through 27E, 1W through 27W, 28, 29E, 29W, and 30 through 32). From the belt feeders, the ore is conveyed to the thirty-two ball mills (Ball Mills 1 through 32) by thirty-two sets of two conveyors in series (Conveyor Belts 6-1 through 6-32 and Conveyor Belts 7-1 through 7-32). At the ball mills, the fine ore is mixed with water and other additives and is pulverized with steel balls to produce a wet slurry. Sixty-one spiral classifiers (Spiral Classifiers 1, 2A through 29A, 2B through 29B, 30, 31, 32A, and 32B) are then used to separate the slurry into oversize material, which is pumped back to the ball mills for further pulverization and undersize material, which is pumped to the bulk flotation plant. The ball milling process is segregated into four sections, with each section including eight of the ball mills and their associated belt feeders, conveyors, and spiral classifiers. The undersize slurry product from each of the sections feeds a portion of the rougher cells in the bulk flotation plant.

The transfer points from the FOSB to the ball mills occur within a building under negative pressure. Any emissions generated from the material transfer operations are collected by the pollution control devices that capture emissions within the building and exhaust to the atmosphere. Consequently, emissions from the transfer operations are accounted for in the emissions from the pollution control devices that exhaust to the atmosphere. Ball milling and subsequent operations are wet processes and have a negligible potential to emit.

3.1.2.5 Bulk Flotation Operations

The process flow diagram of the Morenci Concentrator bulk flotation operations is presented in Figure D.11 of Appendix D. The process flow diagrams are limited to equipment subject to regulations and the primary components of the bulk flotation plant operations, and do not include electric pumps, sumps, process tanks, and piping, which need not be identified to understand the process.

The bulk flotation operations utilize three stages to separate the wet slurry from the ball mills into: (a) a combined copper/molybdenum concentrate; and (b) tailings. The first stage utilizes 109 bulk rougher cells (Bulk Rougher Cells 1 through 109). The tailings from the bulk rougher cells are sent to thickeners and then pumped to their storage locations (Operation 023 – see Section 3.1.17) while the copper/molybdenum concentrate is pumped to the Hydro Cone Cluster for size separation. The undersize from the Hydro Cone Cluster is pumped to the second separation stage while the oversize is pumped to six regrind mills (Regrind Mills 1 through 6) for size reduction and reprocessing by the Hydro Cone Clusters. The second separation stage utilizes cleaner cells to further separate the copper/molybdenum concentrate from the tailings. The product from the cleaner cells is pumped to the third separation stage while the tailings are pumped to scavenger cells (Cleaner and Scavenger Cells 1 through 48) to recover any lost copper/molybdenum concentrate. The product from the scavenger cells is pumped back to the Hydro Cone Cluster for size classification while the tailings are pumped to join the tailings from the bulk rougher cells. The third separation stage utilizes four recleaner column cells (Recleaner Column Cells 1 through 4) to achieve the final separation of the copper/molybdenum concentrate from the tailings. The products from the recleaner column cells are pumped to thickeners to condense the copper/molybdenum concentrate prior to further processing by the Combined Molybdenum Flotation Operations (Operation 018 - see Section 3.1.14). The tailings from the secondary column cells are pumped back to the Hydro Cone Clusters for reprocessing.

3.1.2.6 Routine Adjustments

If the conveying system to the COSB is out of commission, haul trucks may be used to transport ore to the Morenci Concentrator. In this situation, front-end loaders would load haul trucks with ore at Mill IOS. Then, the haul trucks would travel to the Morenci Concentrator and dump the ore into the COSB.

Additionally, minor changes in process unit configuration and to process chemicals in order to respond to the evolving ore characteristics are a routine part of the Morenci Concentrator operations. These types of changes do not require authorization, are not addressed as an AOS, and are encompassed within the estimated emission calculations presented in this application. Any changes to the Morenci Concentrator operations requiring authorization will be properly addressed through the permitting rules.

3.1.3 Operation 003: MFL Fine Crushing Plant

Process flow diagrams of the MFL Fine Crushing Plant are presented in Figures D.21 through D.27 of Appendix D. Descriptions of the MFL Fine Crushing Plant processes are presented in the following sections.

3.1.3.1 Ore Storage and Conveying

Process flow diagrams of the MFL Fine Crushing Plant ore storage and conveying operations are presented in Figures D.21 and D.22 of Appendix D. The MFL Fine Crushing Plant operations begin at Conveyor Belt R9 (although it is noted that for applicability of 40 CFR 60 Subpart LL purposes, "at the mill or concentrator" starts with the reclaim from the Metcalf Track Hopper Storage Bin (MTHSB)). Conveyor Belts R9, R10, R3, R4, R5, and R6, designed in series, are used to convey and deposit ore into the MTHSB. Ore is reclaimed from the MTHSB by twelve apron feeders (Apron Feeders 2C1 through 2C4, 2B3 through 2B6, and 2A3 through 2A6). The apron feeders deposit ore onto five conveyor belts (Conveyor Belts 3C, 3B2, 3B3, 3A2, and 3A3), which subsequently feed MFL Conveyor Belts 4C, 4B, and 4A. MFL Conveyor Belts 4C, 4B, and 4A then each feed a scalping screen to split the ore into three separate secondary crushing and screening circuits.

As shown in Figures D.21 and D.22 of Appendix D, emissions from the ore storage and conveying operations are controlled by the following pollution control devices:

- R9/R10 FFDC (exhausted to the atmosphere);
- R10/R3 FFDC (exhausted to the atmosphere);
- R3/R4 Bag Collector 3 (exhausted to the atmosphere);
- R4/R5/R6 Bag Collector 4 (exhausted to the atmosphere);
- Scrubber 3C (exhausted to the atmosphere); and
- FFDC 3A (exhausted to the atmosphere).

3.1.3.2 Secondary and Tertiary Crushing and Conveying

Process flow diagrams of the MFL Fine Crushing Plant secondary and tertiary crushing and conveying operations are presented in Figures D.23 and D.24 of Appendix D. Three secondary crushing and screening circuits are used to reduce the size of ore prior to agglomeration and copper leaching. Each circuit consists of the following operations: (a) size separation using a scalping screen (Scalping Screens A, B, and C); (b) secondary crushing of the oversize ore from the scalping screen (Secondary Crushers A, B, and C); and (c) size separation of the ore processed by the secondary crusher using two secondary screens (Secondary Screens A1, A2, B1, B2, C1, and C2). The undersize ore from the scalping and secondary screens feed Conveyor Belt 9. The oversize ore from the secondary screens feed either Conveyor Belt 7 or 8. Conveyor Belts 7, 8, 11, 5, and 6 are then used to convey the ore to the Tertiary Crushing Surge Bin (TCSB). Ore is reclaimed from the TCSB using six belt feeders (Belt Feeders 12-1 through 12-6), which each feed a tertiary crusher (Tertiary Crushers C1 through C6). Ore from the tertiary crushers is discharged to Conveyor Belt 9 to mix with the undersize ore from the scalping and secondary screens. Conveyor Belt 9 subsequently feeds Conveyor Belts 14, 15, 16, and S11, designed in series, which are used to stockpile the fine ore prior to agglomeration.

As shown in Figures D.23 and D.24 of Appendix D, emissions from the secondary and tertiary crushing and conveying operations are controlled by the following pollution control devices:

- FFDC 6A (exhausted to the atmosphere);
- FFDC 6B (exhausted to the atmosphere);
- FFDC 1 (exhausted to the atmosphere);
- Scrubber 5 (exhausted to the atmosphere);
- FFDC 8 (exhausted to the atmosphere);
- Scrubber 4 (exhausted to the atmosphere);
- Tertiary Crushing Dust Collector (exhausted inside the MFL Crusher Building);
- Conveyor Belt 9 Dust Collector (exhausted inside the MFL Crusher Building);
- 14/15 FFDC (exhausted to the atmosphere);
- 15/16 FFDC (exhausted to the atmosphere); and
- 16/S11 FFDC (exhausted to the atmosphere).

Additionally, the material transfer point from Conveyor Belt S11 to the Fine Ore Intermediate Stockpile (FOIS) is controlled either by water sprays or surfactants. When water sprays are used, the water is applied directly at the transfer point to the FOIS. When surfactants are used, the surfactants are applied at the transfer point from Conveyor Belt 15 to Conveyor Belt 16.

3.1.3.3 Agglomeration

Process flow diagrams of the MFL Fine Crushing Plant agglomeration operations are presented in Figures D.25 and D.26 of Appendix D. Ore is reclaimed from the FOIS using two belt feeders (Belt Feeders SF1 and SF2). The belt feeders deposit ore onto Conveyor Belt A1A, which feeds both Conveyor Belts A2A and A2C via the Agglomeration Splitter. Conveyor Belts A2A and A2C each feed an agglomerating unit (Agglomerating Units 1 and 2), where acid, raffinate, and water are mixed with the ore. The agglomeration causes the fine material in the ore to adhere to the coarser material. The agglomerating units discharge to Conveyor Belt S12, which feeds the conveyor stacking systems prior to copper leaching.

As shown in Figures D.25 and D.26 of Appendix D, emissions from the material transfer points prior to the agglomerating units are controlled by the following pollution control devices:

- FOIS/A1A Bag Collector 7 (exhausted to the atmosphere);
- A1A/A2A Bag Collector 8 (exhausted to the atmosphere); and
- A1A/A2C Bag Collector 9 (exhausted to the atmosphere).

Due to the agglomeration process causing an increased moisture content of the ore along with the fine material adhering to the coarse material, emissions are negligible at all material transfer processes following agglomeration.

3.1.3.4 Conveyor Stacking System

The process flow diagram of the MFL Fine Crushing Plant conveyor stacking system is presented in Figure D.27 of Appendix D. The conveyor stacking system is used to convey the agglomerated ore to the copper leaching stockpiles for copper leaching (see Section 3.1.7.1). The conveyor stacking system consists of twenty-nine conveyors and three stackers. The number of conveyors/stackers actually utilized in the stacking system at any given time is dependent on where the agglomerated ore is being placed in the copper leaching stockpiles. Closer locations will not require all of the conveyors/stackers to be utilized.

3.1.3.5 Routine Adjustments

If the conveying system to the MTHSB is out of commission, haul trucks may be used to transport ore to the MFL Fine Crushing Plant. In this situation, front-end loaders would load haul trucks with ore at MFL IOS. Then, the haul trucks would travel to the MFL Fine Crushing Plant and dump the ore into the MTHSB.

Additionally, minor changes in process unit configuration and to process chemicals in order to respond to the evolving ore characteristics are a routine part of the MFL Fine Crushing Plant operations. These types of changes do not require authorization, are not addressed as an AOS, and are encompassed within the estimated emission calculations presented in this application. Any changes to the MFL Fine Crushing Plant operations requiring authorization will be properly addressed through the permitting rules.

3.1.4 Operation 004: Lime Slaking Plants and Lime Transloading Operations

Process flow diagrams of the Lime Slaking Plants and Line Transloading are presented in Figures D.32 through D.34 of Appendix D. Descriptions of each of the Lime Slaking Plants and Lime Transloading are presented in the following sections.

3.1.4.1 Lime Slaking Plant for the Morenci Concentrator

The process flow diagram of the Lime Slaking Plant for the Morenci Concentrator is presented in Figure D.32 of Appendix D. Quicklime is delivered by truck to two lime silos (Lime Silos 1 and 2). A dust filter on each silo (Lime Silo 1 Dust Filter and Lime Silo 2 Dust Filter) captures and recovers any lime entrained in the air displaced during the silo filling process. The lime silos subsequently feed two lime slakers (Lime Slakers 1 and 2) using the Lime Transfer Conveyor and Lime Feeders 1 and 2. Lime from Lime Silo 1 can bypass the Lime Transfer Conveyor to directly feed Lime Slaker 1 using Lime

Feeder 1 or can feed Lime Slaker 2 using the reversible Lime Transfer Conveyor along with Lime Feeder 2. Similarly, lime from Lime Silo 2 can bypass the Lime Transfer Conveyor to directly feed Lime Slaker 2 using Lime Feeder 2 or can feed Lime Slaker 1 using the reversible Lime Transfer Conveyor and Lime Feeder 1.

Water is mixed with the quicklime in the lime slakers to produce milk of lime. The milk of lime is pumped to the Milk of Lime Slurry Tanks and then the Milk of Lime Storage Tanks prior to being distributed for use in the Morenci Concentrator.

Emissions from Lime Slakers 1 and 2 are controlled by water spray mist control systems.

3.1.4.2 Lime Slaking Plant for the Metcalf Concentrator

The process flow diagram of the Lime Slaking Plant for the Metcalf Concentrator is presented in Figure D.33 of Appendix D. Quicklime is delivered by truck to the Metcalf Lime Silo where the Metcalf Lime Silo Bin Vent captures and recovers any lime entrained in the air displaced during the silo filling process. The Metcalf Lime Screw Feeder subsequently delivers lime from the Metcalf Lime Silo to the Metcalf Lime Slaker, where water is mixed with the quicklime to produce milk of lime. The Metcalf Lime Slaker includes an integrated induced draft wet scrubber (Metcalf Lime Slaker Wet Scrubber) that primarily reduces chute plugging at the dry solids feed inlet by keeping the slaker under a slight negative pressure. Consequently, the scrubber is not considered a pollution control device because it is inherent to the design of the slaker. However, as a secondary benefit, it also helps reduce dust generated during the slaking process.

The milk of lime is processed by the Metcalf Lime Grit Wet Screen to remove any solids before it is pumped to Milk of Lime Storage Tanks 1 and 2 and distributed for use in the Metcalf Concentrator. The grit removed by the Metcalf Lime Grit Wet Screen is transferred to the Metcalf Lime Grit Collection Bin for disposal using the Metcalf Lime Grit Screw Conveyor. The operations following the Metcalf Lime Slaker process wet, saturated material, such that any emission of regulated air pollutants is expected to be negligible.

3.1.4.3 Lime Transloading Operations

The process flow diagram of the Lime Transloading Operations is presented in Figure D.34 of Appendix D. Lime Transloading Operations add the option to bring quicklime into the FMMI facility via railcar using existing rail lines. Lime transloading operations involve the use of a portable hydraulically operated system whereby material is transferred from a railcar to a truck through an enclosed conveyor. The lime transloading system is comprised of: (a) an enclosed articulating portable conveyor (i.e., Lime Transloading Conveyor); (b) an engine used to power the system (i.e., Lime Transloading Engine); and (c) a dust collector for controlling particulate matter emissions during the transfer process (i.e., Lime Transloading Dust Collector).

Lime transloading operations occur in the following sequential steps:

1. The Lime Transloading Conveyor is positioned with the receiving end (articulating tail) below the railcar discharge and the discharge spout over the truck loading port;

2. The receiving end of the Lime Transloading Conveyor is hydraulically raised to form a seal against the railcar discharge and the discharge spout will be lowered to seal against the truck loading port; and
3. The quicklime transfer process commences.

Following lime transloading operations, the trucks travel to the various lime silos at the FMMI facility and pneumatically transfer the quicklime to the silos.

Lime transloading operations are designed so that the Lime Transloading Dust Collector is automatically energized when the Lime Transloading Conveyor is turned on. Because of the seals between the Lime Transloading Conveyor and the railcars and trucks, the Lime Transloading Dust Collector controls emissions from both the transfer from the railcar to the Lime Transloading Conveyor and from the Lime Transloading Conveyor to the trucks. Pollutants collected by the dust collector will be discharged back into the Lime Transloading Conveyor.

The Lime Transloading Engine is diesel-fired, manufactured by Yanmar (Model 4TNV88C-DYEM), and has a rated power of 47.6 horsepower (hp). The engine meets the non-emergency engine Tier 4 Final emission standards and other requirements of 40 CFR 60 Subpart IIII.

3.1.5 Operation 005: Metcalf Power Plant

The process flow diagram of the Metcalf Power Plant is presented in Figure D.38 of Appendix D. Although FMMI gets most of its electrical power from outside sources, the Metcalf Power Plant can be operated to generate additional power, when necessary. The Metcalf Power Plant consists of two natural gas turbine generators and auxiliary equipment. Natural gas is used to power the combustion turbines (Natural Gas Turbines 1 and 2), which are connected directly to generators that produce electricity. The combusted gas exiting the turbine (waste heat) is emitted out a stack to the atmosphere.

Two black start engines (Black Start Turbine Engines 1 and 2) aid in the startup of Natural Gas Turbines 1 and 2. Black Start Turbine Engine 1 is associated with Natural Gas Turbine 1 while Black Start Turbine Engine 2 is associated with Natural Gas Turbine 2. The engines operate for approximately eight minutes each time their associated turbine is started. Additionally, the engines are operated periodically during maintenance checks and readiness testing.

3.1.6 Operation 006: Copper Concentrate Processing Operations

Process flow diagrams of the Copper Concentrate Processing Operations are presented in Figures D.17 and D.20 of Appendix D. Copper concentrate from the Copper Concentrate Thickeners is first processed by the Filter Feed Trash Screen where oversized trash (i.e., plastic material) is removed from the process and placed in the Filter Feed Trash Bin. The copper concentrate is then processed by two copper filters (Copper Filters 1 and 2) to remove excess water. The copper filters discharge copper concentrate cake to hoppers (Copper Filter Discharge Hoppers 1 and 2) before being reclaimed by feeders (Copper Cake Discharge Feeders 1 and 2). The feeders discharge to a single conveyor (Final Concentrate Conveyor), which transfers the copper concentrate product to Conveyor Belt 10A South.

Conveyor Belt 10A South is capable of feeding Conveyor Belts 11, 11A, 11B, 12, 13, and BA. Conveyor Belts 11, 11A, 11B, 12, and 13 discharge to the Copper Concentrate Storage Piles while Conveyor Belt BA feeds Conveyor Belts BB and BC in series before discharging to the Copper Concentrate Storage Piles. Following storage, the copper concentrate is loaded into railcars for shipping to offsite copper smelters.

The material transfer points from Copper Filters 1 and 2 to Conveyor Belt 10A South are either located inside buildings or are covered. This design, along with the use of chutes at conveyor transfer points and the high amount of moisture remaining after being processed by the filters (9.5%), prevents the loss of the valuable copper concentrate and minimizes emissions. Conveyor Belts 11, 11A, 11B, 12, 13, BA, BB, and BC, and the Copper Concentrate Storage Pile are all located within the Copper Concentrate Storage Building, which is enclosed on three sides.

3.1.7 Operation 009: SX/EW Operations

Process flow diagrams of SX/EW Operations are presented in Figures D.30 and D.31 of Appendix D. Descriptions of SX/EW processes are presented in the following sections.

3.1.7.1 Copper Leaching

Copper leaching begins with ore from Mining Operations (Operation 001 – see Section 3.1.1) or the MFL Fine Crushing Plant (Operation 003 – see Section 3.1.3) being placed in stockpiles. An aqueous solution of weak acid (raffinate) is applied to the stockpiles by sprinkler irrigation methods and drip emitters and dissolves copper and other metals from the ore. The copper containing raffinate, referred to as pregnant leach solution (PLS), flows by gravity to collection ponds (PLS Collection Ponds). The PLS is subsequently pumped from the ponds to the SX facilities. PLS from the CLP (Operation 014 – see Section 3.1.11) supplements the PLS from copper leaching.

3.1.7.2 Solution Extraction

FMMI operates four full-scale SX facilities (Central SX, Metcalf SX, Modoc SX, and Stargo SX) to extract copper from the PLS. Additionally, one small-scale SX facility (Modoc Test Facility SX) is located at the FMMI facility but is owned and operated by Freeport Technology Center based out of Tucson, Arizona. The Modoc Test Facility is used for experimental and research purposes and serves to support all of Freeport-McMoRan's full-scale SX/EW facilities by conducting tests and measurements.

Each SX facility contains a series of mixer-settler units. The mixer-settler units are designed in a series-parallel alignment. The PLS is pumped to the mixer portion of the extraction mixer-settler units and is vigorously mixed with an equal volume of organic solution. The organic solution is approximately 75% diluent (a refined petroleum-based reagent) and 25% copper extraction reagent (a specialty chemical that selectively extracts copper from aqueous solutions under specific conditions). During mixing, the copper in the PLS is transferred to the organic solution. From the mixers, the solution is delivered to the settlers where the copper depleted PLS (now called raffinate) settles to the bottom and is pumped to organic recovery tanks to reclaim any organic before being returned to the leaching stockpiles. The copper containing organic solution (now called loaded organic) floats to the top of the settlers and is pumped to the strip mixer-settler units.

At the mixer portion of the strip mixer-settler units, the loaded organic is mixed with a strong solution of H_2SO_4 (lean electrolyte), and the copper selectively moves from the loaded organic to the electrolyte (now called rich electrolyte). From the mixers, the solution is delivered to the settlers where the organic solution stripped of copper (now called barren organic) floats to the top and the rich electrolyte settles to the bottom. The barren organic is sent back to the extraction mixer-settler units and the rich electrolyte is pumped to the EW facilities.

When possible, evaporative loss of the organic solution is limited in the mixer-settler units by the use of covers.

3.1.7.3 Electrowinning

FMMI operates three full-scale EW facilities (Central EW, Southside EW, and Stargo EW) and one small-scale EW facility (Modoc Test Facility EW), which process the rich electrolyte from the SX facilities through a series of cells.

Central contains 548 EW cells, Southside contains 220 EW cells, Stargo contains 324 EW cells, and the Modoc Test Facility contains 4 EW cells. At the electrowinning facilities, insoluble lead plates hang in the cells as anodes while stainless steel starter sheets hang in the cells as cathodes. The copper from the rich electrolyte is deposited onto the cathodes to create a copper plate. The cathodes plated in copper are removed from the cells after approximately seven days. The copper depleted electrolyte (lean electrolyte) is returned to the SX facilities.

Five natural gas-fired small industrial boilers (Small Industrial Boilers 1 through 5) are used to heat water that runs through non-contact heat exchangers along with the electrolyte from the full-scale EW facilities. The small industrial boilers maintain the temperature of the electrolyte temperature at a level optimal for copper plating. The Modoc Test Facility EW utilizes electric heaters and boilers to perform the same function.

PM emissions in the form of H_2SO_4 mist from EW are controlled mainly by the use of heat retention balls and surfactants. However, foam, blankets, and brushes are also authorized to be used.

3.1.7.4 Cathode Preparation

The copper plated cathodes from the EW facilities are washed prior to the copper being removed from the cathode by a stripping machine. Then, the pure copper plates are weighed and bundled for shipment to offsite facilities for further processing into copper products. Two hot water pressure cleaners (Diesel Hot Water Pressure Cleaners 1 and 2) are used to provide the hot water used for cathode washing in the full-scale EW facilities. The Modoc Test Facility EW utilizes electric pressure washers.

3.1.8 Operation 010: Concrete Batch Plant

The process flow diagram of the CBP is presented in Figure D.37 of Appendix D. Aggregate (rock, sand, and gravel) is supplied by an offsite sand and gravel pit and is stored in stockpiles at the CBP. Additionally, fly ash and cement are delivered to the CBP by truck and are pneumatically conveyed to the Fly Ash Silo and Cement Silo, respectively. Bin vents are installed on each silo (Fly Ash Silo Bin

Vent and Cement Silo Bin Vent) to capture and recover any fly ash or cement entrained in the air displaced during the silo filling process.

During operations, aggregate is loaded into the Feed Hopper by a front-end loader. The CBP Aggregate Conveyor Belt is then used to reclaim the aggregate and convey it to the Weigh Hopper. Likewise, the Fly Ash Screw Conveyor and Cement Screw Conveyor reclaim fly ash and cement from their respective silos and also feed the Weigh Hopper. The Weigh Hopper then feeds the aggregate, fly ash, and cement mixture directly into a concrete mixing truck where water and additional additives are added, as needed, to produce concrete.

Three propane hot water heaters (Propane Hot Water Heaters 1, 2, and 3) rated at 1.2 MMBtu/hr each are used to support the CBP operations.

3.1.9 Operation 011: Storage Tanks

FMMI utilizes a variety of diesel and gasoline storage tanks located throughout the facility to fuel vehicles and equipment. Other miscellaneous storage tanks are used at the FMMI facility to supply processes with necessary chemicals. The majority of the storage tanks are considered insignificant or trivial activities or emit negligible amounts of air pollutants and are not subject to any specifically applicable requirements (see Section 10). The storage tanks subject to permitting include four diesel storage tanks and three gasoline storage tanks. The process flow diagram of the permitted storage tanks is presented in Figure D.43 of Appendix D.

The gasoline storage tanks at the FMMI facility are associated with various gasoline dispensing facilities (GDF). All GDF at the FMMI facility currently have monthly throughputs of less than 100,000 gallons of gasoline.

3.1.10 Operation 013: Grizzly Operations

The process flow diagram of the Grizzly Operations is presented in Figure D.36 of Appendix D. FMMI operates the following six grizzlies, which are used for various purposes at the facility:

- Concentrate Grizzly;
- Construction Grizzly 1;
- Construction Grizzly 2;
- Construction Grizzly 3;
- Stockpile Grizzly 1; and
- Stockpile Grizzly 2.

The material processed by the grizzlies includes, but is not limited to, ore, aggregate, dirty concentrate, slag, rip rap, engineered fill, and petroleum contaminated soils. A front-end loader is used to place material on the grizzly decks. Undersize material that passes through the grizzlies is collected in undersize stockpiles while the oversize material that slides off the grizzly decks is collected in oversize stockpiles. Subsequently, the oversize and undersize material can then be transported by loader for various uses.

Emissions from grizzly operations are typically controlled by using a water truck to wet the material prior to processing by the grizzlies.

3.1.11 Operation 014: Concentrate Leach Plant

The process flow diagram of the CLP is presented in Figure D.28 of Appendix D. The CLP uses hydrometallurgy to extract copper from copper concentrate. This technology allows FMMI to produce high purity copper from copper concentrate without the use of a copper smelter.

Copper concentrate from the Concentrate Processing Operations (Operation 006 – see Section 3.1.6) is delivered to the CLP in slurry form from the Copper Concentrate Thickeners via pumps, Filter Feed Tanks, and the Ground Concentrate Tank. The concentrate is pumped from the Ground Concentrate Tank to Pressure Leach Vessels 1 and 2 (PLV 1 and PLV 2). The vessels operate at high temperature and pressure in parallel arrangement. Oxygen, coolant, and lean electrolyte are injected into the vessels to sustain the exothermic reaction and to maintain the target temperature. The leached concentrate slurry discharges from the PLVs into Flash Vessels, which are used to reduce the pressure of the system to near atmospheric conditions.

The flashed slurry is then discharged to the Slurry Conditioning Tank prior to being processed by the Evaporative Cooler, which utilizes Vacuum Cooling, a Barometric Condenser, and a Recirculating Condensate Cooler to cool the slurry and recycle condensate. A small portion of the evaporated gas is vented through the Vacuum Pump but is considered a trivial activity (see Section 10).

The cooled slurry-containing copper bearing PLS is separated from any residue via the Decant Thickener. The Decant Thickener underflow residue is washed with fresh water in the Counter-Current Decantation (CCD) Thickeners to recover more than 99.9% of the copper as a solution. The Decant Thickener overflow solution (termed strong PLS) and the CCD Thickeners overflow solution (termed weak PLS) are directed to the PLS Holding Tank and Silica Preparation Tanks. The combined solution product (termed mixed PLS) is then pumped to FMMI's Stargo and Modoc solvent extraction facilities. The washed CCD residue tails (i.e., waste) are neutralized with milk of lime in the Neutralization Tanks prior to being pumped to the tailings thickeners and storage.

Other equipment and operations supporting the CLP include:

- Natural Gas Startup Boiler;
- PLV Cooling Tower, used to distribute cooling water to the coolers, condensers, air compressors, PLV agitator seal system, PLV agitators, and glycol heat exchanger;
- Oxygen Plant including Oxygen Plant Cooling Tower 1; and
- Flocculant, lime, and diatomaceous earth additive systems, including the use of bin vents to capture and recover any flocculant, lime, or diatomaceous earth entrained in the air displaced during filling of the Flocculant Bin, Lime Silo, and Super Sack Unloader, respectively.

As shown in Figure D.28 of Appendix D, the steam generated during slurry flash cooling along with exhaust gas from the PLVs is sent to a 2-Stage Scrubber. The exhaust gas contains PM in the form of H_2SO_4 and VOC. The 2-Stage Scrubber is used for recovery of slurry and control of any remaining PM.

FMMI is currently operating the CLP according to Figure D.28. However, FMMI has the option to make upgrades to the CLP under Alternate Operating Scenario 2 (AOS2) (see Section 4.1.2).

3.1.12 Operation 015: Diesel Emergency Engines

The process flow diagram of the Diesel Emergency Engines at the FMMI facility is presented in Figure D.39 of Appendix D. FMMI currently operates ten diesel emergency engines. Eight of the engines are associated with generators while the other two are associated with pumps. The diesel emergency engines are used in the event of outside commercial power interruption or when the power supply is unreliable. They are also used during maintenance checks, readiness testing, and/or certain non-emergency situations.

3.1.13 Operation 017: Metcalf Concentrator

Process flow diagrams of the Metcalf Concentrator are presented in Figures D.12 through D.16 of Appendix D. Descriptions of the Metcalf Concentrator processes are presented in the following sections.

3.1.13.1 Secondary Crushing and Screening

Process flow diagrams of the Metcalf Concentrator secondary crushing and screening operations are presented in Figures D.12 and D.13 of Appendix D. The Metcalf Concentrator operations begin at the Secondary Screen Feed Bin. Ore is reclaimed from the Secondary Screen Feed Bin by two belt feeders (Secondary Screen Belt Feeders 1 and 2). Each of the belt feeders feed a screen (Secondary Screens 1 and 2) to separate the oversize ore from the undersize ore. The undersized ore is deposited onto the B3 Crushed Ore A Conveyor, which discharges to the B4 Crushed Ore B Conveyor. The B4 Crushed Ore B Conveyor is used to feed the crushed ore storage, reclaim, and tertiary crushing operations.

The oversize ore from Secondary Screens 1 and 2 is deposited onto the B1 Secondary Crusher Feed Conveyor, which discharges to the Secondary Crusher Feed Bin. Ore is reclaimed from the Secondary Crusher Feed Bin by two belt feeders (Secondary Crusher Belt Feeders 1 and 2). Each of the belt feeders feeds a crusher (Secondary Crushers 1 and 2) to reduce the size of the ore. The crushers discharge to the B2 Secondary Crusher Discharge Conveyor, which circulates the ore back to the Secondary Screen Feed Bin.

As shown in Figures D.12 and D.13 of Appendix D, emissions from the secondary crushing and screening operations are controlled by the following pollution control devices:

- Secondary Screen Feed Bin FFDC (exhausted to the atmosphere);
- Secondary Screening FFDC 1 (exhausted to the atmosphere);
- Secondary Screening FFDC 2 (exhausted to the atmosphere);
- Secondary Crusher Feed Bin FFDC (exhausted to the atmosphere);

- Secondary Crushing FFDC 1 (exhausted to the atmosphere);
- Secondary Crushing FFDC 2 (exhausted to the atmosphere); and
- Crushed Ore A/B Conveyor Transfer Point FFDC (exhausted to the atmosphere).

3.1.13.2 Crushed Ore Storage, Reclaim, and Tertiary Crushing

Process flow diagrams of the Metcalf Concentrator crushed ore storage, reclaim, and tertiary crushing operations are presented in Figures D.14 and D.15 of Appendix D. The B5 Crushed Ore Bin Tripper Conveyor receives ore from the B4 Crushed Ore B Conveyor and feeds Crushed Ore Bins A, B, and C. Ore is reclaimed from the bins by twenty-four belt feeders (Crushed Ore Belt Feeders 1 through 24) and is conveyed to the Crusher Surge Bin by the B6 Crushed Ore Feed Conveyor and the B7 Crushed Ore Feed Transfer Conveyor, arranged in series.

Ore is reclaimed from the Crusher Surge Bin by two belt feeders (B8-A Crusher Belt Feeder and B8-B Crusher Belt Feeder), which discharge to the B9 Crusher Feed Conveyor. B9 Crusher Feed Conveyor transfers the ore to the Crusher Feed Hopper, which is used to regulate the flow of ore to the HRC/HPGR Crusher. The HRC/HPGR Crusher reduces the size of the ore and discharges to the B10 Crusher Discharge Conveyor, which feeds the Wet Screen Feed Bin. Ore is reclaimed from the Wet Screen Feed Bin by two belt feeders (B11-A Wet Screen Belt Feeder 1 and B11-B Wet Screen Belt Feeder 2), which feed two wet screens (Wet Screens 1 and 2). The reclaim and material transfers to the wet screens occur within enclosed areas between the Wet Screen Feed Bin and Wet Screens 1 and 2. Multiple water spray systems are installed within the enclosed areas to completely saturate the ore being transferred to the wet screens.

The undersize ore slurry from the wet screens is transferred to the cyclones of the ball milling operations while the saturated oversize ore is conveyed to the Wet Screen Oversize Bin by three conveyors in series (B12 Wet Screen Oversize Conveyor, B13 Wet Screen Oversize Transfer Conveyor, and B14 Wet Screen Oversize Shuttle Conveyor). Ore is reclaimed from the Wet Screen Oversize Bin by five belt feeders (Wet Screen Oversize Belt Feeders 1 through 5), which discharge to the B6 Crushed Ore Feed Conveyor for circulation back to the HRC/HPGR Crusher.

As shown in Figures D.14 and D.15 of Appendix D, emissions from the crushed ore storage, reclaim, and tertiary crushing operations are controlled by the following pollution control devices:

- Crushed Ore B/Tripper Conveyor Transfer Point FFDC (exhausted to the atmosphere);
- Crushed Ore Bin FFDC 1 (exhausted to the atmosphere);
- Crushed Ore Bin FFDC 2 (exhausted to the atmosphere);
- Crushed Ore Bin FFDC 3 (exhausted to the atmosphere);
- Crushed Ore Bin FFDC 4 (exhausted to the atmosphere);
- Crushed Ore Transfers FFDC (exhausted to the atmosphere);
- HRC/HPGR Crusher FFDC (exhausted to the atmosphere); and
- Wet Screen Feed FFDC (exhausted to the atmosphere).

3.1.13.3 Ball Milling and Bulk Flotation Operations

The process flow diagram of the Metcalf Concentrator ball milling and bulk flotation operations is presented in Figure D.16 of Appendix D. The process flow diagrams are limited to equipment subject to regulations and the primary components of the ball milling and bulk flotation operations, and do not include electric pumps, sumps, process tanks, and piping, which need not be identified to understand the process.

The ball milling operations begin with the fine ore slurry from the wet screens being transferred to two cyclones (Cyclones 1 and 2). Oversized ore from the cyclones is transferred to two ball mills (Ball Mills 1 and 2), which use steel balls to pulverize the ore. The pulverized ore slurry is then sent back to the cyclones for resizing. Undersize material from the cyclones is sent to the bulk flotation plant.

The bulk flotation plant operations utilize three stages to separate the wet slurry from the cyclones into: (a) a combined copper/molybdenum concentrate; and (b) tailings. The first stage utilizes 12 bulk rougher cells (Bulk Rougher Cells 1 through 12). The tailings from the bulk rougher cells are sent to thickeners and then pumped to their storage locations (Operation 023 – see Section 3.1.17) while the copper/molybdenum concentrate is pumped to the Copper Regrind Cyclone for size separation. The undersize from the Copper Regrind Cyclone is pumped to the second separation stage while the oversize is pumped to two regrind mills (Regrind Mills 1 and 2) for size reduction and reprocessing by the Copper Regrind Cyclone. The second separation stage utilizes four 1st copper cleaner cells (1st Copper Cleaner Cells 1 through 4) to further separate the copper/molybdenum concentrate from the tailings. The product from the 1st copper cleaner cells is pumped to the third separation stage while the tailings are pumped to four 1st copper cleaner/scavenger cells (1st Copper Cleaner/Scavenger Cells 1 through 4) to recover any lost copper/molybdenum concentrate. The 1st copper cleaner/scavenger cells product is pumped back to the Copper Regrind Cyclone for size classification while the tailings are pumped to join the tailings from the bulk rougher cells. The third separation stage utilizes four copper column cells (Copper Column Cells 1 through 4) and five column scavenger cells (Column Scavenger Cells 1 through 5) to achieve the final separation of the copper/molybdenum concentrate from the tailings. The product from the copper column cells is pumped to thickeners to condense the copper/molybdenum concentrate prior to further processing by the Combined Molybdenum Flotation Plant (see Section 3.1.14). The tailings from the copper column cells are pumped to the column scavenger cells. The product from the column scavenger cells is pumped back to the copper column cells for reprocessing while the tailings are pumped back to the 1st copper cleaner cells.

Ball milling and bulk flotation operations are a wet process, so any particulate emissions are considered negligible.

3.1.13.4 Routine Adjustments

If the conveying system to the Secondary Screen Feed Bin is out of commission, haul trucks may be used to transport ore to the Metcalf Concentrator. In this situation, front-end loaders would load haul trucks with ore at Mill IOS. Then, the haul trucks would travel to the Metcalf Concentrator and dump the ore into the Secondary Screen Feed Bin.

Additionally, minor changes in process unit configuration and to process chemicals in order to respond to the evolving ore characteristics are a routine part of the Metcalf Concentrator operations. These types of changes do not require authorization, are not addressed as an AOS, and are encompassed within the estimated emission calculations presented in this application. Any changes to the Metcalf Concentrator operations requiring authorization will be properly addressed through the permitting rules.

3.1.14 Operation 018: Combined Molybdenum Flotation and Concentrate Processing Operations

Process flow diagrams of the Combined Molybdenum Flotation Plant and Concentrate Processing Operations are presented in Figures D.17 through D.19 of Appendix D. The process flow diagrams are limited to equipment subject to regulations and the primary components of the bulk flotation and concentrate processing operations, and do not include electric pumps, sumps, process tanks, and piping, which need not be identified to understand the process. Descriptions of the Combined Molybdenum Flotation and Concentrate Processing Operations are presented in the following sections.

3.1.14.1 Combined Molybdenum Flotation Operations

Process flow diagrams of the Combined Molybdenum Flotation Operations are presented in Figures D.17 and D.18 of Appendix D. The Combined Molybdenum Flotation Operations utilize three stages to separate the bulk copper/molybdenum concentrate from the thickeners at the Morenci and Metcalf Concentrators into: (a) a copper concentrate product; and (b) a molybdenum concentrate product.

The first stage utilizes the Trash Screen in conjunction with 12 tanks (Molybdenum High Shear Conditioning Tanks 1 through 12) to condition the bulk copper/molybdenum concentrate prior to processing by eight rougher cells (Molybdenum Rougher Flotation Cells 1 through 8). The molybdenum concentrate product from the rougher cells is pumped to the second separation stage while the copper concentrate product tails is pumped to the copper concentrate thickeners prior to filtering and processing by the Copper Concentrate Processing Operations (Operation 006 - see Section 3.1.6). The second separation stage utilizes eighteen cleaner flotation cells (1st Molybdenum Cleaner Flotation Cells 1 through 5, 2nd Molybdenum Cleaner Flotation Cells 1 through 3, 3rd Molybdenum Cleaner Flotation Cells 1 through 6, and 4th Molybdenum Cleaner Flotation Cells 1 through 4) to further separate any remaining copper concentrate from the molybdenum concentrate. The product from the cleaner flotation cells is pumped to the third separation stage while the tailings are pumped to the Molybdenum Intermediate Thickener and then back to the Molybdenum High Shear Conditioning Tanks via the Molybdenum Feed Tank for reprocessing. The third separation stage utilizes two column cells (Molybdenum Flotation Column Cells 1 and 2) to achieve the final separation of the copper concentrate from the molybdenum concentrate. The product from the column cells is pumped to the Molybdenum Concentrate Thickener to condense the molybdenum concentrate prior to further processing by the Molybdenum Concentrate Processing Operations. The tailings from the column cells are pumped back to the cleaner flotation cells for reprocessing.

Various chemicals are added to the Combined Molybdenum Flotation Operations to optimize the separation of copper and molybdenum concentrate. The NaHS System is described in Section 3.1.14.3. CO_2 is injected into the Molybdenum Rougher and Cleaner Flotation Cells to help to optimize the flotation process by decreasing the pH of the Combined Molybdenum Flotation Operations. However, a low pH may cause a release of H_2S emissions from the NaHS that is added to various locations in the flotation process. NaHS is used to depress copper while allowing the flotation of molybdenum. Because H_2S is highly toxic, FMMI operates a series of scrubbers, referred to as the H_2S Scrubber System (exhausted to the atmosphere) to reduce worker's potential exposure to H_2S emissions. The H_2S Scrubber System is used only to reduce H_2S emissions for worker health and safety and for industrial hygiene purposes. It is not used to ensure compliance with an emission limitation or standard. Consequently, the H_2S Scrubber System is part of the physical and operational design of the Combined Molybdenum Flotation Operations and is an inherent part of the process.

The majority of the H_2S emission locations that are controlled by the H_2S Scrubber System are identified in Figures D.17 through D.19 of Appendix D. The remaining H_2S emission locations that are controlled by the H_2S Scrubber System are not identified in the process flow diagrams (process tanks, samplers, feed boxes, pump boxes, etc.), as they are not necessary to understand the process. Because CO_2 is never injected into the Molybdenum Plant Feed Tank, the pH of the solution in the tank is high enough to prevent the formation of H_2S even though NaHS is added. Consequently, it is unnecessary to vent the Molybdenum Plant Feed Tank to the H_2S Scrubber System.

The process of capturing the H_2S emissions in a gas stream may inadvertently capture entrained fine solids as well. Therefore, the H_2S Scrubber System includes a venturi scrubber to help remove the fine solids entrained in the gas stream followed by two packed bed scrubbers, arranged in series, to reduce the H_2S emissions. As shown in Figure D.18 of Appendix D, the H_2S Scrubber System uses sodium hydroxide (NaOH) to decrease H_2S emissions via chemical reaction.

Addition of the other chemicals is not described because their use emits negligible amounts of air pollutants, and they are not subject to any specifically applicable requirements.

3.1.14.2 Molybdenum Concentrate Processing Operations

The process flow diagram of the Molybdenum Concentrate Processing Operations is presented in Figure D.19 of Appendix D. Molybdenum concentrate from the thickener is pumped to the Molybdenum Filter where excess moisture is removed. The filtered molybdenum concentrate has a moisture content of 8.5% and is in the form of a cake. The molybdenum concentrate cake is transferred to the Molybdenum Filter Discharge Hopper to be stored prior to shipping for further processing or to customers. When a shipment needs to be prepared, the molybdenum concentrate cake is reclaimed from the hopper using the Molybdenum Filter Screw Conveyor, which feeds the molybdenum concentrate packaging containers. The containers are then loaded onto a truck for shipment offsite.

Emissions from the Molybdenum Concentrate Processing Operations are minimal due to the high moisture content of the concentrate material.

3.1.14.3 NaHS System

A process flow diagram of the NaHS System associated with the Combined Molybdenum Flotation Operations is presented in Figure D.19 of Appendix D. The locations where NaHS is added to the Combined Molybdenum Flotation Operations are detailed in Figures D.17 and D.18 of Appendix D. NaHS is used to depress copper while allowing the flotation of molybdenum.

NaHS has the potential to release H_2S emissions if mixed with an acid (low pH) or exposed to heat. However, H_2S emissions do not occur in a high pH mixture. When CO_2 is injected into the Molybdenum Rougher and Cleaner Flotation Cells, the pH of the Molybdenum Flotation Operations drops to a level where H_2S emissions may be released, and the H_2S Scrubber System is used to control emissions.

The NaHS Storage Tanks can be thermally insulated in order to minimize fluctuations in temperature that could cause a release of H_2S emissions. As an additional precaution, during the unloading of NaHS from trucks or railcars, the displaced vapor space of the NaHS storage tanks (working losses) can be vented back to the trucks or railcars to prevent potential releases of H_2S emissions to the atmosphere. Potential breathing loses from the NaHS storage tanks can be either absorbed using a carbon filter or prevented using a diesel fuel blanket on top of the NaHS in the storage tanks. These options are inherent to the design of the storage tanks and are not considered pollution control devices as they are primarily used for health and safety purposes to prevent exposure to H_2S emissions. FMMI also has the option to vent the vapor space of the NaHS Storage Tanks to the H_2S Scrubber System. The process flow diagram depicting vapor equalization during tank filling and the option of venting to the H_2S Scrubber System is presented in Figure D.19 of Appendix D.

3.1.14.4 Routine Adjustments

Minor changes in process unit configuration and to process chemicals in order to respond to the evolving ore characteristics are a routine part of the Combined Molybdenum Flotation Concentrate Processing Operations. These types of changes do not require authorization, are not addressed as an AOS, and are encompassed within the estimated emission calculations presented in this application. Any changes to the Combined Molybdenum Flotation and Concentrate Processing Operations requiring authorization will be properly addressed through the permitting rules.

3.1.15 Operation 021: Propane and Natural Gas Emergency Engines

The process flow diagram of the Propane and Natural Gas Emergency Engines at the FMMI facility is presented in Figure D.40 of Appendix D. FMMI currently operates fourteen propane and natural gas emergency engines. All fourteen of the engines are associated with generators. The propane and natural gas emergency engines are used to provide power to various sources in the event of outside commercial power interruption or when the power supply is unreliable. They are also used during maintenance checks, readiness testing, and/or certain non-emergency situations.

3.1.16 Operation 022: Prill Bins

The process flow diagram depicting the operations associated with the Prill Bins is presented in Figure D.35 of Appendix D. Ammonium nitrate prill is pneumatically delivered to the Prill Bins from the prill supplier's trucks. Prill Bins 1 through 3 share a common filling port while Prill Bins 4 through 7 each have their own filling port. Each of the bins is equipped with a bin vent to regulate the flow of air, however, the bin vents do not contain a capture/control mechanism (i.e., the bin vents do not contain a filter).

When preparing for a blast at the FMMI facility, ammonium nitrate prill is reclaimed from the bins and loaded into enclosed trucks. Fabric chutes facilitate the transfer from the bins to the hatch openings in the trucks. Fuel oil is also added to the trucks and is mixed with the prill to form ANFO. The ANFO is then transferred by truck to the blasting location and loaded into the prepared drill holes prior to detonation.

3.1.17 Operation 023: Tailings Operations

As described in Sections 3.1.2.5 and 3.1.13.3, tailings are separated from the copper and molybdenum concentrates produced by the Morenci and Metcalf Concentrators via bulk rougher flotation cells. Tailings are first sent to thickeners for water recovery before being pumped to the tailings storage areas in slurry form. At the storage area locations, cyclone systems receive the slurry and separate the tailings by size. The larger particles are placed on the outside of the tailings storage areas to build berms and lifts while the smaller particles are pumped to the center of the tailings storage areas.

Approximately 2,645 acres of the active tailings storage areas are considered “drying areas” such that they are susceptible to wind erosion and have the potential to emit PM, PM_{10}, $PM_{2.5}$, and HAP emissions. The control techniques used to minimize wind erosion emissions of the active tailings storage area may include: (a) using a wet dam construction technique; (b) applying water; (c) treating the active areas with polymer and/or magnesium chloride; (d) hydro-seeding or hydro-mulching; (e) limiting vehicle access and speed; (f) covering; (g) utilizing wind breaks; (h) facilitating encrustation; (i) maintaining the inherent moisture content; and (j) wetting the active areas with slurry. The application of control techniques is dependent on providing safe access to the tailings storage areas.

3.1.18 Operation 024: Miscellaneous Fuel Burning Equipment

The process flow diagram of the Miscellaneous Fuel Burning Equipment at the FMMI facility is presented in Figure D.42 of Appendix D. Miscellaneous fuel burning equipment consists of any equipment that is not an engine and is not directly tied to a specific major or supporting operations at the FMMI facility. The equipment includes:

- Light Vehicle Propane Pressure Washer;
- Locomotive Area Machine Shop Natural Gas Parts Washer;
- Natural Gas Small Space Heaters;
- Natural Gas Small Boilers;
- Propane Small Space Heaters; and
- Propane Small Boilers.

The Light Vehicle Propane Pressure Washer and Locomotive Area Machine Shop Natural Gas Parts Washer are used as necessary to remove contaminants or debris from different objects. The Small Space Heaters and Boilers are used primarily for human comfort purposes.

3.1.19 Operation 025: Diesel Non-Emergency Engines

The process flow diagram of the Diesel Non-Emergency Engines at the FMMI facility is presented in Figure D.41 of Appendix D. FMMI currently operate two diesel non-emergency engines. Neither of the engines are associated with generators. The diesel non-emergency engines are operated infrequently and are used to drive pumps for extraction of material from ponds or sumps.

3.2 DESCRIPTION OF PRODUCTS

The product associated with each major and supporting operations at the FMMI facility is presented in Table 3.1.

3.3 DESCRIPTION OF ALL PROCESS AND CONTROL EQUIPMENT FOR WHICH PERMITS ARE REQUIRED

The equipment associated with the FMMI facility that is subject to air quality permitting through ADEQ is presented in Table 3.2. Further detailed information about the equipment (maximum rated capacity, make, model, serial number, and date of manufacturer) is presented in Appendix B. Table 3.2 also presents the Source Classification Code (SCC) associated with each piece of equipment subject to air quality permitting as well as a reference to the applicable state (A.A.C.) and federal (NSPS and National Emission Standards for Hazardous Air Pollutants [NESHAP]) requirements. Further details about the applicable requirements are presented in Section 9.

All other equipment at the FMMI facility that is not identified in Table 3.2 is either an insignificant activity as defined in A.A.C. R18-2-101.68 or a trivial activity as defined in A.A.C. R18-2-101.146. Further information about these types of equipment or activities is presented in Section 10.

Table 3.1 Description of Products

Operation		Product
001	Mining Operations	Primary crushed ore for the Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant
		Uncrushed ore for leaching and storage
002	Morenci Concentrator	Bulk copper/molybdenum concentrate
		Tailings
003	MFL Fine Crushing Plant	Crushed and agglomerated ore for leaching
004	Lime Slaking Plants and Lime Transloading	Milk of lime
		Lime in trucks
005	Metcalf Power Plant	Electrical energy
006	Copper Concentrate Processing Operations	Filtered copper concentrate
009	Solution Extraction/Electrowinning Operations	Copper cathodes
		Lean electrolyte for the CLP
010	Concrete Batch Plant	Mixed concrete
011	Storage Tanks	Diesel for vehicles/various uses
		Gasoline for vehicles
013	Grizzly Operations	Size separated miscellaneous materials
014	Concentrate Leach Plant	Pregnant leach solution
		Tailings slurry
015	Diesel Emergency Engines	Mechanical energy or electrical energy (if a generator is used)
017	Metcalf Concentrator	Bulk slurry copper/molybdenum concentrate
		Tailings slurry
018	Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations	Thickened copper concentrate slurry
		Packaged molybdenum concentrate
021	Propane and Natural Gas Emergency Engines	Electrical energy
022	Prill Bins	Ammonium nitrate prill for blasting

Table 3.1 Description of Products

Operation		Product
023	Tailings Operations	Tailings in various forms (e.g., slurry, crimped, reseeded, capped, repurposed as roadways/causeways, etc.)
024	Miscellaneous Fuel Burning Equipment	Heat/hot water
025	Diesel Non-Emergency Engines	Mechanical energy

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 001: Mining Operations					
001-002	Dump Pocket Feed Hopper 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Dump Pocket Feed Hopper 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-187	Apron Feeder AF2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	In-Pit Crusher 2	3-03-024-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
001-249	Apron Feeder AF3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	In-Pit Crusher 3	3-03-024-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
001-006	In-Pit Crusher 2 FFDC	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	In-Pit Crusher 2	3-03-024-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Rock Hammer 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Discharge Conveyor DC2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46 (transfer onto)	40 CFR 60 Subparts A and LL (transfer onto)	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
001-250	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	--	-- [d]	-- [c]	--
	In-Pit Crusher 3	3-03-024-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Rock Hammer 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Feeder Belt FB3	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46 (transfer onto)	40 CFR 60 Subparts A and LL (transfer onto)	--
	Discharge Conveyor P11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-251	P11/P5 and P11/P12 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Discharge Conveyor P11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-344	Conveyor Belt P12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
001-015	P5/P6 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt P5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-016	Conveyor Belt P6 (transfer to Mill IOS)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-225	DC2/P9 and P9/P10 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Discharge Conveyor DC2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 (transfer from)	-- [a]	--
	Diverter Gate 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-226	Conveyor Belt P10 (transfer to MFL IOS)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
001-325	DC2/P5 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Discharge Conveyor DC2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Diverter Gate 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt P5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-323	Portable Cleanup Conveyor	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-299	Mill IOS/R1A FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Reclaim Feeder 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Reclaim Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Reclaim Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Reclaim Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
001-300	Mill IOS/R1B FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Reclaim Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Reclaim Feeder 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Reclaim Feeder 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R1B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-272	R1A and R1B/R7 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R1B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-277	R1A and R1B/R2 Bag Collector 1	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R1B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
001-277 (cont'd)	Conveyor Belt R2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-278	R2/R11 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-228	MFL IOS/R8 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Apron Feeder 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Apron Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
001-229	R8/R9 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 002: Morenci Concentrator					
002-022	R7/1A and 1B FFDC (vented inside)	--	-- [d]	--	--
	Conveyor Belt R7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Coarse Ore Splitter	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt 1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt 1B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-023	1A/COSB FFDC 1 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 2 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 3 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 4 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 5 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 6 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 7 (vented inside)	--	-- [d]	--	--
	1A/COSB FFDC 8 (vented inside)	--	-- [d]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-023 (cont'd)	1A/COSB FFDC 9 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Coarse Ore Storage Bin (COSB)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-024	1B/COSB FFDC 1 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 2 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 3 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 4 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 5 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 6 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 7 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 8 (vented inside)	--	-- [d]	--	--
	1B/COSB FFDC 9 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 1B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Coarse Ore Storage Bin (COSB)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-025	COSB/AFA/2A FFDC (vented inside)	--	-- [d]	--	--
	Apron Feeder A1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder A2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder A3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder A4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 2A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-026	COSB/AFB/2B FFDC (vented inside)	--	-- [d]	--	--
	Apron Feeder B1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder B2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder B3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder B4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-026 (cont'd)	Conveyor Belt 2B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-027	COSB/AFC/2C FFDC (vented inside)	--	-- [d]	--	--
	Apron Feeder C1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder C2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder C3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder C4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 2C	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-028	COSB/AFD/2D FFDC (vented inside)	--	-- [d]	--	--
	Apron Feeder D1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder D2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder D3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-028 (cont'd)	Apron Feeder D4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 2D	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-029	Fine Crushing Line A FFDC 1 (vented inside)	--	-- [d]	-- [c]	--
	Conveyor Belt 2A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Vibrating Grizzly 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Crusher 1	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Shaker Screen 1AN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 1AS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 1BN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 1BS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 1A	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-029 (cont'd)	Tertiary Crusher 1B	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-033	Fine Crushing Line A FFDC 2 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-030	Fine Crushing Line B FFDC 1	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 2B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Vibrating Grizzly 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Crusher 2	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Shaker Screen 2AN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 2AS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 2BN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 2BS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-030 (cont'd)	Tertiary Crusher 2A	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 2B	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-034	Fine Crushing Line B FFDC 2 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-031	Fine Crushing Line C FFDC 1	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 2C	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Vibrating Grizzly 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Crusher 3	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Shaker Screen 3AN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 3AS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 3BN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-031 (cont'd)	Shaker Screen 3BS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 3A	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 3B	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-035	Fine Crushing Line C to 3B to 3 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt 3B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-036	Fine Crushing Line C to 3B to 3A FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt 3B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-032	Fine Crushing Line D FFDC 1	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 2D	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-032 (cont'd)	Vibrating Grizzly 4	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Crusher 4	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Shaker Screen 4AN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 4AS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 4BN	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Shaker Screen 4BS	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 4A	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher 4B	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-326	Fine Crushing Line D FFDC 2 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-038	3/4/5 FFDC (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-039	3A/4A/5A FFDC (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 4A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 5A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-040	5A/FOSB FFDC 1 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 2 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 3 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 4 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 5 (vented inside)	--	-- [d]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-040 (cont'd)	5A/FOSB FFDC 6 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 7 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 8 (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 9 (vented inside)	--	-- [d]	--	--
	Conveyor Belt 5A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Fine Ore Storage Bin (FOSB)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-041	5/FOSB FFDC 1 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 2 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 3 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 4 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 5 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 6 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 7 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 8 (vented inside)	--	-- [d]	--	--
	5/FOSB FFDC 9 (vented inside)	--	-- [d]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-041 (cont'd)	Conveyor Belt 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Fine Ore Storage Bin (FOSB)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-045	Belt Feeder 1E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 1W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-046	Belt Feeder 2E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 2W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-046 (cont'd)	Ball Mill 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-047	Belt Feeder 3E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 3W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-048	Belt Feeder 4E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 4W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-049	Belt Feeder 5E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 5W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-050	Belt Feeder 6E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 6W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-051	Belt Feeder 7E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 7W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-052	Belt Feeder 8E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 8W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-053	Belt Feeder 9E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 9W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-054	Belt Feeder 10E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 10W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-055	Belt Feeder 11E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 11W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-056	Belt Feeder 12E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-057	Belt Feeder 13E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 13W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-13	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-13	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 13	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-058	Belt Feeder 14E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 14W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-059	Belt Feeder 15E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 15W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-15	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-15	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 15	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-060	Belt Feeder 16E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 16W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-16	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-16	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 16	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-061	Belt Feeder 17E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 17W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-17	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-17	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 17	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-062	Belt Feeder 18E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 18W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-18	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-18	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 18	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-063	Belt Feeder 19E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 19W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-19	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-19	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 19	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-064	Belt Feeder 20E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 20W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-20	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-20	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 20	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-065	Belt Feeder 21E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 21W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-21	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-21	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 21	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-066	Belt Feeder 22E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 22W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-22	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-22	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 22	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-067	Belt Feeder 23E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 23W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-23	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-23	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 23	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-068	Belt Feeder 24E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 24W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-24	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-24	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 24	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-069	Belt Feeder 25E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 25W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-25	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-25	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 25	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-070	Belt Feeder 26E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 26W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-26	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-26	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 26	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-071	Belt Feeder 27E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 27W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-27	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-27	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 27	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-072	Belt Feeder 28	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 6-28	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-28	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 28	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-073	Belt Feeder 29E	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 29W	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-073 (cont'd)	Conveyor 6-29	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor 7-29	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Ball Mill 29	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-074	Belt Feeder 30	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 6-30	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 7-30	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Ball Mill 30	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-075	Belt Feeder 31	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 6-31	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 7-31	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Ball Mill 31	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-076	Belt Feeder 32	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 6-32	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor 7-32	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Ball Mill 32	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
002-352	Regrind Mill 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Regrind Mill 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Regrind Mill 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Regrind Mill 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Regrind Mill 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Regrind Mill 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Morenci Concentrator Bulk Flotation	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 003: MFL Fine Crushing Plant					
003-273	R9/R10 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-330	R10/R3 FFDC	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-079	R3/R4 Bag Collector 3	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-080	R4/R5/R6 Bag Collector 4	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-080 (cont'd)	Conveyor Belt R5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt R6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-082	Scrubber 3C	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt R6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Metcalf Track Hopper Storage Bin (MTHSB)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-317	FFDC 3A	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Apron Feeder 2C1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2C2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2C3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2C4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2B3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-317 (cont'd)	Apron Feeder 2B4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2B5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2B6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2A3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2A4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2A5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Apron Feeder 2A6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3C	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor Belt 3B2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3B3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3A2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-317 (cont'd)	Conveyor Belt 3A3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	MFL Conveyor Belt 4C	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	MFL Conveyor Belt 4B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	MFL Conveyor Belt 4A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-301	FFDC 6A	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	MFL Conveyor Belt 4A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Scalping Screen A	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Crusher A	3-03-024-02	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Screen A1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Screen A2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-301 (cont'd)	Conveyor Belt 8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-302	FFDC 6B	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	MFL Conveyor Belt 4B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Scalping Screen B	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Crusher B	3-03-024-02	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Screen B1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Secondary Screen B2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-304	FFDC 1	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	MFL Conveyor Belt 4C	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-304 (cont'd)	Scalping Screen C	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Crusher C	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Screen C1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Secondary Screen C2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Conveyor Belt 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-089	Scrubber 5	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt 7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	MFL Conveyor Belt 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	MFL Conveyor Belt 11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-303	FFDC 8	--	A.A.C. R18-2-306.01 [b,d]	--	--
	MFL Conveyor Belt 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-088	Scrubber 4	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crushing Surge Bin (TCSB)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Belt Feeder 12-1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-5	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-088 (cont'd)	Belt Feeder 12-6	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
003-306	Tertiary Crushing Dust Collector (vented inside)	--	-- [d]	-- [c]	--
	Belt Feeder 12-1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Belt Feeder 12-5	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Belt Feeder 12-6	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Tertiary Crusher C1	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher C2	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher C3	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-306 (cont'd)	Tertiary Crusher C4	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Tertiary Crusher C5	3-03-024-03	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Tertiary Crusher C6	3-03-024-03	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
003-307	Conveyor Belt 9 Dust Collector (vented inside)	--	-- [d]	--	--
	Conveyor Belt 9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-320	14/15 FFDC	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 15	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
003-331	15/16 FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Conveyor Belt 15	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-331 (cont'd)	Conveyor Belt 16	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
003-309	16/S11 FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Conveyor Belt 16	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor Belt S11	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
003-199	Conveyor Belt S11 (transfer to FOIS)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-441	Dust Suppression Fan	--	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
003-201	FOIS/A1A Bag Collector 7	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Belt Feeder SF1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Belt Feeder SF2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt A1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-202	A1A/A2A Bag Collector 8	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt A1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-202 (cont'd)	Agglomeration Splitter	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt A2A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-203	A1A/A2C Bag Collector 9	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt A1A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Agglomeration Splitter	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt A2C	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-204	Agglomerating Unit 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-205	Agglomerating Unit 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
003-206	Conveyor Belt S12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-385	Overland Conveyor S26	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-386	Overland Conveyor S27	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-387	Overland Conveyor S28	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-388	Overland Conveyor S29 with Mobile Tripper	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-394	Portable Transfer Conveyor PT1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-396	Radial Stacker RS2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-397	Mobile Stacker Conveyor MBC	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-398	Ramp Super Portable Conveyor RP1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-399	Ramp Super Portable Conveyor RP2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-400	Ramp Super Portable Conveyor RP3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-401	Ramp Super Portable Conveyor RP4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-402	Ramp Super Portable Conveyor RP5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-403	Ramp Super Portable Conveyor RP6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-404	Ramp Super Portable Conveyor RP7	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-405	Ramp Super Portable Conveyor RP8	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-406	Ramp Super Portable Conveyor RP9	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-407	Ramp Super Portable Conveyor RP10	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-408	Ramp Super Portable Conveyor RP11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-409	Ramp Super Portable Conveyor RP12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-410	Ramp Super Portable Conveyor RP13	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-449	Ramp Super Portable Conveyor RP14	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-450	Ramp Super Portable Conveyor RP15	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-451	Ramp Super Portable Conveyor RP16	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-452	Ramp Super Portable Conveyor RP17	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
003-453	Ramp Super Portable Conveyor RP18	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-454	Ramp Super Portable Conveyor RP19	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-411	Horizontal Feed Conveyor HFC1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-412	Horizontal Conveyor HC1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-413	Radial Stacker RS3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-455	Horizontal Feed Conveyor HFC2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-456	Horizontal Conveyor HC2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
003-457	Radial Stacker RS4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
Operation 004: Lime Slaking Plants and Lime Transloading					
004-231	Lime Silo 1	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Silo 1 Dust Filter	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	-- [f]	-- [f]

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
004-231 (cont'd)	Lime Transfer Conveyor	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Feeder 1	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
004-232	Lime Silo 2	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Silo 2 Dust Filter	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	-- [f]	-- [f]
	Lime Transfer Conveyor	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Feeder 2	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
004-233	Lime Slaker 1	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
004-234	Lime Slaker 2	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
004-275	Metcalf Lime Silo	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Metcalf Lime Silo Bin Vent	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	-- [f]	-- [f]
	Metcalf Lime Screw Feeder	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
004-276	Metcalf Lime Slaker	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Metcalf Lime Slaker Wet Scrubber	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	-- [f]	-- [f]
004-440	Metcalf Lime Grit Wet Screen	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Metcalf Lime Grit Screw Conveyor	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Metcalf Lime Grit Collection Bin	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
004-445	Lime Transloading Conveyor	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Transloading Dust Collector	--	-- [h]	--	--
004-446	Lime Transloading Engine	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (non-emergency engine)	40 CFR 63 Subparts A and ZZZZ (new non-emergency CI engine at an area source)
Operation 005: Metcalf Power Plant					
005-108	Natural Gas Turbine 1	2-01-002-01	A.A.C. R18-2-306.01 A.A.C. R18-2-719	-- [i]	-- [j]
005-110	Natural Gas Turbine 2	2-01-002-01	A.A.C. R18-2-306.01 A.A.C. R18-2-719	-- [i]	-- [j]

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
005-432	Diesel Black Start Turbine Engine 1	2-02-001-02	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (existing black start CI engine at an area source)
005-433	Diesel Black Start Turbine Engine 2	2-02-001-02	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (existing black start CI engine at an area source)
Operation 006: Copper Concentrate Processing Operations					
006-391	Filter Feed Trash Screen	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
006-392	Copper Filter Discharge Hopper 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Copper Filter Discharge Hopper 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Copper Cake Discharge Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Copper Cake Discharge Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Final Concentrate Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
006-044	Conveyor Belt 10A South	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 11A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 11B	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 12	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 13	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt BA	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt BB	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt BC	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
006-335	Copper Concentrate Storage Building	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 009: Solution Extraction/Electrowinning Operations					
009-117	Central SX	4-90-001-99	A.A.C. R18-2-730	--	--
009-462	Central Backwash Bleed Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-463	Central Barren Organic Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-464	Central Bead Separator Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-465	Central High Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-466	Central Low Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-467	Central Gunk Tank 1	4-90-001-99	A.A.C. R18-2-730	--	--
009-468	Central Gunk Tank 2	4-90-001-99	A.A.C. R18-2-730	--	--
009-469	Central Gunk Tank 3	4-90-001-99	A.A.C. R18-2-730	--	--
009-470	Central Organic Recovery Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-471	Central Raffinate Pond	4-90-001-99	A.A.C. R18-2-730	--	--
009-118	Metcalf SX	4-90-001-99	A.A.C. R18-2-730	--	--
009-472	Metcalf Barren Organic Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-473	Metcalf High A Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-474	Metcalf High B Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
009-475	Metcalf Low A Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-476	Metcalf Low B Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-477	Metcalf SX-7 Diluent Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-478	Metcalf Gunk Tank 1	4-90-001-99	A.A.C. R18-2-730	--	--
009-479	Metcalf Gunk Tank 2	4-90-001-99	A.A.C. R18-2-730	--	--
009-480	Metcalf Gunk Tank 3	4-90-001-99	A.A.C. R18-2-730	--	--
009-481	Metcalf Holding Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-482	Metcalf Organic Recovery A Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-483	Metcalf Organic Recovery B Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-484	Metcalf Partially Loaded Organic Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-485	Metcalf Raffinate Pond	4-90-001-99	A.A.C. R18-2-730	--	--
009-119	Modoc SX	4-90-001-99	A.A.C. R18-2-730	--	--
009-486	Modoc Loaded Organic F Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-487	Modoc Loaded Organic G Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-488	Modoc High A Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
009-489	Modoc High B Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-490	Modoc Low A Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-491	Modoc Low B Decant Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-492	Modoc SX-7 Diluent Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-493	Modoc Gunk Tank 1	4-90-001-99	A.A.C. R18-2-730	--	--
009-494	Modoc Gunk Tank 2	4-90-001-99	A.A.C. R18-2-730	--	--
009-495	Modoc Gunk Tank 3	4-90-001-99	A.A.C. R18-2-730	--	--
009-496	Modoc Holding Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-497	Modoc Organic Recovery A Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-498	Modoc Organic Recovery B Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-499	Modoc Raffinate Pond	4-90-001-99	A.A.C. R18-2-730	--	--
009-349	Stargo SX	4-90-001-99	A.A.C. R18-2-730	--	--
009-500	Stargo Recovered Solution Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-501	Stargo Gunk Tank 1	4-90-001-99	A.A.C. R18-2-730	--	--
009-502	Stargo Gunk Tank 2	4-90-001-99	A.A.C. R18-2-730	--	--
009-503	Stargo Gunk Tank 3	4-90-001-99	A.A.C. R18-2-730	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
009-504	Stargo Loaded Organic Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-505	Stargo Holding Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-506	Stargo Stormwater Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-507	Stargo Tricanter Feed Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-508	Stargo Slurry Tank	4-90-001-99	A.A.C. R18-2-730	--	--
009-121	Central EW	3-03-999-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
009-122	Southside EW	3-03-999-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
009-221	Stargo EW	3-03-999-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
009-123	Small Industrial Natural Gas Boiler 1	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]
009-184	Small Industrial Natural Gas Boiler 2	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]
009-185	Small Industrial Natural Gas Boiler 3	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
009-222	Small Industrial Natural Gas Boiler 4	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]
009-223	Small Industrial Natural Gas Boiler 5	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]
009-274	Diesel Hot Water Pressure Cleaner 1	1-02-005-03	A.A.C. R18-2-724	-- [l]	-- [m]
009-347	Diesel Hot Water Pressure Cleaner 2	1-02-005-03	A.A.C. R18-2-724	-- [l]	-- [m]
009-422	Modoc Test Facility SX	4-90-001-99	A.A.C. R18-2-730	--	--
009-423	Modoc Test Facility EW	3-03-999-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
009-424	A Organic Tank (Modoc Test Facility)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
009-425	B Organic Tank (Modoc Test Facility)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
009-426	Diluent Tank (Modoc Test Facility)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
Operation 010: Concrete Batch Plant					
010-144	Feed Hopper	3-05-011-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
010-145	Aggregate Conveyor Belt	3-05-011-23	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
010-146	Fly Ash Silo	3-05-011-17	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
	Fly Ash Silo Bin Vent	3-05-011-17	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723 [g]	-- [n]	--
	Fly Ash Screw Conveyor	3-05-011-17	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
010-147	Cement Silo	3-05-011-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
	Cement Silo Bin Vent	3-05-011-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723 [g]	-- [n]	--
	Cement Screw Conveyor	3-05-011-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
010-148	CBP Aggregate Conveyor Belt	3-05-011-23	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
	Fly Ash Silo Screw Conveyor	3-05-011-17	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
	Cement Silo Screw Conveyor	3-05-011-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--
	Weigh Hopper	3-05-011-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	-- [n]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
010-270	Propane Hot Water Heater 1	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
010-271	Propane Hot Water Heater 2	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
010-310	Propane Hot Water Heater 3	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
Operation 011: Storage Tanks					
011-150	Diesel Tank D1	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	-- [o]	-- [p]
011-151	Diesel Tank D2	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	-- [o]	-- [p]
011-154	Diesel Tank D5	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	-- [o]	-- [p]
011-161	Diesel Tank Pit 95	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	-- [o]	-- [p]
011-155	Gasoline Tank G1	4-07-146-97 4-07-146-98	A.A.C. R18-2-710 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.105	-- [q]	40 CFR 63 Subparts A and CCCCCC
011-156	Gasoline Tank G2	4-07-146-97 4-07-146-98	A.A.C. R18-2-710 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.105	-- [q]	40 CFR 63 Subparts A and CCCCCC
011-157	Gasoline Tank G3	4-07-146-97 4-07-146-98	A.A.C. R18-2-710 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.105	-- [q]	40 CFR 63 Subparts A and CCCCCC

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 013: Grizzly Operations					
013-195	Concentrate Grizzly	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
013-337	Construction Grizzly 1	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722	-- [r]	--
013-338	Construction Grizzly 2	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722	-- [r]	--
013-339	Construction Grizzly 3	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722	-- [r]	--
013-380	Stockpile Grizzly 1	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
013-381	Stockpile Grizzly 2	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
Operation 014: Concentrate Leach Plant					
014-242	Natural Gas Startup Boiler	1-02-006-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subparts A and Dc	-- [k]
014-239	Pressure Leach Vessel 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Pressure Leach Vessel 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
014-239 (cont'd)	PLV 2-Stage Scrubber	--	A.A.C. R18-2-306.01 [b,h]	--	--
014-240	PLV Cooling Tower	3-85-001-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	-- [s]
014-241	Oxygen Plant Cooling Tower 1	3-85-001-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	-- [s]
014-348	Flocculant Bin	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Flocculant Bin Vent	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--
	Flocculant Feeder	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
014-254	Lime Silo	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- [f]	-- [f]
	Lime Silo Bin Vent	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	-- [f]	-- [f]
014-253	Super Sack Unloader	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Super Sack Unloader Bin Vent	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 015: Diesel Emergency Engines					
015-262	GO Diesel Emergency Generator GNO37A	2-02-001-02	A.A.C. R18-2-306.01 A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-415	ETPS Diesel Emergency Generator GNO36A	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-419	NTPS Diesel Emergency Generator GNO46A	2-02-001-02	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (existing emergency CI engine at an area source)
015-421	Central SX Diesel Emergency Generator GNO95A	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
015-434	Metcalf Diesel Fire Pump Engine	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-439	Emergency Diesel Generator WWTP GNO61A	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-442	Metcalf Clean Room Diesel Emergency Generator	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
015-461	Metcalf Mill Diesel Emergency Generator	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency CI engine at an area source)
Operation 017: Metcalf Concentrator					
017-318	Secondary Screen Feed Bin FFDC	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt R11	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	B2 Secondary Crusher Discharge Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Secondary Screen Feed Bin	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-280	Secondary Screening FFDC 1	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Secondary Screen Belt Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Secondary Screen 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B1 Secondary Crusher Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B3 Crushed Ore A Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-281	Secondary Screening FFDC 2	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Secondary Screen Belt Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Secondary Screen 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B1 Secondary Crusher Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B3 Crushed Ore A Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-319	Secondary Crusher Feed Bin FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B1 Secondary Crusher Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-319 (cont'd)	Secondary Crusher Feed Bin	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
017-283	Secondary Crushing FFDC 1	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Secondary Crusher Belt Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Metcalf Secondary Crusher 1	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B2 Secondary Crusher Discharge Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-284	Secondary Crushing FFDC 2	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	Secondary Crusher Belt Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Metcalf Secondary Crusher 2	3-03-024-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B2 Secondary Crusher Discharge Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-285	Crushed Ore A/B Conveyor Transfer Point FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B3 Crushed Ore A Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-285 (cont'd)	B4 Crushed Ore B Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-286	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B4 Crushed Ore B Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B5 Crushed Ore Bin Tripper Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-287	Crushed Ore Bin FFDC 1	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B5 Crushed Ore Bin Tripper Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Bin A	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Crushed Ore Belt Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 3	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 4	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-287 (cont'd)	Crushed Ore Belt Feeder 5	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 6	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B6 Crushed Ore Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B7 Crushed Ore Feed Transfer Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-288	Crushed Ore Bin FFDC 2	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B5 Crushed Ore Bin Tripper Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Bin B	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Crushed Ore Belt Feeder 7	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 8	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 9	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 10	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-288 (cont'd)	Crushed Ore Belt Feeder 11	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 12	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B6 Crushed Ore Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-289	Crushed Ore Bin FFDC 3	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B5 Crushed Ore Bin Tripper Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Bin B	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Crushed Ore Belt Feeder 13	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 14	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 15	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 16	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 17	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-289 (cont'd)	Crushed Ore Belt Feeder 18	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B6 Crushed Ore Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-290	Crushed Ore Bin FFDC 4	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B5 Crushed Ore Bin Tripper Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Bin C	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Crushed Ore Belt Feeder 19	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 20	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 21	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 22	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 23	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crushed Ore Belt Feeder 24	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-290 (cont'd)	B6 Crushed Ore Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
017-291	Crushed Ore Transfers FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B7 Crushed Ore Feed Transfer Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crusher Surge Bin	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B8-A Crusher Belt Feeder	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B8-B Crusher Belt Feeder	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B9 Crusher Feed Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Crusher Feed Hopper	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
017-292	HRC/HPGR Crusher FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	HRC/HPGR Crusher	3-03-024-03	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B10 Crusher Discharge Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-294	Wet Screen Feed FFDC	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	B10 Crusher Discharge Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Feed Bin	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
017-327	B11-A Wet Screen Belt Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B11-B Wet Screen Belt Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Wet Screen 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	B12 Wet Screen Oversize Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B13 Wet Screen Oversize Transfer Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	B14 Wet Screen Oversize Shuttle Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Oversize Bin	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
017-327 (cont'd)	Wet Screen Oversize Belt Feeder 1	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Oversize Belt Feeder 2	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Oversize Belt Feeder 3	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Oversize Belt Feeder 4	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Wet Screen Oversize Belt Feeder 5	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Metcalf Ball Mill 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Metcalf Ball Mill 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Metcalf Regrind Mill 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Metcalf Regrind Mill 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Metcalf Concentrator Bulk Flotation	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- [a]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations					
018-333	Trash Screen	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
018-334	Molybdenum Filter Discharge Hopper	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Molybdenum Filter Screw Conveyor	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	Molybdenum Packaging	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
018-336	Combined Molybdenum Flotation	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- [a]	--
	NaHS Storage Tank 1	3-01-875-97 3-01-875-98	A.A.C. R18-2-730	--	--
	NaHS Storage Tank 2	3-01-875-97 3-01-875-98	A.A.C. R18-2-730	--	--
	H_2S Scrubber System	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730 [g]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 021: Propane and Natural Gas Emergency Engines					
021-367	Western King Site 1 Propane Emergency Generator GNO21A	2-02-010-01	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-368	Western King Site 2 Propane Emergency Generator GNO20A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-369	Engineering Yard Propane Emergency Generator GNO19A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-373	Flagpole Propane Emergency Generator GNO22A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A	2-02-010-01	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-377	Garfield Connex Propane Emergency Generator GNO48A	2-02-010-01	A.A.C. R18-2-719 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	--	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-435	GSC Propane Emergency Generator GNO23A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-447	Sunridge Propane Emergency Generator GNO85A	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
021-509	GSC Natural Gas Emergency Generator	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.83 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and JJJJ (emergency engine)	40 CFR 63 Subparts A and ZZZZ (new emergency SI engine at an area source)
Operation 022: Prill Bins					
022-393	Prill Bin 1	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 2	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 3	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 4	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 5	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 6	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Prill Bin 7	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
Operation 024: Miscellaneous Fuel Burning Equipment					
024-420	Light Vehicle Propane Pressure Washer	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer	1-02-006-03	A.A.C. R18-2-724	-- [l]	-- [k]
024-443	Natural Gas Small Space Heaters	1-02-006-03	A.A.C. R18-2-724	-- [l]	-- [k]
	Natural Gas Small Boilers	1-02-006-03	A.A.C. R18-2-724	-- [l]	-- [k]
024-444	Propane Small Space Heaters	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
	Propane Small Boilers	1-02-010-02	A.A.C. R18-2-724	-- [l]	-- [k]
Operation 025: Diesel Non-Emergency Engines					
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (non-emergency engine)	40 CFR 63 Subparts A and ZZZZ (new non-emergency CI engine at an area source)
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine	2-02-001-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subparts A and IIII (non-emergency engine)	40 CFR 63 Subparts A and ZZZZ (new non-emergency CI engine at an area source)
AOS1: Morenci Concentrator Quaternary Crushing Operations					
002-033 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	--	-- [d]	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-033 (AOS1) (cont'd)	Conveyor Belt 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-034 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-035 (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt 3B (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-036 (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	--	--
	Conveyor Belt 3B (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 3A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-326 (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-311 (AOS1)	West Transfer Points FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	West Proportioning Gate 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	West RC Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	West RC Product Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	West Proportioning Gate 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	West Transfer Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor Belt 4 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-312 (AOS1)	West Surge Bin FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	West RC Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	West Surge Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-313 (AOS1)	West RC FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	West RC Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	West Flop Gate (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	West RC Feed Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	West RC (AOS1)	3-03-024-03	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	West RC Product Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
002-314 (AOS1)	East Transfer Points FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belt 3A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	East Proportioning Gate 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	East RC Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	East RC Product Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-314 (AOS1) (cont'd)	East Proportioning Gate 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	East Transfer Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor Belt 4A (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
002-315 (AOS1)	East Surge Bin FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b]	-- [c]	--
	East RC Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	East Surge Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
002-316 (AOS1)	East RC FFDC (AOS1)	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	East RC Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	East Flop Gate (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	East RC Feed Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--
	East RC (AOS1)	3-03-024-03	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-316 (AOS1) (cont'd)	East RC Product Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
002-038 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	--	-- [d]	--	--
	Conveyor Belt 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	West Proportioning Gate 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt 4 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Conveyor Belt 5 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
002-039 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	--	-- [d]	-- [c]	--
	Conveyor Belt 3A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	East Proportioning Gate 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Conveyor Belt 4A (AOS1)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subparts A and LL [e]	--
	Conveyor Belt 5A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
002-040 (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 2 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 3 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 4 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 5 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 6 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 7 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 8 (AOS1) (vented inside)	--	-- [d]	--	--
	5A/FOSB FFDC 9 (AOS1) (vented inside)	--	-- [d]	--	--
	Conveyor Belt 5A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
	Fine Ore Storage Bin (FOSB) (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
AOS2: Concentrate Leach Plant Upgrades					
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Vent Gas Cyclone 1 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--
	Spray Condenser 1 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--
	PLV Scrubber 1 (AOS2)	--	A.A.C. R18-2-306.01 [b,h]	--	--
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
	Vent Gas Cyclone 2 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--
	Spray Condenser 2 (AOS2)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 [g]	--	--
	PLV Scrubber 2 (AOS2)	--	A.A.C. R18-2-306.01 [b,h]	--	--
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	3-85-001-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	-- [s]

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP
AOS3: Primary Crushing and Overland Conveying Operations					
001-256 (AOS3)	Crushers (AOS3)	3-03-024-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 or A.A.C. R18-2-901.1 A.A.C. R18-2-901.46 (DOM TBD)	40 CFR 60 Subparts A and LL (DOM TBD)	--
	Pollution Control Device for Crushers (AOS3)	--	A.A.C. R18-2-306.01 [b,d]	-- [c]	--
	Conveyor Belts (AOS3)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- [a]	--
	Pollution Control Device for Conveyor Belts (AOS3)	--	A.A.C. R18-2-306.01 [b,d]	--	--

[a] The equipment is not subject to A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL (Standards of Performance for Metallic Mineral Processing Plants) because the equipment is not a crusher or screen located in an open-pit mine or a crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, or railcar unloading station located at a mill or concentrator.

[b] For convenience, A.A.C. R18-2-306.01 is listed as applicable to the pollution control device. However, the voluntary limitation is actually applicable to the process equipment controlled by the pollution control device and the pollution control device is used to demonstrate compliance with the voluntary emission limitation.

[c] The pollution control device is not an affected facility subject to A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL (Standards of Performance for Metallic Mineral Processing Plants). Instead, it controls affected facilities subject to A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL and is used to ensure compliance with the requirements of A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL.

[d] The pollution control device is not an affected facility subject to A.A.C. R18-2-702.B.3 and A.A.C. R18-2-721 (Standards of Performance for Existing Nonferrous Metals Industry Sources). Instead, it controls affected facilities subject to A.A.C. R18-2-702.B.3 and A.A.C. R18-2-721 and is used to ensure compliance with the requirements of A.A.C. R18-2-702.B.3 and A.A.C. R18-2-721.

[e] The affected facilities subject to 40 CFR 60 Subpart LL (Standards of Performance for Metallic Mineral Processing Plants) are the conveyor belt transfer points (points in the conveying operation where the metallic mineral or metallic mineral concentrate is transferred to or from a conveyor belt except where the metallic mineral is being transferred to a stockpile).

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP

[f] The equipment is not subject to 40 CFR 60 Subpart HH (Standards of Performance for Lime Manufacturing Plants) or 40 CFR 63 Subpart AAAAA (National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants) because it is not a kiln and FMMI is not a major source of HAP emissions and does not manufacture lime products through calcination.

[g] The equipment is not considered a pollution control device because it is either inherent to the process or the primary purpose is not pollution control.

[h] The pollution control device is not an affected facility subject to A.A.C. R18-2-702.B.3 and A.A.C. R18-2-730 (Standards of Performance for Unclassified Sources). Instead, it controls affected facilities subject to A.A.C. R18-2-702.B.3 and A.A.C. R18-2-730 and is used to ensure compliance with the requirements of A.A.C. R18-2-702.B.3 and A.A.C. R18-2-730.

[i] The equipment is not subject to 40 CFR 60 Subparts GG (Standards of Performance for Stationary Gas Turbines) or KKKK (Standards of Performance for Stationary Combustion Turbines) because the turbines were constructed prior to October 3, 1977.

[j] The equipment is not subject to 40 CFR 63 Subpart YYYY (National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines) because FMMI is not a major source of HAP emissions.

[k] The equipment is exempt from 40 CFR 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources) because it is considered a gas-fired boiler.

[l] The equipment is not subject to 40 CFR 60 Subparts D (Standards of Performance for Fossil Fuel-Fired Steam Generators), Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units), or 40 CFR 60 Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) because the equipment has a maximum design heat input capacity of less than 10 MMBtu/hr.

[m] The equipment is exempt from 40 CFR 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources) because it is considered a hot water heater.

[n] The equipment is not subject to 40 CFR 60 Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) because the Concrete Batch Plant does not have a crusher or grinding mill.

[o] The equipment is not subject to 40 CFR 60 Subparts K (Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978), Ka (Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984), or Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984) because diesel is not considered a petroleum liquid (Subparts K and Ka) and has a maximum true vapor pressure below 3.5 kPa (Subpart Kb).

[p] The equipment is not subject to 40 CFR 63 Subpart EEEE (National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)) because FMMI is not a major source of HAP emissions and diesel is not considered an organic liquid.

[q] The equipment is not subject to 40 CFR 60 Subparts K (Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978), Ka (Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984), or Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984) because the tanks are less than 75 m^3.

[r] The equipment is not subject to 40 CFR 60 Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) because grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be affected facilities (i.e., screening operations).

Table 3.2 Equipment Subject to Air Quality Permitting

Process Number	Equipment Description	Source Classification Code (SCC)	Applicable Requirements Reference		
			State	NSPS	NESHAP

[s] The equipment is not subject to 40 CFR 63 Subpart Q (National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers) because FMMI is not a major source of HAP emissions.

4 ALTERNATE OPERATING SCENARIOS

4.1 DESCRIPTION OF AOS

As described in Section 2.5, FMMI is proposes to make changes to previously permitted AOS. Description of each AOS to be included in FMMI's renewal permit is presented in the following sections.

4.1.1 AOS1: Morenci Concentrator Quaternary Crushing Operations

As part of MPR #56315, FMMI was authorized to upgrade the Morenci Concentrator Crushing Operations by installing the east and west quaternary crushing systems, replacing Conveyor Belt 4A, and extending Conveyor Belts 3, 3A, and 5A. Process flow diagrams of AOS1 are presented in Figures D.8 and D.10 of Appendix D.

The east and west quaternary crushing system operations will begin with ore being conveyed from Conveyor Belts 3 and 3A to the East and West Roll Crusher (RC) Feed Conveyors via East and West Proportioning Gate 1 and 2. Conveyor Belt 3 will feed the West RC Feed Conveyor while Conveyor Belt 3A will feed the East RC Feed Conveyor. The East and West RC Feed Conveyors will then discharge to the East and West Surge Bins, respectively. The East and West RC Feeders will reclaim the ore from the Surge Bins and transfer it to the East and West RC Feed Bins via the East and West Flop Gates, respectively, which will be used to regulate the flow of ore to the East and West RCs. The reclaim and material transfers to the RC Feed Bins will occur within enclosed areas between the Surge Bins and the Feed Bins. The quaternary crushed ore from the East and West RCs will discharge to the East and West RC Product Conveyors, respectively. Alternatively, the East and West RC Feeders can directly feed the East and West RC Product Conveyors via the East and West Flop Gates, respectively, if the RCs are not operating. Using the East Proportioning Gate 2, the East RC Product Conveyor will feed either Conveyor Belt 4A for transfer to the FOSB via Conveyor Belt 5A or the East Transfer Conveyor, which will route the ore back to the East RC Feed Conveyor for reprocessing through the East Quaternary Crushing System. Using the West Proportioning Gate 2, the West RC Product Conveyor can feed either the West Transfer Conveyor, which will discharge to Conveyor Belt 4 for transfer to the FOSB via Conveyor Belt 5 or the West RC Feed Conveyor, which will allow the ore to be reprocessed by the West Quaternary Crushing System.

As shown in Figures D.8 and D.10 of Appendix D, emissions from the east and west quaternary crushing systems will be controlled by the following FFDCs:

- West Transfer Points FFDC (exhausted to the atmosphere);
- West Surge Bin FFDC (exhausted to the atmosphere);
- West RC FFDC (exhausted to the atmosphere);
- East Transfer Points FFDC (exhausted to the atmosphere);
- East Surge Bin FFDC (exhausted to the atmosphere); and
- East RC FFDC (exhausted to the atmosphere).

Because FMMI has not yet made the authorized changes, AOS1 corresponds to the future operation of the quaternary crushing systems. FMMI is currently operating under the non-AOS1 operations described in Section 3.1.2.

4.1.2 AOS2: Concentrate Leach Plant Upgrades

SPR #96391 authorized FMMI to upgrade the CLP by making the following changes:

- Increase the maximum hourly capacity of the PLVs from 29.1 tph total to 20 tph each;
- Add an additional cooling tower to support the Oxygen Plant; and
- Replace the existing 2-Stage Scrubber with a two-train control system (one for each PLV).

The new parallel pollution control trains for the PLVs (Process #s 014-458 and 014-459) will each consist of: (a) a Vent Gas Cyclone to recover any slurry entrained in the exhaust gas; (b) a Spray Condenser to condense any remaining steam; and (c) a Scrubber to control any remaining particulate matter. The exhaust from the Scrubbers is the release points to the atmosphere.

The design of the pollution control trains includes an Emergency Relief Vessel located after the Spray Condensers for bypass of the Scrubbers in the case of an emergency. It is conservatively planned for the Emergency Relief Vessel to be used twice per year. Due to the minimal emissions expected for emergencies, the Emergency Relief Vessel is considered a trivial activity (see Section 10).

The process flow diagram of AOS2 is presented in Figure D.29 of Appendix D. Because the facility changes may not be completed by the time FMMI is issued their renewal permit, AOS2 is established to account for operations following the facility changes (while still maintaining authorization for existing operations).

4.1.3 AOS3: Primary Crushing and Overland Conveying Operations

AOS3 corresponds to the operation of portable crushing and conveying systems when the in-pit crushers are down for maintenance or repair or when the conveying systems are unable to deliver ore to Mill IOS or MFL IOS (see Section 3.1.1.2 for a description of non-AOS3 operations). The portable crushing and conveying systems will be used to process and transfer ore to a conveyor or stockpile downstream of the failed component of the IPCC system. The portable crushing and conveying systems may be rented or brought in from another Freeport-McMoRan Copper & Gold facility. Consequently, detailed information regarding the exact equipment to be used cannot be provided.

The portable crushing and conveying systems will be equipped with pollution control methods equivalent to the parts of the IPCC system they are replacing. Therefore, emissions during operation of the portable crushing and conveying systems are less than or equal to the emission estimates for the permanent IPCC system.

4.2 AOS PRODUCTS

The products associated with AOS at the FMMI facility are presented in Table 4.1.

Table 4.1 Description of AOS Products

Operation		Product
AOS1	Morenci Concentrator Quaternary Crushing Operations	Crushed ore
AOS2	Concentrate Leach Plant Upgrades	Pregnant leach solution
		Tailings slurry
AOS3	Primary Crushing and Overland Conveying Operations	Primary crushed ore for the Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant

5 IDENTIFICATION AND DESCRIPTION OF POLLUTION CONTROLS

5.1 REFERENCE TO APPLICABLE TEST METHODS

The requirements applicable to each piece of equipment and/or process at the FMMI facility are identified in Table 3.2 and described in Tables 9.1 through 9.19. The applicable test methods that can be used to determine compliance with the applicable emission standards include:

- Opacity Standard: U.S. Environmental Protection Agency (EPA) Reference Method 9, EPA Reference Method 22, or Visible Emission Surveys;
- PM Emission Standard: EPA Reference Method 5 and (if necessary) EPA Reference Method 202;
- PM_{10} Emission Standard: EPA Reference Method 201 or 201A and (if necessary) EPA Reference Method 202 (alternately EPA Reference Method 5 can be used with the assumption that all particulate collected is PM_{10});
- CO Emission Standard: EPA Reference Method 10;
- NO_X Emission Standard: EPA Reference Method 7E;
- SO_2 Emission Standard EPA Reference Method 6 or 6C; and
- VOC Emission Standard: EPA Reference Method 25A.

5.2 IDENTIFICATION, DESCRIPTION, AND LOCATION

Identification and description of the pollution control equipment utilized at the FMMI facility is presented in Table 5.1. The general location of the pollution control equipment is shown in the process flow diagrams presented in Appendix D and the site diagrams presented in Section 12.

Bin vents, silo dust filters, the Metcalf Lime Slaker Wet Scrubber (Process #004-276), and the H_2S Scrubber System (Process #018-336) are not considered pollution control devices because they are inherent to the process equipment and have a primary function that is not pollution control. However, they are included in Table 5.1 for reference purposes and because they have a secondary benefit of controlling emissions. Additionally, pollution prevention techniques such as unpaved road watering, water sprays, mist eliminators, covers, thermal retention balls, etc. are also not considered pollution control devices. However, they are included in Table 5.1 for reference purposes and consistency.

FMMI has numerous buildings, structures, chutes, transfer towers, and enclosures that help minimize the release of particulate matter emissions to the atmosphere. These are not addressed individually in Table 5.1.

FMMI utilizes a variety of compliance monitoring devices, including the following currently required by Class I Air Quality Permit #72683 for Scrubber 3C (Process #003-082), Scrubber 4 (Process #003-088), and Scrubber 5 (Process #003-089):

- A continuous differential pressure monitoring system for the gas stream through each scrubber; and
- A continuous flow rate monitoring system for the scrubbing liquid.

Other compliance activities are presented in Tables 9.1 through 9.19.

5.3 RATED AND OPERATING EFFICIENCIES

The rated and operating efficiency of the air pollution control equipment and methods used at the FMMI facility is presented in Table 5.1.

5.4 DATA NECESSARY TO ESTABLISH REQUIRED EFFICIENCY

As presented in Section 9, there are no applicable requirements for the efficiency of the air pollution control equipment used at the FMMI facility. Consequently, it is unnecessary provide data necessary to establish a required efficiency. As described in Section 5.1, EPA reference methods are used to demonstrate compliance with applicable emission standards. Additionally, the following methods are used to ensure proper operation of the pollution control devices:

- Use of compliance monitoring devices (see Section 5.2); and
- Other miscellaneous compliance activities (see Tables 9.1 through 9.19).

5.5 NEW OR MODIFIED POLLUTION CONTROL EQUIPMENT

FMMI does not propose to add or modify any pollution control equipment. Consequently, it is not necessary as part of this application to provide evidence that ambient air quality standards, or maximum allowable increases under A.A.C. R18-2-218, will not be violated.

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
Operation 001: Mining Operations						
001-001a	Unpaved Road Watering and/or Chemical Dust Suppression Use	Vehicle Travel on Unpaved Roads	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-002b	Water Spray/Wet Suppression	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-187	Water Spray/Wet Suppression	Apron Feeder AF2 to In-Pit Crusher 2	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-249	Water Spray/Wet Suppression	Apron Feeder AF3 to In-Pit Crusher 3	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-006	In-Pit Crusher 2 FFDC	In-Pit Crusher 2 In-Pit Crusher 2 to Discharge Conveyor DC2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	17,900 dscfm	99.99%
001-250	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	In-Pit Crusher 3 In-Pit Crusher 3 to Feeder Belt FB3 Feeder Belt FB3 to Discharge Conveyor P11	PM, PM_{10}, $PM_{2.5}$, HAPs	None	12,000 dscfm	99.99%
001-251	P11/P5 and P11/P12 FFDC	Discharge Conveyor P11 to Conveyor Belt P5 Discharge Conveyor P11 to Conveyor Belt P12	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	15,300 dscfm	99.99%
001-344	Water Spray/Wet Suppression	Conveyor Belt P12 to Conveyor Belt P10	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-015	P5/P6 FFDC	Conveyor Belt P5 to Conveyor Belt P6	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	12,800 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
001-016	Water Spray/Wet Suppression	Conveyor Belt P6 (transfer to Mill IOS)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-225	DC2/P9 and P9/P10 FFDC	Discharge Conveyor DC2 to Conveyor Belt P9 via Diverter Gate 2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	18,400 dscfm	99.99%
		Conveyor Belt P9 to Conveyor Belt P10				
001-226	Water Spray/Wet Suppression	Conveyor Belt P10 (transfer to MFL IOS)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
001-325	DC2/P5 FFDC	Discharge Conveyor DC2 to Conveyor Belt P5 via Diverter Gate 2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	7,300 dscfm	99.99%
001-299	Mill IOS/R1A FFDC	Reclaim Feeder 1 to Conveyor Belt R1A	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	12,500 dscfm	99.99%
		Reclaim Feeder 2 to Conveyor Belt R1A				
		Reclaim Feeder 3 to Conveyor Belt R1A				
		Reclaim Feeder 4 to Conveyor Belt R1A				
001-300	Mill IOS/R1B FFDC	Reclaim Feeder 5 to Conveyor Belt R1B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	10,000 dscfm	99.99%
		Reclaim Feeder 6 to Conveyor Belt R1B				
		Reclaim Feeder 7 to Conveyor Belt R1B				
001-272	R1A and R1B/R7 FFDC	Conveyor Belt R1A to Conveyor Belt R7	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,000 dscfm	99.99%
		Conveyor Belt R1B to Conveyor Belt R7				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
001-277	R1A and R1B/R2 Bag Collector 1	Conveyor Belt R1A to Conveyor Belt R2 Conveyor Belt R1B to Conveyor Belt R2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	3,100 dscfm	99 - 99.5%
001-278	R2/R11 FFDC	Conveyor Belt R2 to Conveyor Belt R11	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	4,600 dscfm	99.99%
001-228	MFL IOS/R8 FFDC	Apron Feeder 1 to Conveyor Belt R8 Apron Feeder 2 to Conveyor Belt R8	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	12,800 dscfm	99.99%
001-229	R8/R9 FFDC	Conveyor Belt R8 to Conveyor Belt R9	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	10,600 dscfm	99.99%
Operation 002: Morenci Concentrator						
002-022	R7/1A and 1B FFDC (vented inside)	Conveyor Belt R7 to Conveyor Belt 1A via Coarse Ore Splitter Conveyor Belt R7 to Conveyor Belt 1B via Coarse Ore Splitter	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
002-023	1A/COSB FFDC 1 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 2 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 3 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 4 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-023 (cont'd)	1A/COSB FFDC 5 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 6 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 7 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 8 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1A/COSB FFDC 9 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
002-024	1B/COSB FFDC 1 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 2 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 3 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 4 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 5 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 6 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-024 (cont'd)	1B/COSB FFDC 7 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 8 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	1B/COSB FFDC 9 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
002-025	COSB/AFA/2A FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder A1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Coarse Ore Storage Bin (COSB) to Apron Feeder A2				
		Coarse Ore Storage Bin (COSB) to Apron Feeder A3				
		Coarse Ore Storage Bin (COSB) to Apron Feeder A4				
		Apron Feeder A1 to Conveyor Belt 2A				
		Apron Feeder A2 to Conveyor Belt 2A				
		Apron Feeder A3 to Conveyor Belt 2A				
		Apron Feeder A4 to Conveyor Belt 2A				
002-026	COSB/AFB/2B FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder B1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Coarse Ore Storage Bin (COSB) to Apron Feeder B2				
		Coarse Ore Storage Bin (COSB) to Apron Feeder B3				
		Coarse Ore Storage Bin (COSB) to Apron Feeder B4				
		Apron Feeder B1 to Conveyor Belt 2B				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-026 (cont'd)	COSB/AFB/2B FFDC (vented inside) (cont'd)	Apron Feeder B2 to Conveyor Belt 2B	See Above	See Above	See Above	See Above
		Apron Feeder B3 to Conveyor Belt 2B				
		Apron Feeder B4 to Conveyor Belt 2B				
002-027	COSB/AFC/2C FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder C1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Coarse Ore Storage Bin (COSB) to Apron Feeder C2				
		Coarse Ore Storage Bin (COSB) to Apron Feeder C3				
		Coarse Ore Storage Bin (COSB) to Apron Feeder C4				
		Apron Feeder C1 to Conveyor Belt 2C				
		Apron Feeder C2 to Conveyor Belt 2C				
		Apron Feeder C3 to Conveyor Belt 2C				
		Apron Feeder C4 to Conveyor Belt 2C				
002-028	COSB/AFD/2D FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder D1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Coarse Ore Storage Bin (COSB) to Apron Feeder D2				
		Coarse Ore Storage Bin (COSB) to Apron Feeder D3				
		Coarse Ore Storage Bin (COSB) to Apron Feeder D4				
		Apron Feeder D1 to Conveyor Belt 2D				
		Apron Feeder D2 to Conveyor Belt 2D				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-028 (cont'd)	COSB/AFD/2D FFDC (vented inside) (cont'd)	Apron Feeder D3 to Conveyor Belt 2D	See Above	See Above	See Above	See Above
		Apron Feeder D4 to Conveyor Belt 2D				
002-029	Fine Crushing Line A FFDC 1 (vented inside)	Conveyor Belt 2A to Vibrating Grizzly 1 and Operation of Vibrating Grizzly 1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Vibrating Grizzly 1 Oversize to Secondary Crusher 1 and Operation of Secondary Crusher 1				
		Vibrating Grizzly 1 Undersize to Shaker Screen 1AN and Operation of Shaker Screen 1AN				
		Vibrating Grizzly 1 Undersize to Shaker Screen 1BN and Operation of Shaker Screen 1BN				
		Secondary Crusher 1 to Shaker Screen 1AS and Operation of Shaker Screen 1AS				
		Secondary Crusher 1 to Shaker Screen 1BS and Operation of Shaker Screen 1BS				
		Shaker Screen 1AN and Shaker Screen 1AS Oversize to Tertiary Crusher 1A and Operation of Tertiary Crusher 1A				
		Shaker Screen 1BN and Shaker Screen 1BS Oversize to Tertiary Crusher 1B and Operation of Tertiary Crusher 1B				
002-033	Fine Crushing Line A FFDC 2 (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Shaker Screen 1AS Undersize to Conveyor Belt 3				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-033 (cont'd)	Fine Crushing Line A FFDC 2 (vented inside) (cont'd)	Shaker Screen 1BN Undersize to Conveyor Belt 3	See Above	See Above	See Above	See Above
		Shaker Screen 1BS Undersize to Conveyor Belt 3				
		Tertiary Crusher 1A to Conveyor Belt 3				
		Tertiary Crusher 1B to Conveyor Belt 3				
002-030	Fine Crushing Line B FFDC 1	Conveyor Belt 2B to Vibrating Grizzly 2 and Operation of Vibrating Grizzly 2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	23,700 dscfm	99.99%
		Vibrating Grizzly 2 Oversize to Secondary Crusher 2 and Operation of Secondary Crusher 2				
		Vibrating Grizzly 2 Undersize to Shaker Screen 2AN and Operation of Shaker Screen 2AN				
		Vibrating Grizzly 2 Undersize to Shaker Screen 2BN and Operation of Shaker Screen 2BN				
		Secondary Crusher 2 to Shaker Screen 2AS and Operation of Shaker Screen 2AS				
		Secondary Crusher 2 to Shaker Screen 2BS and Operation of Shaker Screen 2BS				
		Shaker Screen 2AN and Shaker Screen 2AS Oversize to Tertiary Crusher 2A and Operation of Tertiary Crusher 2A				
		Shaker Screen 2BN and Shaker Screen 2BS Oversize to Tertiary Crusher 2B and Operation of Tertiary Crusher 2B				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-034	Fine Crushing Line B FFDC 2 (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3 Shaker Screen 2AS Undersize to Conveyor Belt 3 Shaker Screen 2BN Undersize to Conveyor Belt 3 Shaker Screen 2BS Undersize to Conveyor Belt 3 Tertiary Crusher 2A to Conveyor Belt 3 Tertiary Crusher 2B to Conveyor Belt 3	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
002-031	Fine Crushing Line C FFDC 1	Conveyor Belt 2C to Vibrating Grizzly 3 and Operation of Vibrating Grizzly 3 Vibrating Grizzly 3 Oversize to Secondary Crusher 3 and Operation of Secondary Crusher 3 Vibrating Grizzly 3 Undersize to Shaker Screen 3AN and Operation of Shaker Screen 3AN Vibrating Grizzly 3 Undersize to Shaker Screen 3BN and Operation of Shaker Screen 3BN Secondary Crusher 3 to Shaker Screen 3AS and Operation of Shaker Screen 3AS Secondary Crusher 3 to Shaker Screen 3BS and Operation of Shaker Screen 3BS Shaker Screen 3AN and Shaker Screen 3AS Oversize to Tertiary Crusher 3A and Operation of Tertiary Crusher 3A	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	25,100 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-031 (cont'd)	Fine Crushing Line C FFDC 1 (cont'd)	Shaker Screen 3BN and Shaker Screen 3BS Oversize to Tertiary Crusher 3B and Operation of Tertiary Crusher 3B	See Above	See Above	See Above	See Above
002-035	Fine Crushing Line C to 3B to 3 FFDC	Shaker Screen 3AN Undersize to Conveyor Belt 3B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	13,900 dscfm	99.99%
		Shaker Screen 3AS Undersize to Conveyor Belt 3B				
		Tertiary Crusher 3A to Conveyor Belt 3B				
		Conveyor Belt 3B to Conveyor Belt 3				
002-036	Fine Crushing Line C to 3B to 3A FFDC	Shaker Screen 3BN Undersize to Conveyor Belt 3B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	16,500 dscfm	99.99%
		Shaker Screen 3BS Undersize to Conveyor Belt 3B				
		Tertiary Crusher 3B to Conveyor Belt 3B				
		Conveyor Belt 3B to Conveyor Belt 3A				
002-032	Fine Crushing Line D FFDC 1	Conveyor Belt 2D to Vibrating Grizzly 4 and Operation of Vibrating Grizzly 4	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	23,700 dscfm	99.99%
		Vibrating Grizzly 4 Oversize to Secondary Crusher 4 and Operation of Secondary Crusher 4				
		Vibrating Grizzly 4 Undersize to Shaker Screen 4AN and Operation of Shaker Screen 4AN				
		Vibrating Grizzly 4 Undersize to Shaker Screen 4BN and Operation of Shaker Screen 4BN				
		Secondary Crusher 4 to Shaker Screen 4AS and Operation of Shaker Screen 4AS				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-032 (cont'd)	Fine Crushing Line D FFDC 1 (cont'd)	Secondary Crusher 4 to Shaker Screen 4BS and Operation of Shaker Screen 4BS	See Above	See Above	See Above	See Above
		Shaker Screen 4AN and Shaker Screen 4AS Oversize to Tertiary Crusher 4A and Operation of Tertiary Crusher 4A				
		Shaker Screen 4BN and Shaker Screen 4BS Oversize to Tertiary Crusher 4B and Operation of Tertiary Crusher 4B				
002-326	Fine Crushing Line D FFDC 2 (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Shaker Screen 4AS Undersize to Conveyor Belt 3A				
		Shaker Screen 4BN Undersize to Conveyor Belt 3A				
		Shaker Screen 4BS Undersize to Conveyor Belt 3A				
		Tertiary Crusher 4A to Conveyor Belt 3A				
		Tertiary Crusher 4B to Conveyor Belt 3A				
002-038	3/4/5 FFDC (vented inside)	Conveyor Belt 3 to Conveyor Belt 4	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Conveyor Belt 4 to Conveyor Belt 5				
002-039	3A/4A/5A FFDC (vented inside)	Conveyor Belt 3A to Conveyor Belt 4A	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Conveyor Belt 4A to Conveyor Belt 5A				
002-040	5A/FOSB FFDC 1 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-040 (cont'd)	5A/FOSB FFDC 2 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 3 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 4 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 5 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 6 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 7 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 8 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 9 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
002-041	5/FOSB FFDC 1 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 2 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 3 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-041 (cont'd)	5/FOSB FFDC 4 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 5 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 6 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 7 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 8 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5/FOSB FFDC 9 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
Operation 003: MFL Fine Crushing Plant						
003-273	R9/R10 FFDC	Conveyor Belt R9 to Conveyor Belt R10	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	3,000 dscfm	99.99%
003-330	R10/R3 FFDC	Conveyor Belt R10 to Conveyor Belt R3	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,000 dscfm	99.99%
003-079	R3/R4 Bag Collector 3	Conveyor Belt R3 to Conveyor Belt R4	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	3,200 dscfm	99 - 99.5%
003-080	R4/R5/R6 Bag Collector 4	Conveyor Belt R4 to Conveyor Belt R5 Conveyor Belt R5 to Conveyor Belt R6	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	8,300 dscfm	99 - 99.5%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-082	Scrubber 3C	Conveyor Belt R6 to Metcalf Track Hopper Storage Bin (MTHSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	35,400 dscfm	90 - 99%
003-317	FFDC 3A	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C1	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	38,000 dscfm	99.99%
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C2				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C3				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C4				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B3				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B4				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B5				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B6				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A3				
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A4				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-317 (cont'd)	FFDC 3A (cont'd)	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A5	See Above	See Above	See Above	See Above
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A6				
		Apron Feeder 2C1 to Conveyor Belt 3C				
		Apron Feeder 2C2 to Conveyor Belt 3C				
		Apron Feeder 2C3 to Conveyor Belt 3C				
		Apron Feeder 2C4 to Conveyor Belt 3C				
		Apron Feeder 2B3 to Conveyor Belt 3B2				
		Apron Feeder 2B4 to Conveyor Belt 3B2				
		Apron Feeder 2B5 to Conveyor Belt 3B3				
		Apron Feeder 2B6 to Conveyor Belt 3B3				
		Apron Feeder 2A3 to Conveyor Belt 3A2				
		Apron Feeder 2A4 to Conveyor Belt 3A2				
		Apron Feeder 2A5 to Conveyor Belt 3A3				
		Apron Feeder 2A6 to Conveyor Belt 3A3				
		Conveyor Belt 3C to MFL Conveyor Belt 4C				
		Conveyor Belt 3B2 to MFL Conveyor Belt 4B				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-317 (cont'd)	FFDC 3A (cont'd)	Conveyor Belt 3B3 to MFL Conveyor Belt 4B	See Above	See Above	See Above	See Above
		Conveyor Belt 3A2 to MFL Conveyor Belt 4A				
		Conveyor Belt 3A3 to MFL Conveyor Belt 4A				
003-301	FFDC 6A	MFL Conveyor Belt 4A to Scalping Screen A and Operation of Scalping Screen A	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	31,100 dscfm	99.99%
		Scalping Screen A Oversize to Secondary Crusher A and Operation of Secondary Crusher A				
		Secondary Crusher A to Secondary Screen A1 and Operation of Secondary Screen A1				
		Secondary Crusher A to Secondary Screen A2 and Operation of Secondary Screen A2				
		Secondary Screen A1 Oversize to Conveyor Belt 8				
		Secondary Screen A2 Oversize to Conveyor Belt 7				
003-302	FFDC 6B	MFL Conveyor Belt 4B to Scalping Screen B and Operation of Scalping Screen B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	27,500 dscfm	99.99%
		Scalping Screen B Oversize to Secondary Crusher B and Operation of Secondary Crusher B				
		Secondary Crusher B to Secondary Screen B1 and Operation of Secondary Screen B1				
		Secondary Crusher B to Secondary Screen B2 and Operation of Secondary Screen B2				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-302 (cont'd)	FFDC 6B (cont'd)	Secondary Screen B1 Oversize to Conveyor Belt 8	See Above	See Above	See Above	See Above
		Secondary Screen B2 Oversize to Conveyor Belt 7				
003-304	FFDC 1	MFL Conveyor Belt 4C to Scalping Screen C and Operation of Scalping Screen C	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	27,700 dscfm	99.99%
		Scalping Screen C Oversize to Secondary Crusher C and Operation of Secondary Crusher C				
		Secondary Crusher C to Secondary Screen C1 and Operation of Secondary Screen C1				
		Secondary Crusher C to Secondary Screen C2 and Operation of Secondary Screen C2				
		Secondary Screen C1 Oversize to Conveyor Belt 8				
		Secondary Screen C2 Oversize to Conveyor Belt 7				
003-089	Scrubber 5	Conveyor Belt 7 to MFL Conveyor Belt 5	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	41,400 dscfm	90 - 99%
		Conveyor Belt 8 to MFL Conveyor Belt 11				
		MFL Conveyor Belt 11 to MFL Conveyor Belt 5				
003-303	FFDC 8	MFL Conveyor Belt 5 to Conveyor Belt 6	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	20,400 dscfm	99.99%
003-088	Scrubber 4	Conveyor Belt 6 to Tertiary Crushing Surge Bin (TCSB)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	45,900 dscfm	90 - 99%
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-1				
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-2				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-088 (cont'd)	Scrubber 4 (cont'd)	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-3	See Above	See Above	See Above	See Above
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-4				
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-5				
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-6				
003-306	Tertiary Crushing Dust Collector (vented inside)	Belt Feeder 12-1 to Tertiary Crusher C1 and Operation of Tertiary Crusher C1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99 - 99.5%
		Belt Feeder 12-2 to Tertiary Crusher C2 and Operation of Tertiary Crusher C2				
		Belt Feeder 12-3 to Tertiary Crusher C3 and Operation of Tertiary Crusher C3				
		Belt Feeder 12-4 to Tertiary Crusher C4 and Operation of Tertiary Crusher C4				
		Belt Feeder 12-5 to Tertiary Crusher C5 and Operation of Tertiary Crusher C5				
		Belt Feeder 12-6 to Tertiary Crusher C6 and Operation of Tertiary Crusher C6				
003-307	Conveyor Belt 9 Dust Collector (vented inside)	Scalping Screen A Undersize to Conveyor Belt 9	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99 - 99.5%
		Scalping Screen B Undersize to Conveyor Belt 9				
		Scalping Screen C Undersize to Conveyor Belt 9				
		Secondary Screen A1 Undersize to Conveyor Belt 9				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-307 (cont'd)	Conveyor Belt 9 Dust Collector (vented inside) (cont'd)	Secondary Screen A2 Undersize to Conveyor Belt 9	See Above	See Above	See Above	See Above
		Secondary Screen B1 Undersize to Conveyor Belt 9				
		Secondary Screen B2 Undersize to Conveyor Belt 9				
		Secondary Screen C1 Undersize to Conveyor Belt 9				
		Secondary Screen C2 Undersize to Conveyor Belt 9				
		Tertiary Crusher C1 to Conveyor Belt 9				
		Tertiary Crusher C2 to Conveyor Belt 9				
		Tertiary Crusher C3 to Conveyor Belt 9				
		Tertiary Crusher C4 to Conveyor Belt 9				
		Tertiary Crusher C5 to Conveyor Belt 9				
		Tertiary Crusher C6 to Conveyor Belt 9				
		Conveyor Belt 9 to Conveyor Belt 14				
003-320	14/15 FFDC	Conveyor Belt 14 to Conveyor Belt 15	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,500 dscfm	99.99%
003-331	15/16 FFDC	Conveyor Belt 15 to Conveyor Belt 16	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,100 dscfm	99.99%
003-309	16/S11 FFDC	Conveyor Belt 16 to Conveyor Belt S11	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,000 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
003-199	Water Spray/Wet Suppression	Conveyor Belt S11 (transfer to FOIS)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
003-201	FOIS/A1A Bag Collector 7	Belt Feeder SF1 to Conveyor Belt A1A Belt Feeder SF2 to Conveyor Belt A1A	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	11,200 dscfm	99 - 99.5%
003-202	A1A/A2A Bag Collector 8	Conveyor Belt A1A to Conveyor Belt A2A via Agglomeration Splitter	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	3,200 dscfm	99 - 99.5%
003-203	A1A/A2C Bag Collector 9	Conveyor Belt A1A to Conveyor Belt A2C via Agglomeration Splitter	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	3,200 dscfm	99 - 99.5%
Operation 004: Lime Slaking Plants and Lime Transloading						
004-231	Mac Dust Filter	Transfer of Quicklime to the Lime Silo 1	PM, PM_{10}, $PM_{2.5}$	None	--	90%
004-232	Mac Dust Filter	Transfer of Quicklime to the Lime Silo 2	PM, PM_{10}, $PM_{2.5}$	None	--	90%
004-233	Water Spray Mist System	Lime Slaker 1	PM, PM_{10}, $PM_{2.5}$	None	--	N/A
004-234	Water Spray Mist System	Lime Slaker 2	PM, PM_{10}, $PM_{2.5}$	None	--	N/A
004-275	FARR Bin Vent	Transfer of Quicklime to Metcalf Lime Silo	PM, PM_{10}, $PM_{2.5}$	None	--	99.90%
004-276	Metcalf Lime Slaker Wet Scrubber	Metcalf Lime Slaker	PM, PM_{10}, $PM_{2.5}$	None	--	N/A

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
004-445a	Lime Transloading Dust Collector	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	PM, PM_{10}, $PM_{2.5}$	None	--	99%
004-445b	Lime Transloading Dust Collector	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	PM, PM_{10}, $PM_{2.5}$	None	--	99%
Operation 006: Copper Concentrate Processing Operations						
006-335a	3-Sided Enclosure	Wind Erosion of the Copper Concentrate Storage Piles	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	75%
Operation 009: Solution Extraction/Electrowinning Operations						
009-117	Covers	Central SX (21,175 ft^2)	VOC, HAPs	None	--	N/A
009-463	Covers	Central Barren Organic Tank (60,900 gallons)	VOC, HAPs	None	--	N/A
009-118	Covers	Metcalf SX (40,585.41 ft^2)	VOC, HAPs	None	--	N/A
009-472	Covers	Metcalf Barren Organic Tank (82,900 gallons)	VOC, HAPs	None	--	N/A
009-477	Covers	Metcalf SX-7 Diluent Tank (51,200 gallons)	VOC, HAPs	None	--	N/A
009-481	Covers	Metcalf Holding Tank (122,200 gallons)	VOC, HAPs	None	--	N/A
009-484	Covers	Metcalf Partially Loaded Organic Tank (122,200 gallons)	VOC, HAPs	None	--	N/A
009-119	Covers	Modoc SX (88,229.16 ft^2)	VOC, HAPs	None	--	N/A
009-486	Covers	Modoc Loaded Organic F Tank (81,400 gallons)	VOC, HAPs	None	--	N/A
009-487	Covers	Modoc Loaded Organic G Tank (81,400 gallons)	VOC, HAPs	None	--	N/A
009-492	Covers	Modoc SX-7 Diluent Tank (49,700 gallons)	VOC, HAPs	None	--	N/A

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
009-496	Covers	Modoc Holding Tank (118,000 gallons)	VOC, HAPs	None	--	N/A
009-349	Covers	Stargo SX (48,846.87 ft^2)	VOC, HAPs	None	--	N/A
009-504	Covers	Stargo Loaded Organic Tank (98,515 gallons)	VOC, HAPs	None	--	N/A
009-505	Covers	Stargo Holding Tank (108,900 gallons)	VOC, HAPs	None	--	N/A
009-508	Covers	Stargo Slurry Tank (500 gallons)	VOC, HAPs	None	--	N/A
009-121	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	Central EW (548 cells)	PM, PM_{10}, $PM_{2.5}$, H_2SO_4, HAPs	None	--	N/A
009-122	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	Southside EW (220 cells)	PM, PM_{10}, $PM_{2.5}$, H_2SO_4, HAPs	None	--	N/A
009-221	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	Stargo EW (324 cells)	PM, PM_{10}, $PM_{2.5}$, H_2SO_4, HAPs	None	--	N/A
009-422	Covers	Modoc Test Facility SX (1,418.72 ft^2)	VOC, HAPs	None	--	N/A
009-423	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	Modoc Test Facility EW (771.2 ft^2)	PM, PM_{10}, $PM_{2.5}$, H_2SO_4	None	--	N/A
Operation 010: Concrete Batch Plant						
010-146	Unspecified Bin Vent	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
010-147	Unspecified Bin Vent	Pneumatic Transfer of Cement to the Cement Silo	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	90%
Operation 014: Concentrate Leach Plant						
014-239	PLV 2-Stage Scrubber	Pressure Leach Vessel 1 and Pressure Leach Vessel 2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.75 lb/hr PM_{10} ≤ 0.75 lb/hr	--	90 - 99%
014-240	Mist Eliminators	PLV Cooling Tower	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A
014-241	Mist Eliminators	Oxygen Plant Cooling Tower 1	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A
014-348	Combination of an Unspecified Bin Vent and Emissions Exhaust Inside a Building Under Positive Pressure	Transfer of Flocculant to the Flocculant Bin	PM, PM_{10}, $PM_{2.5}$	None	--	95%
014-254	Modu-Kleen Bin Vent	Transfer of Lime to the Lime Silo	PM, PM_{10}, $PM_{2.5}$	None	--	99.90%
014-253	Modu-Kleen Bin Vent	Transfer of Diatomaceous Earth to the Super Sack Unloader	PM, PM_{10}, $PM_{2.5}$	None	--	99.90%
Operation 017: Metcalf Concentrator						
017-318	Secondary Screen Feed Bin FFDC	Conveyor Belt R11 to Secondary Screen Feed Bin B2 Secondary Crusher Discharge Conveyor to Secondary Screen Feed Bin	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	6,800 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-280	Secondary Screening FFDC 1	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 1	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	26,200 dscfm	99.99%
		Secondary Screen Belt Feeder 1 to Secondary Screen 1 and Operation of Secondary Screen 1				
		Secondary Screen 1 Oversize to B1 Secondary Crusher Feed Conveyor				
		Secondary Screen 1 Undersize to B3 Crushed Ore A Conveyor				
017-281	Secondary Screening FFDC 2	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 2	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	25,900 dscfm	99.99%
		Secondary Screen Belt Feeder 2 to Secondary Screen 2 and Operation of Secondary Screen 2				
		Secondary Screen 2 Oversize to B1 Secondary Crusher Feed Conveyor				
		Secondary Screen 2 Undersize to B3 Crushed Ore A Conveyor				
017-319	Secondary Crusher Feed Bin FFDC	B1 Secondary Crusher Feed Conveyor to Secondary Crusher Feed Bin	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,700 dscfm	99.99%
017-283	Secondary Crushing FFDC 1	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 1	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	8,800 dscfm	99.99%
		Secondary Crusher Belt Feeder 1 to Metcalf Secondary Crusher 1 and Operation of Metcalf Secondary Crusher 1				
		Metcalf Secondary Crusher 1 to B2 Secondary Crusher Discharge Conveyor				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-284	Secondary Crushing FFDC 2	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 2 Secondary Crusher Belt Feeder 2 to Metcalf Secondary Crusher 2 and Operation of Metcalf Secondary Crusher 2 Metcalf Secondary Crusher 2 to B2 Secondary Crusher Discharge Conveyor	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	11,200 dscfm	99.99%
017-285	Crushed Ore A/B Conveyor Transfer Point FFDC	B3 Crushed Ore A Conveyor to B4 Crushed Ore B Conveyor	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	4,100 dscfm	99.99%
017-286	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	B4 Crushed Ore B Conveyor to B5 Crushed Ore Bin Tripper Conveyor	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	20,400 dscfm	99.99%
017-287	Crushed Ore Bin FFDC 1	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin A Crushed Ore Bin A to Crushed Ore Belt Feeder 1 Crushed Ore Bin A to Crushed Ore Belt Feeder 2 Crushed Ore Bin A to Crushed Ore Belt Feeder 3 Crushed Ore Bin A to Crushed Ore Belt Feeder 4 Crushed Ore Bin A to Crushed Ore Belt Feeder 5 Crushed Ore Bin A to Crushed Ore Belt Feeder 6 Crushed Ore Belt Feeder 1 to B6 Crushed Ore Feed Conveyor	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	22,900 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-287 (cont'd)	Crushed Ore Bin FFDC 1 (cont'd)	Crushed Ore Belt Feeder 2 to B6 Crushed Ore Feed Conveyor	See Above	See Above	See Above	See Above
		Crushed Ore Belt Feeder 3 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 4 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 5 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 6 to B6 Crushed Ore Feed Conveyor				
		B6 Crushed Ore Feed Conveyor to B7 Crushed Ore Feed Transfer Conveyor				
017-288	Crushed Ore Bin FFDC 2	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	20,000 dscfm	99.99%
		Crushed Ore Bin B to Crushed Ore Belt Feeder 7				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 8				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 9				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 10				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 11				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 12				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-288 (cont'd)	Crushed Ore Bin FFDC 2 (cont'd)	Crushed Ore Belt Feeder 7 to B6 Crushed Ore Feed Conveyor	See Above	See Above	See Above	See Above
		Crushed Ore Belt Feeder 8 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 9 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 10 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 11 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 12 to B6 Crushed Ore Feed Conveyor				
017-289	Crushed Ore Bin FFDC 3	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	20,000 dscfm	99.99%
		Crushed Ore Bin B to Crushed Ore Belt Feeder 13				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 14				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 15				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 16				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 17				
		Crushed Ore Bin B to Crushed Ore Belt Feeder 18				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-289 (cont'd)	Crushed Ore Bin FFDC 3 (cont'd)	Crushed Ore Belt Feeder 13 to B6 Crushed Ore Feed Conveyor	See Above	See Above	See Above	See Above
		Crushed Ore Belt Feeder 14 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 15 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 16 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 17 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 18 to B6 Crushed Ore Feed Conveyor				
017-290	Crushed Ore Bin FFDC 4	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin C	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	20,000 dscfm	99.99%
		Crushed Ore Bin C to Crushed Ore Belt Feeder 19				
		Crushed Ore Bin C to Crushed Ore Belt Feeder 20				
		Crushed Ore Bin C to Crushed Ore Belt Feeder 21				
		Crushed Ore Bin C to Crushed Ore Belt Feeder 22				
		Crushed Ore Bin C to Crushed Ore Belt Feeder 23				
		Crushed Ore Bin C to Crushed Ore Belt Feeder 24				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-290 (cont'd)	Crushed Ore Bin FFDC 4 (cont'd)	Crushed Ore Belt Feeder 19 to B6 Crushed Ore Feed Conveyor	See Above	See Above	See Above	See Above
		Crushed Ore Belt Feeder 20 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 21 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 22 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 23 to B6 Crushed Ore Feed Conveyor				
		Crushed Ore Belt Feeder 24 to B6 Crushed Ore Feed Conveyor				
017-291	Crushed Ore Transfers FFDC	B7 Crushed Ore Feed Transfer Conveyor to Crusher Surge Bin	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	10,200 dscfm	99.99%
		Crusher Surge Bin to B8-A Crusher Belt Feeder				
		Crusher Surge Bin to B8-B Crusher Belt Feeder				
		B8-A Crusher Belt Feeder to B9 Crusher Feed Conveyor				
		B8-B Crusher Belt Feeder to B9 Crusher Feed Conveyor				
		B9 Crusher Feed Conveyor to Crusher Feed Hopper				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
017-292	HRC/HPGR Crusher FFDC	HRC/HPGR Crusher HRC/HPGR Crusher to B10 Crusher Discharge Conveyor	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	10,000 dscfm	99.99%
017-294	Wet Screen Feed FFDC	B10 Crusher Discharge Conveyor to Wet Screen Feed Bin	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,500 dscfm	99.99%
017-327	Saturation	Wet Screen Feed Bin to Wet Screens 1/2	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	100%
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations						
018-336	H_2S Scrubber System	Combined Molybdenum Flotation	PM, PM_{10}, $PM_{2.5}$, H_2S	None	18,000 dscfm	90 - 99%
Operation 023: Tailings Operations						
023-418	Use of a Wet Dam Construction Technique, Applying Water, Treating the Active Areas with Polymer and/or Magnesium Chloride, Hydro-seeding or Hydro-mulching, Limiting Vehicle Access and Speed, Covering, Utilizing Wind Breaks, Facilitating Encrustation, Maintaining the Inherent Moisture Content, and Wetting the Active Areas with Slurry	Wind Erosion of Tailings	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
AOS1: Morenci Concentrator Quaternary Crushing Operations						
002-033 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Shaker Screen 1AS Undersize to Conveyor Belt 3 (AOS1)				
		Shaker Screen 1BN Undersize to Conveyor Belt 3 (AOS1)				
		Shaker Screen 1BS Undersize to Conveyor Belt 3 (AOS1)				
		Tertiary Crusher 1A to Conveyor Belt 3 (AOS1)				
		Tertiary Crusher 1B to Conveyor Belt 3 (AOS1)				
002-034 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Shaker Screen 2AS Undersize to Conveyor Belt 3 (AOS1)				
		Shaker Screen 2BN Undersize to Conveyor Belt 3 (AOS1)				
		Shaker Screen 2BS Undersize to Conveyor Belt 3 (AOS1)				
		Tertiary Crusher 2A to Conveyor Belt 3 (AOS1)				
		Tertiary Crusher 2B to Conveyor Belt 3 (AOS1)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-035 (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Shaker Screen 3AN Undersize to Conveyor Belt 3B (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	13,900 dscfm	99.99%
		Shaker Screen 3AS Undersize to Conveyor Belt 3B (AOS1)				
		Tertiary Crusher 3A to Conveyor Belt 3B (AOS1)				
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3 (AOS1)				
002-036 (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Shaker Screen 3BN Undersize to Conveyor Belt 3B (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	16,500 dscfm	99.99%
		Shaker Screen 3BS Undersize to Conveyor Belt 3B (AOS1)				
		Tertiary Crusher 3B to Conveyor Belt 3B (AOS1)				
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3A (AOS1)				
002-326 (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Shaker Screen 4AS Undersize to Conveyor Belt 3A (AOS1)				
		Shaker Screen 4BN Undersize to Conveyor Belt 3A (AOS1)				
		Shaker Screen 4BS Undersize to Conveyor Belt 3A (AOS1)				
		Tertiary Crusher 4A to Conveyor Belt 3A (AOS1)				
		Tertiary Crusher 4B to Conveyor Belt 3A (AOS1)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-311 (AOS1)	West Transfer Points FFDC (AOS1)	Conveyor Belt 3 (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 1 (AOS1) West RC Product Conveyor (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 2 (AOS1) West RC Product Conveyor (AOS1) to West Transfer Conveyor (AOS1) via West Proportioning Gate 2 (AOS1) West Transfer Conveyor (AOS1) to Conveyor Belt 4 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	16,900 dscfm	99.99%
002-312 (AOS1)	West Surge Bin FFDC (AOS1)	West RC Feed Conveyor (AOS1) to West Surge Bin (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,000 dscfm	99.99%
002-313 (AOS1)	West RC FFDC (AOS1)	West Surge Bin (AOS1) to West RC Feeder (AOS1) West RC Feeder (AOS1) to West RC Feed Bin (AOS1) via West Flop Gate (AOS1) West RC Feeder (AOS1) to West RC Product Conveyor (AOS1) via West Flop Gate (AOS1) West RC (AOS1) West RC (AOS1) to West RC Product Conveyor (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	9,300 dscfm	99.99%
002-314 (AOS1)	East Transfer Points FFDC (AOS1)	Conveyor Belt 3A (AOS1) to East RC Feed Conveyor (AOS1) via East Proportioning Gate 1 (AOS1) East RC Product Conveyor (AOS1) to East Transfer Conveyor (AOS1) via East Proportioning Gate 2 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	16,900 dscfm	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-314 (AOS1) (cont'd)	East Transfer Points FFDC (AOS1) (cont'd)	East Transfer Conveyor (AOS1) to East RC Feed Conveyor (AOS1)	See Above	See Above	See Above	See Above
		East RC Product Conveyor (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 2 (AOS1)				
002-315 (AOS1)	East Surge Bin FFDC (AOS1)	East RC Feed Conveyor (AOS1) to East Surge Bin (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	3,000 dscfm	99.99%
002-316 (AOS1)	East RC FFDC (AOS1)	East Surge Bin (AOS1) to East RC Feeder (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	9,300 dscfm	99.99%
		East RC Feeder (AOS1) to East RC Feed Bin (AOS1) via East Flop Gate (AOS1)				
		East RC Feeder (AOS1) to East RC Product Conveyor (AOS1) via East Flop Gate (AOS1)				
		East RC (AOS1)				
		East RC (AOS1) to East RC Product Conveyor (AOS1)				
002-038 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	Conveyor Belt 3 (AOS1) to Conveyor Belt 4 (AOS1) via West Proportioning Gate 1 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Conveyor Belt 4 (AOS1) to Conveyor Belt 5 (AOS1)				
002-039 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	Conveyor Belt 3A (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 1 (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
		Conveyor Belt 4A (AOS1) to Conveyor Belt 5A (AOS1)				
002-040 (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
002-040 (AOS1) (cont'd)	5A/FOSB FFDC 2 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 3 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 4 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 5 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 6 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 7 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 8 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
	5A/FOSB FFDC 9 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	99.99%
AOS2: Concentrate Leach Plant Upgrades						
014-458 (AOS2)	PLV Scrubber 1 (AOS2)	Pressure Leach Vessel 1 (AOS2)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.525 lb/hr PM_{10} ≤ 0.525 lb/hr	--	99.50%
014-459 (AOS2)	PLV Scrubber 2 (AOS2)	Pressure Leach Vessel 2 (AOS2)	PM, PM_{10}, $PM_{2.5}$, HAPs	PM ≤ 0.525 lb/hr PM_{10} ≤ 0.525 lb/hr	--	99.50%
014-460 (AOS2)	Mist Eliminators	Oxygen Plant Cooling Tower 2 (AOS2)	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled [a]	Pollutants Controlled	Voluntary Emission Limitations [a]	Exhaust Flow Rate [a]	Rated/ Operating Efficiency [b]
AOS3: Primary Crushing and Overland Conveying Operations						
001-256a (AOS3)	Pollution Control Device for Crushers (AOS3)	Crushers To Be Determined	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A
001-256b (AOS3)	Pollution Control Device for Conveyor Belts (AOS3)	Conveyor Belts To Be Determined	PM, PM_{10}, $PM_{2.5}$, HAPs	None	--	N/A

[a] gr = grains, dscf = dry standard cubic foot, lb = pounds, dscrm = dry standard cubic foot per minute, ft^2 = square feet

[b] The efficiency data for water sprays/wet suppression is from AP-42 Section 11.19.1, Page 11.19.1-5 (11/95). The efficiency data for the FFDCs is from FARR references. The efficiency data for the bag collectors/dust collectors is from AP-42 Table B.2-3 for fabric filters. The efficiency data for the wet scrubbers is from AP-42 Table B.2-3 for hi-efficiency wet scrubbers. The efficiency for the PLV 2-Stage Scrubber is from AP-42 Table B.2-3 for venturi scrubbers. The efficiency data for the PLV Scrubbers 1/2 is from FMMI's design engineers.

6 EMISSIONS RELATED INFORMATION

6.1 EMISSIONS FROM EACH PROCESS

Detailed information about the individual emission units associated with operations at the FMMI facility is identified in Tables 6.1 through 6.5. This information includes:

- Identification of the regulated air pollutants emitted;
- Classification of emissions as fugitive or non-fugitive; and
- Quantification of potential emissions.

Table 6.1 presents PM, PM_{10}, and $PM_{2.5}$ emissions on an hourly (pounds per hour [lb/hr]) and annual (tpy) basis, Table 6.2 presents CO, NO_X, SO_2, and VOC emissions on an hourly and annual basis, Table 6.3 presents GHG (i.e., CO_2, CH_4, N_2O, and CO_2e) emissions on an hourly and annual basis, Table 6.4 presents H_2SO_4 and H_2S emissions on an hourly and annual basis, and Table 6.5 presents HAP emissions on an hourly and annual basis. The emission units listed in Tables 6.1 through 6.5 exclude the insignificant emission units/activities and trivial emission units/activities presented in Section 10.

6.2 FACILITY-WIDE EMISSIONS AND PTE

The sum of potential emissions from the emission units at the FMMI facility is presented in Table 6.6. The PTE of the FMMI facility is presented in Table 6.7. The primary activity of the FMMI facility is mining and ore processing operations, which is not a “categorical source”, or a “Section 302(j) category” source as defined in A.A.C. R18-2-101.23 and R18-2-101.129, respectively. Therefore, only non-fugitive emissions are included in the determination of the facility-wide PTE of regulated air pollutants (except HAPs) for permitting purposes. All HAP emissions are included in the determination of the facility-wide PTE regardless of their fugitive or non-fugitive classification.

As shown in Table 6.7, the PTE of facility-wide operations is above the Class I (Title V) “major source” permitting thresholds for PM_{10}, $PM_{2.5}$, CO, and NO_X, but below the Prevention of Significant Deterioration (PSD) “major source” thresholds for all regulated air pollutants (for a non-categorical source in an attainment/unclassifiable area). Additionally, FMMI’s facility-wide PTE is below the HAP “major source” threshold. Consequently, FMMI’s facility-wide operations are a “major source” for purposes of the Title V operating permit program, a “minor source” for purposes of the PSD program, and an “area source” for purposes of the HAPs program.

6.3 EMISSION FACTOR DOCUMENTATION

The methodologies and calculations used to estimate potential emissions from the emission units identified in Section 6.1 are presented in Appendix E.

6.4 ELECTRONIC COPY OF EMISSION CALCULATIONS

An electronic copy of the emission calculations will be provided via email with this application. The Excel spreadsheets used to calculate emissions are reproduced in Appendix F.

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
Operation 001: Mining Operations										
001-004	Drilling	Fugitive	455.00	455.00	273.00	50.56	137.26	137.26	82.36	15.25
001-003	Blasting	Fugitive	1,444.65	1,444.65	751.22	43.34	182.48	182.48	94.89	5.47
001-001a	Vehicle Travel on Unpaved Roads	Fugitive	4,496.99	4,496.99	1,155.51	115.55	16,334.97	16,334.97	4,197.31	419.73
001-001b	Dozer Operation	Fugitive	338.24	338.24	60.05	35.51	1,481.48	1,481.48	263.02	155.56
001-001c	Road Grader Operation	Fugitive	61.44	61.44	23.50	1.90	269.11	269.11	102.93	8.34
001-002a	Loading Ore into Haul Trucks	Fugitive	102.23	102.23	48.35	7.32	373.14	373.14	176.49	26.73
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Fugitive	2.65	2.65	1.25	0.19	11.60	11.60	5.49	0.83
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Fugitive	75.74	75.74	35.82	5.42	257.13	257.13	121.61	18.42
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Fugitive	1.39	1.39	0.66	0.10	6.11	6.11	2.89	0.44
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Fugitive	1.25	1.25	0.59	0.09	5.50	5.50	2.60	0.39
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	Non-Fugitive	0.31	0.31	0.15	0.15	1.34	1.34	0.67	0.67

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	Non-Fugitive	0.21	0.21	0.21	0.21	0.90	0.90	0.90	0.90
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	Non-Fugitive	0.52	0.52	0.52	0.52	2.30	2.30	2.30	2.30
001-344	Conveyor Belt P12 to Conveyor Belt P10	Non-Fugitive	0.15	0.15	0.07	0.01	0.65	0.65	0.31	0.05
001-015	Processes Controlled by P5/P6 FFDC	Non-Fugitive	0.44	0.44	0.44	0.44	1.92	1.92	1.92	1.92
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Fugitive	1.69	1.69	0.80	0.12	7.41	7.41	3.50	0.53
001-017	Wind Erosion of Mill IOS	Fugitive	1.46	1.46	0.73	0.11	6.40	6.40	3.20	0.48
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	Non-Fugitive	0.32	0.32	0.16	0.16	1.38	1.38	0.69	0.69
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Fugitive	1.30	1.30	0.62	0.09	5.70	5.70	2.70	0.41
001-227	Wind Erosion of MFL IOS	Fugitive	1.64	1.64	0.82	0.12	7.20	7.20	3.60	0.54
001-325	Processes Controlled by DC2/P5 FFDC	Non-Fugitive	0.13	0.13	0.06	0.06	0.55	0.55	0.27	0.27
001-299	Processes Controlled by Mill IOS/R1A FFDC	Non-Fugitive	0.43	0.43	0.43	0.43	1.88	1.88	1.88	1.88

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
001-300	Processes Controlled by Mill IOS/R1B FFDC	Non-Fugitive	0.34	0.34	0.34	0.34	1.50	1.50	1.50	1.50
001-272	Processes Controlled by R1A and R1B/R7 FFDC	Non-Fugitive	0.10	0.10	0.10	0.10	0.45	0.45	0.45	0.45
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	Non-Fugitive	0.19	0.19	0.19	0.19	0.81	0.81	0.81	0.81
001-278	Processes Controlled by R2/R11 FFDC	Non-Fugitive	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69
001-228	Processes Controlled by MFL IOS/R8 FFDC	Non-Fugitive	0.22	0.22	0.11	0.11	0.96	0.96	0.48	0.48
001-229	Processes Controlled by R8/R9 FFDC	Non-Fugitive	0.18	0.18	0.09	0.09	0.80	0.80	0.40	0.40
001-323a	Loading to the Portable Cleanup Conveyor	Fugitive	0.09	0.09	0.04	0.007	0.41	0.41	0.19	0.03
001-323b	Unloading from the Portable Cleanup Conveyor	Non-Fugitive	0.09	0.09	0.04	0.007	0.41	0.41	0.19	0.03
Operation 002: Morenci Concentrator										
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	Non-Fugitive	0.41	0.41	0.20	0.20	1.78	1.78	0.89	0.89

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	Non-Fugitive	0.43	0.43	0.22	0.22	1.88	1.88	0.94	0.94
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	Non-Fugitive	0.24	0.24	0.12	0.12	1.04	1.04	0.52	0.52
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	Non-Fugitive	0.28	0.28	0.14	0.14	1.24	1.24	0.62	0.62
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	Non-Fugitive	0.41	0.41	0.20	0.20	1.78	1.78	0.89	0.89
Operation 003: MFL Fine Crushing Plant										
003-273	Processes Controlled by R9/R10 FFDC	Non-Fugitive	0.051	0.051	0.026	0.026	0.23	0.23	0.11	0.11
003-330	Processes Controlled by R10/R3 FFDC	Non-Fugitive	0.10	0.10	0.10	0.10	0.45	0.45	0.45	0.45
003-079	Processes Controlled by R3/R4 Bag Collector 3	Non-Fugitive	0.19	0.19	0.19	0.19	0.84	0.84	0.84	0.84
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	Non-Fugitive	0.50	0.50	0.50	0.50	2.18	2.18	2.18	2.18
003-082	Processes Controlled by Scrubber 3C	Non-Fugitive	3.03	3.03	3.03	3.03	13.29	13.29	13.29	13.29

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
003-317	Processes Controlled by FFDC 3A	Non-Fugitive	1.30	1.30	1.30	1.30	5.71	5.71	5.71	5.71
003-301	Processes Controlled by FFDC 6A	Non-Fugitive	1.33	1.33	1.33	1.33	5.84	5.84	5.84	5.84
003-302	Processes Controlled by FFDC 6B	Non-Fugitive	1.18	1.18	1.18	1.18	5.16	5.16	5.16	5.16
003-304	Processes Controlled by FFDC 1	Non-Fugitive	1.19	1.19	1.19	1.19	5.20	5.20	5.20	5.20
003-089	Processes Controlled by Scrubber 5	Non-Fugitive	3.55	3.55	3.55	3.55	15.54	15.54	15.54	15.54
003-303	Processes Controlled by FFDC 8	Non-Fugitive	0.87	0.87	0.87	0.87	3.83	3.83	3.83	3.83
003-088	Processes Controlled by Scrubber 4	Non-Fugitive	3.93	3.93	3.93	3.93	17.23	17.23	17.23	17.23
003-320	Processes Controlled by 14/15 FFDC	Non-Fugitive	0.12	0.12	0.12	0.12	0.53	0.53	0.53	0.53
003-331	Processes Controlled by 15/16 FFDC	Non-Fugitive	0.11	0.11	0.11	0.11	0.47	0.47	0.47	0.47
003-309	Processes Controlled by 16/S11 FFDC	Non-Fugitive	0.10	0.10	0.10	0.10	0.45	0.45	0.45	0.45
003-199	Conveyor Belt S11 (transfer to FOIS)	Fugitive	1.12	1.12	0.53	0.08	4.88	4.88	2.31	0.35

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
003-200	Wind Erosion of the FOIS	Fugitive	0.74	0.74	0.37	0.06	3.24	3.24	1.62	0.24
003-441	Dust Suppression Fan	Fugitive	0.04	0.04	0.04	0.04	0.19	0.19	0.19	0.19
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	Non-Fugitive	0.67	0.67	0.67	0.67	2.94	2.94	2.94	2.94
003-202	Processes Controlled by A1A/A2A Bag Collector 8	Non-Fugitive	0.19	0.19	0.19	0.19	0.84	0.84	0.84	0.84
003-203	Processes Controlled by A1A/A2C Bag Collector 9	Non-Fugitive	0.19	0.19	0.19	0.19	0.84	0.84	0.84	0.84
Operation 004: Lime Slaking Plants and Lime Transloading										
004-231	Transfer of Quicklime to the Lime Silo 1	Non-Fugitive	1.53	1.53	0.53	0.08	1.67	1.67	0.58	0.09
004-232	Transfer of Quicklime to the Lime Silo 2	Non-Fugitive	1.53	1.53	0.53	0.08	1.67	1.67	0.58	0.09
004-233	Lime Slaker 1	Non-Fugitive	0.43	0.36	0.43	0.43	1.86	1.56	1.86	1.86
004-234	Lime Slaker 2	Non-Fugitive	0.43	0.36	0.43	0.43	1.86	1.56	1.86	1.86
004-275	Transfer of Quicklime to Metcalf Lime Silo	Non-Fugitive	0.02	0.02	0.005	0.0008	0.03	0.03	0.01	0.002
004-276	Metcalf Lime Slaker	Non-Fugitive	0.02	0.01	0.02	0.02	0.07	0.06	0.07	0.07

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Non-Fugitive	0.31	0.31	0.11	0.02	0.67	0.67	0.24	0.04
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	Non-Fugitive	0.31	0.31	0.11	0.02	0.67	0.67	0.24	0.04
004-446	Lime Transloading Engine (47.6 hp engine)	Non-Fugitive	0.002	0.002	0.002	0.002	0.01	0.009	0.01	0.01
Operation 005: Metcalf Power Plant										
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Non-Fugitive	1.35	0.39	1.35	1.35	0.89	0.26	0.89	0.89
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Non-Fugitive	1.35	0.39	1.35	1.35	0.89	0.26	0.89	0.89
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Non-Fugitive	0.66	0.59	0.66	0.66	0.17	0.15	0.17	0.17
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Non-Fugitive	0.66	0.59	0.66	0.66	0.17	0.15	0.17	0.17
Operation 006: Copper Concentrate Processing Operations										
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044d	Conveyor Belt BA to Conveyor Belt BB	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044e	Conveyor Belt BB to Conveyor Belt BC	Non-Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	Fugitive	0.02	0.02	0.01	0.002	0.10	0.10	0.05	0.007

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	Fugitive	0.30	0.30	0.15	0.02	1.30	1.30	0.65	0.10
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	Fugitive	0.20	0.20	0.10	0.01	0.89	0.89	0.42	0.06
Operation 009: Solution Extraction/Electrowinning Operations										
009-121	Central EW (548 cells)	Fugitive	4.75	4.75	4.75	4.75	20.82	20.82	20.82	20.82
009-122	Southside EW (220 cells)	Fugitive	1.67	1.67	1.67	1.67	7.30	7.30	7.30	7.30
009-221	Stargo EW (324 cells)	Fugitive	2.96	2.96	2.96	2.96	12.98	12.98	12.98	12.98
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.47	0.12	0.47	0.47
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.47	0.12	0.47	0.47
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.47	0.12	0.47	0.47
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.47	0.12	0.47	0.47
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.47	0.12	0.47	0.47
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Non-Fugitive	0.01	0.008	0.009	0.006	0.06	0.04	0.04	0.03

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Non-Fugitive	0.01	0.008	0.009	0.006	0.06	0.04	0.04	0.03
009-423	Modoc Test Facility EW (771.2 ft^2)	Fugitive	0.12	0.12	0.12	0.12	0.53	0.53	0.53	0.53
Operation 010: Concrete Batch Plant										
010-144a	Unloading Aggregate to the Aggregate Stockpiles	Fugitive	0.61	0.61	0.29	0.04	0.20	0.20	0.10	0.01
010-144b	Wind Erosion of the Aggregate Stockpiles	Fugitive	0.13	0.13	0.06	0.010	0.56	0.56	0.28	0.04
010-144c	Loading Aggregate to the Feed Hopper	Fugitive	0.61	0.61	0.29	0.04	0.20	0.20	0.10	0.01
010-145	Feed Hopper to Aggregate Conveyor Belt	Non-Fugitive	0.61	0.61	0.29	0.04	0.20	0.20	0.10	0.01
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Non-Fugitive	1.66	1.66	0.58	0.09	0.55	0.55	0.19	0.03
010-147	Pneumatic Transfer of Cement to the Cement Silo	Non-Fugitive	1.93	1.93	1.24	0.10	0.64	0.64	0.41	0.03
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	Non-Fugitive	16.60	16.60	5.82	0.88	5.52	5.52	1.93	0.29
010-148b	Cement Screw Conveyor to Weigh Hopper	Non-Fugitive	19.33	19.33	12.45	1.02	6.43	6.43	4.14	0.34

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
010-148c	Aggregate Conveyor Belt to Weigh Hopper	Non-Fugitive	0.61	0.61	0.29	0.04	0.20	0.20	0.10	0.01
010-148d	Weigh Hopper to Concrete Mixing Truck	Non-Fugitive	35.52	35.52	9.85	1.59	11.81	11.81	3.27	0.53
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Non-Fugitive	0.008	0.002	0.008	0.008	0.03	0.01	0.03	0.03
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Non-Fugitive	0.008	0.002	0.008	0.008	0.03	0.01	0.03	0.03
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Non-Fugitive	0.008	0.002	0.008	0.008	0.03	0.01	0.03	0.03
Operation 013: Grizzly Operations										
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	Fugitive	0.13	0.13	0.04	0.003	0.58	0.58	0.19	0.01
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	Fugitive	0.11	0.11	0.05	0.008	0.49	0.49	0.23	0.03
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	Fugitive	1.10	1.10	0.37	0.03	4.82	4.82	1.62	0.11
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	Fugitive	0.93	0.93	0.44	0.07	4.07	4.07	1.93	0.29
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	Fugitive	1.10	1.10	0.37	0.03	4.82	4.82	1.62	0.11
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	Fugitive	0.93	0.93	0.44	0.07	4.07	4.07	1.93	0.29
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	Fugitive	1.10	1.10	0.37	0.03	4.82	4.82	1.62	0.11
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	Fugitive	0.93	0.93	0.44	0.07	4.07	4.07	1.93	0.29
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	Fugitive	1.10	1.10	0.37	0.03	4.82	4.82	1.62	0.11
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	Fugitive	0.93	0.93	0.44	0.07	4.07	4.07	1.93	0.29
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	Fugitive	1.10	1.10	0.37	0.03	4.82	4.82	1.62	0.11

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	Fugitive	0.93	0.93	0.44	0.07	4.07	4.07	1.93	0.29
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	Fugitive	0.18	0.18	0.09	0.01	0.80	0.80	0.40	0.06
Operation 014: Concentrate Leach Plant										
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Non-Fugitive	0.13	0.03	0.13	0.13	0.23	0.06	0.23	0.23
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Non-Fugitive	0.75	0.75	0.75	0.75	3.29	3.29	3.29	3.29
014-240	PLV Cooling Tower	Fugitive	0.30	0.30	0.22	0.0007	1.32	1.32	0.95	0.003
014-241	Oxygen Plant Cooling Tower 1	Fugitive	0.08	0.08	0.06	0.0002	0.34	0.34	0.25	0.0007
014-348	Transfer of Flocculant to the Flocculant Bin	Non-Fugitive	0.76	0.76	0.27	0.04	0.07	0.07	0.02	0.004
014-254	Transfer of Lime to the Lime Silo	Non-Fugitive	0.02	0.02	0.005	0.0008	0.0005	0.0005	0.0002	0.00003

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	Non-Fugitive	0.02	0.02	0.005	0.0008	0.0001	0.0001	0.00004	0.000006
Operation 015: Diesel Emergency Engines										
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Non-Fugitive	0.14	0.13	0.14	0.14	0.02	0.02	0.02	0.02
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Non-Fugitive	0.14	0.13	0.14	0.14	0.04	0.03	0.04	0.04
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Non-Fugitive	0.06	0.05	0.06	0.06	0.01	0.01	0.01	0.01
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Non-Fugitive	0.07	0.06	0.07	0.07	0.02	0.01	0.02	0.02
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Non-Fugitive	0.002	0.002	0.002	0.002	0.0005	0.0005	0.0005	0.0005
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Non-Fugitive	0.07	0.07	0.07	0.07	0.02	0.02	0.02	0.02
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Non-Fugitive	0.08	0.07	0.08	0.08	0.02	0.02	0.02	0.02

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Non-Fugitive	0.24	0.22	0.24	0.24	0.06	0.05	0.06	0.06
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Non-Fugitive	0.03	0.03	0.03	0.03	0.008	0.007	0.008	0.008
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Non-Fugitive	0.18	0.16	0.18	0.18	0.04	0.04	0.04	0.04
Operation 017: Metcalf Concentrator										
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	Non-Fugitive	0.23	0.23	0.23	0.23	1.02	1.02	1.02	1.02
017-280	Processes Controlled by Secondary Screening FFDC 1	Non-Fugitive	0.90	0.90	0.90	0.90	3.93	3.93	3.93	3.93
017-281	Processes Controlled by Secondary Screening FFDC 2	Non-Fugitive	0.89	0.89	0.89	0.89	3.89	3.89	3.89	3.89
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	Non-Fugitive	0.13	0.13	0.13	0.13	0.56	0.56	0.56	0.56
017-283	Processes Controlled by Secondary Crushing FFDC 1	Non-Fugitive	0.30	0.30	0.30	0.30	1.32	1.32	1.32	1.32

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
017-284	Processes Controlled by Secondary Crushing FFDC 2	Non-Fugitive	0.38	0.38	0.38	0.38	1.68	1.68	1.68	1.68
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	Non-Fugitive	0.14	0.14	0.14	0.14	0.62	0.62	0.62	0.62
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	Non-Fugitive	0.70	0.70	0.70	0.70	3.06	3.06	3.06	3.06
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	Non-Fugitive	0.79	0.79	0.79	0.79	3.44	3.44	3.44	3.44
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	Non-Fugitive	0.69	0.69	0.69	0.69	3.00	3.00	3.00	3.00
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	Non-Fugitive	0.69	0.69	0.69	0.69	3.00	3.00	3.00	3.00
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	Non-Fugitive	0.69	0.69	0.69	0.69	3.00	3.00	3.00	3.00
017-291	Processes Controlled by Crushed Ore Transfers FFDC	Non-Fugitive	0.35	0.35	0.35	0.35	1.53	1.53	1.53	1.53
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	Non-Fugitive	0.34	0.34	0.34	0.34	1.50	1.50	1.50	1.50

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
017-294	Processes Controlled by Wet Screen Feed FFDC	Non-Fugitive	0.12	0.12	0.12	0.12	0.53	0.53	0.53	0.53
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations										
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	Non-Fugitive	0.0004	0.0004	0.0002	0.00003	0.002	0.002	0.0008	0.0001
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	Fugitive	0.0004	0.0004	0.0002	0.00003	0.002	0.002	0.0008	0.0001
018-336	Processes Controlled by H_2S Scrubber System	Non-Fugitive	0.43	0.43	0.43	0.43	1.90	1.90	1.90	1.90
Operation 021: Propane and Natural Gas Emergency Engines										
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Non-Fugitive	0.003	0.001	0.003	0.003	0.0006	0.0003	0.0006	0.0006
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Non-Fugitive	0.02	0.01	0.02	0.02	0.005	0.002	0.005	0.005
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Non-Fugitive	0.02	0.01	0.02	0.02	0.005	0.002	0.005	0.005

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Non-Fugitive	0.02	0.01	0.02	0.02	0.005	0.002	0.005	0.005
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Non-Fugitive	0.02	0.01	0.02	0.02	0.005	0.002	0.005	0.005
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Non-Fugitive	0.007	0.004	0.007	0.007	0.002	0.0009	0.002	0.002
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Non-Fugitive	0.003	0.001	0.003	0.003	0.0006	0.0003	0.0006	0.0006
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Non-Fugitive	0.003	0.001	0.003	0.003	0.0006	0.0003	0.0006	0.0006
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Non-Fugitive	0.003	0.001	0.003	0.003	0.0006	0.0003	0.0006	0.0006
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Non-Fugitive	0.008	0.004	0.008	0.008	0.002	0.0009	0.002	0.002
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Non-Fugitive	0.008	0.004	0.008	0.008	0.002	0.0009	0.002	0.002

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Non-Fugitive	0.03	0.01	0.03	0.03	0.007	0.004	0.007	0.007
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Non-Fugitive	0.09	0.05	0.09	0.09	0.02	0.01	0.02	0.02
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Non-Fugitive	0.03	0.01	0.03	0.03	0.007	0.004	0.007	0.007
Operation 022: Prill Bins										
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	Non-Fugitive	2.58	2.58	0.90	0.14	0.81	0.81	0.28	0.04
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	Non-Fugitive	3.50	3.50	1.23	0.19	0.81	0.81	0.28	0.04
Operation 023: Tailings Operations										
023-418	Wind Erosion of Tailings	Fugitive	103.99	103.99	52.00	7.80	455.49	455.49	227.75	34.16
Operation 024: Miscellaneous Fuel Burning Equipment										
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Non-Fugitive	0.002	0.0007	0.002	0.002	0.01	0.003	0.01	0.01

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Non-Fugitive	0.004	0.0009	0.004	0.004	0.02	0.004	0.02	0.02
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Non-Fugitive	0.15	0.04	0.15	0.15	0.66	0.17	0.66	0.66
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Non-Fugitive	0.04	0.01	0.04	0.04	0.19	0.05	0.19	0.19
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Non-Fugitive	0.03	0.009	0.03	0.03	0.14	0.04	0.14	0.14
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Non-Fugitive	0.004	0.001	0.004	0.004	0.02	0.004	0.02	0.02
Operation 025: Diesel Non-Emergency Engines										
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Non-Fugitive	0.09	0.08	0.09	0.09	0.38	0.33	0.38	0.38
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Non-Fugitive	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005
AOS1: Morenci Concentrator Quaternary Crushing Operations										
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Non-Fugitive	0.24	0.24	0.12	0.12	1.04	1.04	0.52	0.52

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Non-Fugitive	0.28	0.28	0.14	0.14	1.24	1.24	0.62	0.62
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	Non-Fugitive	0.58	0.58	0.58	0.58	2.54	2.54	2.54	2.54
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	Non-Fugitive	0.10	0.10	0.10	0.10	0.45	0.45	0.45	0.45
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	Non-Fugitive	0.32	0.32	0.32	0.32	1.40	1.40	1.40	1.40
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	Non-Fugitive	0.58	0.58	0.58	0.58	2.54	2.54	2.54	2.54
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	Non-Fugitive	0.10	0.10	0.10	0.10	0.45	0.45	0.45	0.45
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	Non-Fugitive	0.32	0.32	0.32	0.32	1.40	1.40	1.40	1.40
AOS2: Concentrate Leach Plant Upgrades										
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Non-Fugitive	0.53	0.53	0.53	0.53	2.30	2.30	2.30	2.30

Table 6.1 Identification and Description of Emission Unit and PM, PM_{10}, and $PM_{2.5}$ Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$	PM (w/ CPM)	PM (w/o CPM)	PM_{10}	$PM_{2.5}$
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Non-Fugitive	0.53	0.53	0.53	0.53	2.30	2.30	2.30	2.30
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	Fugitive	0.27	0.27	0.20	0.0006	1.18	1.18	0.86	0.003
AOS3: Primary Crushing and Overland Conveying Operations										
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	Non-Fugitive	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.							
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	Non-Fugitive	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.							

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
Operation 001: Mining Operations										
001-003	Blasting	Fugitive	8,812.17	390.26	3.14	--	2,658.43	117.73	0.95	--
Operation 002: Morenci Concentrator										
002-352	Morenci Concentrator Bulk Flotation	Fugitive	--	--	--	0.15	--	--	--	0.64
Operation 003: MFL Fine Crushing Plant										
003-204	Agglomerating Unit 1	Non-Fugitive	0.0002	0.03	0.26	--	0.0004	0.05	0.41	--
003-205	Agglomerating Unit 2	Non-Fugitive	0.0002	0.03	0.26	--	0.0004	0.05	0.41	--
Operation 004: Lime Slaking Plants and Lime Transloading										
004-446	Lime Transloading Engine (47.6 hp engine)	Non-Fugitive	0.43	0.35	0.0005	0.02	1.89	1.52	0.002	0.09
Operation 005: Metcalf Power Plant										
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Non-Fugitive	16.80	120.89	0.15	0.43	11.01	79.23	0.10	0.28
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Non-Fugitive	16.80	120.89	0.15	0.43	11.01	79.23	0.10	0.28
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Non-Fugitive	2.00	9.30	0.003	0.75	0.50	2.33	0.0008	0.19

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Non-Fugitive	2.00	9.30	0.003	0.75	0.50	2.33	0.0008	0.19
Operation 009: Solution Extraction/Electrowinning Operations										
009-117	Central SX (21,175 ft^2)	Fugitive	--	--	--	0.92	--	--	--	4.01
009-462	Central Backwash Bleed Tank (33,000 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.10
009-463	Central Barren Organic Tank (60,900 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.08
009-464	Central Bead Separator Tank (5,000 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-465	Central High Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-466	Central Low Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-467	Central Gunk Tank 1 (7,600 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-468	Central Gunk Tank 2 (7,600 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-469	Central Gunk Tank 3 (23,800 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.07

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
009-470	Central Organic Recovery Tank (306,700 gallons)	Non-Fugitive	--	--	--	0.33	--	--	--	1.46
009-471	Central Raffinate Pond (9,905 ft^2)	Fugitive	--	--	--	1.17	--	--	--	5.12
009-118	Metcalf SX (40,585.41 ft^2)	Fugitive	--	--	--	1.77	--	--	--	7.75
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.11
009-473	Metcalf High A Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-474	Metcalf High B Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.07
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Non-Fugitive	--	--	--	0.01	--	--	--	0.06
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.07
009-481	Metcalf Holding Tank (122,200 gallons)	Non-Fugitive	--	--	--	0.04	--	--	--	0.16
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Non-Fugitive	--	--	--	0.34	--	--	--	1.47
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Non-Fugitive	--	--	--	0.34	--	--	--	1.47
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Non-Fugitive	--	--	--	0.04	--	--	--	0.16
009-485	Metcalf Raffinate Pond (10,236 ft^2)	Fugitive	--	--	--	1.22	--	--	--	5.33
009-119	Modoc SX (88,229.16 ft^2)	Fugitive	--	--	--	3.03	--	--	--	13.27
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.10
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.10
009-488	Modoc High A Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.007	--	--	--	0.03
009-489	Modoc High B Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.007	--	--	--	0.03

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
009-490	Modoc Low A Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.007	--	--	--	0.03
009-491	Modoc Low B Decant Tank (4,700 gallons)	Non-Fugitive	--	--	--	0.007	--	--	--	0.03
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Non-Fugitive	--	--	--	0.01	--	--	--	0.05
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Non-Fugitive	--	--	--	0.01	--	--	--	0.05
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Non-Fugitive	--	--	--	0.007	--	--	--	0.03
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Non-Fugitive	--	--	--	0.01	--	--	--	0.05
009-496	Modoc Holding Tank (118,000 gallons)	Non-Fugitive	--	--	--	0.03	--	--	--	0.14
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Non-Fugitive	--	--	--	0.26	--	--	--	1.16
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Non-Fugitive	--	--	--	0.26	--	--	--	1.16
009-499	Modoc Raffinate Pond (15,678 ft^2)	Fugitive	--	--	--	1.47	--	--	--	6.45
009-349	Stargo SX (48,846.87 ft^2)	Fugitive	--	--	--	2.12	--	--	--	9.29

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Non-Fugitive	--	--	--	0.01	--	--	--	0.06
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.09
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.09
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.09
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.10
009-505	Stargo Holding Tank (108,900 gallons)	Non-Fugitive	--	--	--	0.03	--	--	--	0.11
009-506	Stargo Stormwater Tank (772,190 gallons)	Non-Fugitive	--	--	--	0.51	--	--	--	2.23
009-507	Stargo Tricanter Feed Tank (250 gallons)	Non-Fugitive	--	--	--	0.002	--	--	--	0.008
009-508	Stargo Slurry Tank (500 gallons)	Non-Fugitive	--	--	--	0.001	--	--	--	0.005
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Non-Fugitive	1.45	1.72	0.01	0.09	5.15	6.13	0.04	0.34
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Non-Fugitive	1.45	1.72	0.01	0.09	5.15	6.13	0.04	0.34

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Non-Fugitive	1.45	1.72	0.01	0.09	5.15	6.13	0.04	0.34
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Non-Fugitive	1.45	1.72	0.01	0.09	5.15	6.13	0.04	0.34
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Non-Fugitive	1.45	1.72	0.01	0.09	5.15	6.13	0.04	0.34
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Non-Fugitive	0.02	0.08	0.0009	0.0008	0.09	0.35	0.004	0.004
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Non-Fugitive	0.02	0.08	0.0009	0.0008	0.09	0.35	0.004	0.004
009-422	Modoc Test Facility SX (1,418.72 ft^2)	Fugitive	--	--	--	0.11	--	--	--	0.46
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Non-Fugitive	--	--	--	0.005	--	--	--	0.02
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Non-Fugitive	--	--	--	0.005	--	--	--	0.02
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Non-Fugitive	--	--	--	0.003	--	--	--	0.01
Operation 010: Concrete Batch Plant										
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Non-Fugitive	0.08	0.14	0.02	0.005	0.36	0.63	0.07	0.02

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Non-Fugitive	0.08	0.14	0.02	0.005	0.36	0.63	0.07	0.02
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Non-Fugitive	0.08	0.14	0.02	0.005	0.36	0.63	0.07	0.02
Operation 011: Storage Tanks										
011-150	Diesel Tank D1 (177,850 gallons)	Non-Fugitive	--	--	--	0.02	--	--	--	0.09
011-151	Diesel Tank D2 (200,434 gallons)	Non-Fugitive	--	--	--	0.03	--	--	--	0.11
011-154	Diesel Tank D5 (47,255 gallons)	Non-Fugitive	--	--	--	0.009	--	--	--	0.04
011-161	Diesel Tank Pit 95 (101,690 gallons)	Non-Fugitive	--	--	--	0.04	--	--	--	0.16
011-155	Gasoline Tank G1 (12,000 gallons)	Non-Fugitive	--	--	--	0.98	--	--	--	4.28
011-156	Gasoline Tank G2 (12,000 gallons)	Non-Fugitive	--	--	--	0.98	--	--	--	4.28
011-157	Gasoline Tank G3 (12,000 gallons)	Non-Fugitive	--	--	--	0.58	--	--	--	2.55

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
Operation 014: Concentrate Leach Plant										
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Non-Fugitive	1.45	0.88	0.01	0.10	2.52	1.53	0.02	0.17
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Non-Fugitive	--	--	--	5.82	--	--	--	25.49
Operation 015: Diesel Emergency Engines										
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Non-Fugitive	0.93	7.31	0.009	0.49	0.14	1.10	0.001	0.07
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Non-Fugitive	0.93	7.32	0.009	0.49	0.23	1.83	0.002	0.12
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Non-Fugitive	0.53	2.06	0.004	0.08	0.13	0.51	0.0009	0.02
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Non-Fugitive	0.22	1.98	0.002	0.18	0.06	0.49	0.0006	0.04
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Non-Fugitive	0.001	0.35	0.0007	0.001	0.0003	0.09	0.0002	0.0003

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Non-Fugitive	1.29	1.38	0.002	0.10	0.32	0.35	0.0006	0.02
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Non-Fugitive	0.52	2.19	0.004	0.05	0.13	0.55	0.001	0.01
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Non-Fugitive	2.44	9.92	0.01	0.19	0.61	2.48	0.003	0.05
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Non-Fugitive	0.23	0.42	0.0008	0.08	0.06	0.11	0.0002	0.02
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Non-Fugitive	3.10	3.31	0.006	0.24	0.78	0.83	0.001	0.06
Operation 017: Metcalf Concentrator										
017-327	Metcalf Concentrator Bulk Flotation	Fugitive	--	--	--	0.15	--	--	--	0.64
Operation 021: Propane and Natural Gas Emergency Engines										
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Non-Fugitive	6.16	0.22	0.002	0.03	1.54	0.06	0.0006	0.006

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Non-Fugitive	16.07	1.16	0.02	0.22	4.02	0.29	0.004	0.05
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Non-Fugitive	13.42	1.20	0.02	0.29	3.36	0.30	0.004	0.07
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Non-Fugitive	16.07	1.16	0.02	0.22	4.02	0.29	0.004	0.05
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Non-Fugitive	13.42	1.20	0.02	0.29	3.36	0.30	0.004	0.07
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Non-Fugitive	30.84	0.71	0.006	0.08	7.71	0.18	0.002	0.02
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Non-Fugitive	6.16	0.22	0.002	0.03	1.54	0.06	0.0006	0.006
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Non-Fugitive	2.27	0.20	0.002	0.02	0.57	0.05	0.0006	0.006
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Non-Fugitive	4.70	0.09	0.002	0.01	1.17	0.02	0.0006	0.003

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Non-Fugitive	31.57	0.73	0.007	0.09	7.89	0.18	0.002	0.02
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Non-Fugitive	31.57	0.73	0.007	0.09	7.89	0.18	0.002	0.02
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Non-Fugitive	9.59	2.04	0.03	0.40	2.40	0.51	0.007	0.10
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Non-Fugitive	0.79	0.10	0.003	0.008	0.20	0.03	0.0007	0.002
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Non-Fugitive	9.59	2.04	0.03	0.40	2.40	0.51	0.007	0.10
Operation 024: Miscellaneous Fuel Burning Equipment										
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Non-Fugitive	0.03	0.05	0.005	0.002	0.11	0.20	0.02	0.008
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Non-Fugitive	0.04	0.05	0.0003	0.003	0.18	0.22	0.001	0.01
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Non-Fugitive	1.67	1.98	0.01	0.11	7.30	8.69	0.05	0.48

Table 6.2 Identification and Description of Emission Unit and CO, NO_X, SO_2, and VOC Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO	NO_X	SO_2	VOC	CO	NO_X	SO_2	VOC
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Non-Fugitive	0.49	0.58	0.003	0.03	2.14	2.55	0.02	0.14
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Non-Fugitive	0.35	0.60	0.07	0.02	1.51	2.62	0.30	0.10
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Non-Fugitive	0.038	0.07	0.008	0.003	0.17	0.29	0.03	0.01
Operation 025: Diesel Non-Emergency Engines										
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Non-Fugitive	1.43	1.07	0.002	0.08	6.26	4.67	0.008	0.33
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Non-Fugitive	0.001	0.47	0.0008	0.001	0.005	2.08	0.004	0.005
AOS2: Concentrate Leach Plant Upgrades										
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Non-Fugitive	--	--	--	4.07	--	--	--	17.84
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Non-Fugitive	--	--	--	4.07	--	--	--	17.84

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
Operation 001: Mining Operations										
001-003	Blasting	Fugitive	88,184.47	3.42	0.67	88,470.76	26,603.24	1.03	0.20	26,689.61
Operation 003: MFL Fine Crushing Plant										
003-204	Agglomerating Unit 1	Non-Fugitive	58.22	--	--	58.22	94.81	--	--	94.81
003-205	Agglomerating Unit 2	Non-Fugitive	58.22	--	--	58.22	94.81	--	--	94.81
Operation 004: Lime Slaking Plants and Lime Transloading										
004-446	Lime Transloading Engine (47.6 hp engine)	Non-Fugitive	54.33	0.002	0.0004	54.52	237.96	0.01	0.002	238.78
Operation 005: Metcalf Power Plant										
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Non-Fugitive	23,967.47	0.45	0.05	23,992.23	15,708.29	0.30	0.03	15,724.52
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Non-Fugitive	23,967.47	0.45	0.05	23,992.23	15,708.29	0.30	0.03	15,724.52
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Non-Fugitive	342.41	0.01	0.003	343.59	85.60	0.003	0.0007	85.90
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Non-Fugitive	342.41	0.01	0.003	343.59	85.60	0.003	0.0007	85.90

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
Operation 009: Solution Extraction/Electrowinning Operations										
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Non-Fugitive	2,054.12	0.04	0.004	2,056.24	7,311.08	0.14	0.01	7,318.63
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Non-Fugitive	2,054.12	0.04	0.004	2,056.24	7,311.08	0.14	0.01	7,318.63
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Non-Fugitive	2,054.12	0.04	0.004	2,056.24	7,311.08	0.14	0.01	7,318.63
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Non-Fugitive	2,054.12	0.04	0.004	2,056.24	7,311.08	0.14	0.01	7,318.63
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Non-Fugitive	2,054.12	0.04	0.004	2,056.24	7,311.08	0.14	0.01	7,318.63
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Non-Fugitive	89.68	0.004	0.0007	89.99	392.80	0.02	0.003	394.14
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Non-Fugitive	89.68	0.004	0.0007	89.99	392.80	0.02	0.003	394.14
Operation 010: Concrete Batch Plant										
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Non-Fugitive	139.99	0.007	0.001	140.56	613.16	0.03	0.006	615.63
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Non-Fugitive	139.99	0.007	0.001	140.56	613.16	0.03	0.006	615.63

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Non-Fugitive	139.99	0.007	0.001	140.56	613.16	0.03	0.006	615.63
Operation 014: Concentrate Leach Plant										
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Non-Fugitive	2,063.48	0.04	0.004	2,065.61	3,586.52	0.07	0.007	3,590.23
Operation 015: Diesel Emergency Engines										
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Non-Fugitive	923.37	0.04	0.007	926.54	138.51	0.006	0.001	138.98
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Non-Fugitive	924.52	0.04	0.008	927.69	231.13	0.009	0.002	231.92
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Non-Fugitive	386.17	0.02	0.003	387.44	96.54	0.004	0.0008	96.86
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Non-Fugitive	251.10	0.01	0.002	251.96	62.78	0.003	0.0005	62.99
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Non-Fugitive	78.66	0.003	0.0006	78.92	19.67	0.0008	0.0002	19.73
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Non-Fugitive	256.81	0.01	0.002	257.69	64.20	0.003	0.0005	64.42

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Non-Fugitive	410.14	0.02	0.003	411.51	102.53	0.004	0.0008	102.88
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Non-Fugitive	1,306.75	0.05	0.01	1,311.22	326.69	0.01	0.003	327.80
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Non-Fugitive	92.34	0.003	0.0006	92.61	23.08	0.0008	0.0002	23.15
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Non-Fugitive	615.20	0.02	0.005	617.31	153.80	0.006	0.001	154.33
Operation 021: Propane and Natural Gas Emergency Engines										
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Non-Fugitive	18.41	0.0009	0.0002	18.48	4.60	0.0002	0.00004	4.62
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Non-Fugitive	142.19	0.007	0.001	142.76	35.55	0.002	0.0003	35.69
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Non-Fugitive	142.19	0.007	0.001	142.76	35.55	0.002	0.0003	35.69

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Non-Fugitive	142.19	0.007	0.001	142.76	35.55	0.002	0.0003	35.69
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Non-Fugitive	142.19	0.007	0.001	142.76	35.55	0.002	0.0003	35.69
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Non-Fugitive	52.60	0.003	0.0005	52.81	13.15	0.0006	0.0001	13.20
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Non-Fugitive	18.41	0.0009	0.0002	18.48	4.60	0.0002	0.00004	4.62
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Non-Fugitive	18.41	0.0009	0.0002	18.48	4.60	0.0002	0.00004	4.62
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Non-Fugitive	20.17	0.0009	0.0002	20.25	5.04	0.0002	0.00004	5.06
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Non-Fugitive	53.85	0.003	0.0005	54.07	13.46	0.0006	0.0001	13.52
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Non-Fugitive	53.85	0.003	0.0005	54.07	13.46	0.0006	0.0001	13.52

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Non-Fugitive	221.31	0.01	0.002	222.17	55.33	0.003	0.0005	55.54
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Non-Fugitive	413.66	0.10	0.04	427.39	103.42	0.02	0.009	106.85
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Non-Fugitive	221.31	0.01	0.002	222.17	55.33	0.003	0.0005	55.54
Operation 024: Miscellaneous Fuel Burning Equipment										
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Non-Fugitive	44.08	0.002	0.0004	44.25	193.05	0.009	0.002	193.83
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Non-Fugitive	58.96	0.001	0.0001	59.02	258.23	0.005	0.0005	258.50
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Non-Fugitive	2,368.32	0.04	0.004	2,370.77	10,373.25	0.20	0.02	10,383.96
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Non-Fugitive	695.60	0.01	0.001	696.32	3,046.74	0.06	0.006	3,049.89
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Non-Fugitive	583.80	0.03	0.006	586.16	2,557.06	0.12	0.02	2,567.38
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Non-Fugitive	65.01	0.003	0.0006	65.27	284.72	0.01	0.003	285.87

Table 6.3 Identification and Description of Emission Unit and CO_2, CH_4, N_2O, and CO_2e Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
Operation 025: Diesel Non-Emergency Engines										
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Non-Fugitive	198.37	0.008	0.002	199.05	868.87	0.04	0.007	871.85
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Non-Fugitive	94.65	0.006	0.0007	95.00	414.56	0.03	0.003	416.12

Table 6.4 Identification and Description of Emission Unit and H_2SO_4 and H_2S Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)		Annual Potential Emissions (tpy)	
			H_2SO_4	H_2S	H_2SO_4	H_2S
Operation 009: Solution Extraction/Electrowinning Operations						
009-121	Central EW (548 cells)	Fugitive	4.75	--	20.82	--
009-122	Southside EW (220 cells)	Fugitive	1.67	--	7.30	--
009-221	Stargo EW (324 cells)	Fugitive	2.96	--	12.98	--
009-423	Modoc Test Facility EW (771.2 ft^2)	Fugitive	0.12	--	0.53	--
Operation 014: Concentrate Leach Plant						
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Non-Fugitive	0.75	--	3.29	--
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations						
018-336	Processes Controlled by H_2S Scrubber System	Non-Fugitive	--	0.47	--	2.06
AOS2: Concentrate Leach Plant Upgrades						
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Non-Fugitive	0.53	--	2.30	--
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Non-Fugitive	0.53	--	2.30	--

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
Operation 001: Mining Operations								
001-004	Drilling	Fugitive	--	1.80E-02	1.03E-01	--	5.42E-03	3.12E-02
001-003	Blasting	Fugitive	--	5.43E-02	5.68E-01	--	7.71E-03	1.21E-01
001-001a	Vehicle Travel on Unpaved Roads	Fugitive	--	7.60E-02	4.38E-01	--	2.76E-01	1.59E+00
001-001b	Dozer Operation	Fugitive	--	3.95E-03	2.28E-02	--	1.73E-02	9.97E-02
001-001c	Road Grader Operation	Fugitive	--	1.55E-03	8.91E-03	--	6.77E-03	3.90E-02
001-002a	Loading Ore into Haul Trucks	Fugitive	--	3.18E-03	1.83E-02	--	1.16E-02	6.69E-02
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Fugitive	--	9.52E-05	1.86E-04	--	4.17E-04	8.16E-04
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Fugitive	--	2.19E-03	1.73E-02	--	7.43E-03	5.87E-02
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Fugitive	--	5.01E-05	9.80E-05	--	2.19E-04	4.29E-04
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Fugitive	--	4.51E-05	8.82E-05	--	1.98E-04	3.86E-04
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	Non-Fugitive	--	1.17E-05	2.28E-05	--	5.11E-05	9.99E-05
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	Non-Fugitive	--	1.56E-05	3.06E-05	--	6.85E-05	1.34E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	Non-Fugitive	--	3.99E-05	7.80E-05	--	1.75E-04	3.42E-04
001-344	Conveyor Belt P12 to Conveyor Belt P10	Non-Fugitive	--	5.36E-06	1.05E-05	--	2.35E-05	4.59E-05
001-015	Processes Controlled by P5/P6 FFDC	Non-Fugitive	--	3.34E-05	6.52E-05	--	1.46E-04	2.86E-04
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Fugitive	--	6.08E-05	1.19E-04	--	2.66E-04	5.21E-04
001-017	Wind Erosion of Mill IOS	Fugitive	--	5.55E-05	1.09E-04	--	2.43E-04	4.76E-04
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	Non-Fugitive	--	1.20E-05	2.34E-05	--	5.25E-05	1.03E-04
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Fugitive	--	4.68E-05	9.15E-05	--	2.05E-04	4.01E-04
001-227	Wind Erosion of MFL IOS	Fugitive	--	6.25E-05	1.22E-04	--	2.74E-04	5.35E-04
001-325	Processes Controlled by DC2/P5 FFDC	Non-Fugitive	--	4.76E-06	9.30E-06	--	2.08E-05	4.07E-05
001-299	Processes Controlled by Mill IOS/R1A FFDC	Non-Fugitive	--	3.26E-05	6.37E-05	--	1.43E-04	2.79E-04
001-300	Processes Controlled by Mill IOS/R1B FFDC	Non-Fugitive	--	2.61E-05	5.10E-05	--	1.14E-04	2.23E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
001-272	Processes Controlled by R1A and R1B/R7 FFDC	Non-Fugitive	--	7.82E-06	1.37E-05	--	3.42E-05	5.98E-05
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	Non-Fugitive	--	1.41E-05	3.06E-05	--	6.19E-05	1.34E-04
001-278	Processes Controlled by R2/R11 FFDC	Non-Fugitive	--	1.20E-05	2.60E-05	--	5.25E-05	1.14E-04
001-228	Processes Controlled by MFL IOS/R8 FFDC	Non-Fugitive	--	8.34E-06	1.63E-05	--	3.65E-05	7.14E-05
001-229	Processes Controlled by R8/R9 FFDC	Non-Fugitive	--	6.91E-06	1.35E-05	--	3.02E-05	5.91E-05
001-323a	Loading to the Portable Cleanup Conveyor	Fugitive	--	3.34E-06	6.53E-06	--	1.46E-05	2.86E-05
001-323b	Unloading from the Portable Cleanup Conveyor	Non-Fugitive	--	3.34E-06	6.53E-06	--	1.46E-05	2.86E-05
Operation 002: Morenci Concentrator								
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	Non-Fugitive	--	1.54E-05	2.70E-05	--	6.76E-05	1.18E-04
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	Non-Fugitive	--	1.64E-05	2.86E-05	--	7.16E-05	1.25E-04
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	Non-Fugitive	--	9.05E-06	1.58E-05	--	3.97E-05	6.93E-05

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	Non-Fugitive	--	1.07E-05	1.88E-05	--	4.71E-05	8.22E-05
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	Non-Fugitive	--	1.54E-05	2.70E-05	--	6.76E-05	1.18E-04
002-352	Morenci Concentrator Bulk Flotation	Fugitive	8.68E-03	--	1.28E-02	3.80E-02	--	5.61E-02
Operation 003: MFL Fine Crushing Plant								
003-273	Processes Controlled by R9/R10 FFDC	Non-Fugitive	--	1.95E-06	3.82E-06	--	8.56E-06	1.67E-05
003-330	Processes Controlled by R10/R3 FFDC	Non-Fugitive	--	7.82E-06	1.53E-05	--	3.42E-05	6.70E-05
003-079	Processes Controlled by R3/R4 Bag Collector 3	Non-Fugitive	--	1.46E-05	2.85E-05	--	6.39E-05	1.25E-04
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	Non-Fugitive	--	3.78E-05	7.40E-05	--	1.66E-04	3.24E-04
003-082	Processes Controlled by Scrubber 3C	Non-Fugitive	--	2.31E-04	4.51E-04	--	1.01E-03	1.98E-03
003-317	Processes Controlled by FFDC 3A	Non-Fugitive	--	9.90E-05	1.94E-04	--	4.34E-04	8.48E-04
003-301	Processes Controlled by FFDC 6A	Non-Fugitive	--	1.01E-04	1.98E-04	--	4.44E-04	8.68E-04
003-302	Processes Controlled by FFDC 6B	Non-Fugitive	--	8.96E-05	1.75E-04	--	3.92E-04	7.67E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
003-304	Processes Controlled by FFDC 1	Non-Fugitive	--	9.02E-05	1.76E-04	--	3.95E-04	7.73E-04
003-089	Processes Controlled by Scrubber 5	Non-Fugitive	--	2.70E-04	5.27E-04	--	1.18E-03	2.31E-03
003-303	Processes Controlled by FFDC 8	Non-Fugitive	--	6.64E-05	1.30E-04	--	2.91E-04	5.69E-04
003-088	Processes Controlled by Scrubber 4	Non-Fugitive	--	2.99E-04	5.85E-04	--	1.31E-03	2.56E-03
003-320	Processes Controlled by 14/15 FFDC	Non-Fugitive	--	9.12E-06	1.78E-05	--	3.99E-05	7.81E-05
003-331	Processes Controlled by 15/16 FFDC	Non-Fugitive	--	8.08E-06	1.58E-05	--	3.54E-05	6.92E-05
003-309	Processes Controlled by 16/S11 FFDC	Non-Fugitive	--	7.82E-06	1.53E-05	--	3.42E-05	6.70E-05
003-199	Conveyor Belt S11 (transfer to FOIS)	Fugitive	--	4.01E-05	7.84E-05	--	1.76E-04	3.43E-04
003-200	Wind Erosion of the FOIS	Fugitive	--	2.81E-05	5.50E-05	--	1.23E-04	2.41E-04
003-441	Dust Suppression Fan	Fugitive	--	--	2.03E-09	--	--	8.89E-09
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	Non-Fugitive	--	5.11E-05	9.99E-05	--	2.24E-04	4.37E-04
003-202	Processes Controlled by A1A/A2A Bag Collector 8	Non-Fugitive	--	1.46E-05	2.85E-05	--	6.39E-05	1.25E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
003-203	Processes Controlled by A1A/A2C Bag Collector 9	Non-Fugitive	--	1.46E-05	2.85E-05	--	6.39E-05	1.25E-04
Operation 004: Lime Slaking Plants and Lime Transloading								
004-446	Lime Transloading Engine (47.6 hp engine)	Non-Fugitive	9.50E-05	--	1.29E-03	4.16E-04	--	5.65E-03
Operation 005: Metcalf Power Plant								
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Non-Fugitive	1.31E-02	--	2.10E-01	8.59E-03	--	1.38E-01
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Non-Fugitive	1.31E-02	--	2.10E-01	8.59E-03	--	1.38E-01
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Non-Fugitive	5.99E-04	--	8.13E-03	1.50E-04	--	2.03E-03
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Non-Fugitive	5.99E-04	--	8.13E-03	1.50E-04	--	2.03E-03
Operation 006: Copper Concentrate Processing Operations								
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044d	Conveyor Belt BA to Conveyor Belt BB	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044e	Conveyor Belt BB to Conveyor Belt BC	Non-Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	Fugitive	--	2.16E-06	7.80E-06	--	9.47E-06	3.42E-05
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	Fugitive	--	2.92E-05	1.05E-04	--	1.28E-04	4.61E-04
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	Fugitive	--	1.89E-05	6.81E-05	--	8.27E-05	2.98E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
Operation 009: Solution Extraction/Electrowinning Operations								
009-117	Central SX (21,175 ft^2)	Fugitive	1.20E-01	--	2.31E-01	5.24E-01	--	1.01E+00
009-462	Central Backwash Bleed Tank (33,000 gallons)	Non-Fugitive	3.10E-03	--	5.99E-03	1.36E-02	--	2.62E-02
009-463	Central Barren Organic Tank (60,900 gallons)	Non-Fugitive	2.32E-03	--	4.49E-03	1.02E-02	--	1.97E-02
009-464	Central Bead Separator Tank (5,000 gallons)	Non-Fugitive	1.21E-03	--	2.34E-03	5.30E-03	--	1.02E-02
009-465	Central High Decant Tank (4,700 gallons)	Non-Fugitive	1.21E-03	--	2.34E-03	5.30E-03	--	1.02E-02
009-466	Central Low Decant Tank (4,700 gallons)	Non-Fugitive	1.21E-03	--	2.34E-03	5.30E-03	--	1.02E-02
009-467	Central Gunk Tank 1 (7,600 gallons)	Non-Fugitive	1.21E-03	--	2.34E-03	5.30E-03	--	1.02E-02
009-468	Central Gunk Tank 2 (7,600 gallons)	Non-Fugitive	1.21E-03	--	2.34E-03	5.30E-03	--	1.02E-02
009-469	Central Gunk Tank 3 (23,800 gallons)	Non-Fugitive	2.04E-03	--	3.95E-03	8.95E-03	--	1.73E-02
009-470	Central Organic Recovery Tank (306,700 gallons)	Non-Fugitive	4.35E-02	--	8.42E-02	1.91E-01	--	3.69E-01
009-471	Central Raffinate Pond (9,905 ft^2)	Fugitive	1.53E-01	--	2.95E-01	6.68E-01	--	1.29E+00

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
009-118	Metcalf SX (40,585.41 ft^2)	Fugitive	2.36E-01	--	4.56E-01	1.03E+00	--	2.00E+00
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Non-Fugitive	3.25E-03	--	6.29E-03	1.43E-02	--	2.75E-02
009-473	Metcalf High A Decant Tank (4,700 gallons)	Non-Fugitive	1.25E-03	--	2.41E-03	5.45E-03	--	1.05E-02
009-474	Metcalf High B Decant Tank (4,700 gallons)	Non-Fugitive	1.25E-03	--	2.41E-03	5.45E-03	--	1.05E-02
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Non-Fugitive	1.25E-03	--	2.41E-03	5.45E-03	--	1.05E-02
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Non-Fugitive	1.25E-03	--	2.41E-03	5.45E-03	--	1.05E-02
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Non-Fugitive	2.01E-03	--	3.88E-03	8.80E-03	--	1.70E-02
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Non-Fugitive	1.79E-03	--	3.47E-03	7.85E-03	--	1.52E-02
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Non-Fugitive	1.25E-03	--	2.41E-03	5.45E-03	--	1.05E-02
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Non-Fugitive	2.10E-03	--	4.07E-03	9.22E-03	--	1.78E-02
009-481	Metcalf Holding Tank (122,200 gallons)	Non-Fugitive	4.80E-03	--	9.27E-03	2.10E-02	--	4.06E-02

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Non-Fugitive	4.48E-02	--	8.66E-02	1.96E-01	--	3.79E-01
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Non-Fugitive	4.48E-02	--	8.66E-02	1.96E-01	--	3.79E-01
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Non-Fugitive	4.80E-03	--	9.27E-03	2.10E-02	--	4.06E-02
009-485	Metcalf Raffinate Pond (10,236 ft^2)	Fugitive	1.62E-01	--	3.14E-01	7.11E-01	--	1.37E+00
009-119	Modoc SX (88,229.16 ft^2)	Fugitive	4.50E-02	--	1.59E-01	1.97E-01	--	6.94E-01
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Non-Fugitive	3.28E-04	--	1.15E-03	1.43E-03	--	5.06E-03
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Non-Fugitive	3.28E-04	--	1.15E-03	1.43E-03	--	5.06E-03
009-488	Modoc High A Decant Tank (4,700 gallons)	Non-Fugitive	1.09E-04	--	3.85E-04	4.78E-04	--	1.69E-03
009-489	Modoc High B Decant Tank (4,700 gallons)	Non-Fugitive	1.09E-04	--	3.85E-04	4.78E-04	--	1.69E-03
009-490	Modoc Low A Decant Tank (4,700 gallons)	Non-Fugitive	1.09E-04	--	3.85E-04	4.78E-04	--	1.69E-03
009-491	Modoc Low B Decant Tank (4,700 gallons)	Non-Fugitive	1.09E-04	--	3.85E-04	4.78E-04	--	1.69E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Non-Fugitive	1.76E-04	--	6.21E-04	7.72E-04	--	2.72E-03
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Non-Fugitive	1.85E-04	--	6.51E-04	8.08E-04	--	2.85E-03
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Non-Fugitive	1.09E-04	--	3.85E-04	4.78E-04	--	1.69E-03
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Non-Fugitive	1.85E-04	--	6.51E-04	8.08E-04	--	2.85E-03
009-496	Modoc Holding Tank (118,000 gallons)	Non-Fugitive	4.72E-04	--	1.66E-03	2.07E-03	--	7.28E-03
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Non-Fugitive	3.93E-03	--	1.39E-02	1.72E-02	--	6.07E-02
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Non-Fugitive	3.93E-03	--	1.39E-02	1.72E-02	--	6.07E-02
009-499	Modoc Raffinate Pond (15,678 ft^2)	Fugitive	2.18E-02	--	7.68E-02	9.55E-02	--	3.37E-01
009-349	Stargo SX (48,846.87 ft^2)	Fugitive	2.79E-01	--	5.40E-01	1.22E+00	--	2.36E+00
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Non-Fugitive	1.76E-03	--	3.41E-03	7.73E-03	--	1.49E-02
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Non-Fugitive	2.76E-03	--	5.33E-03	1.21E-02	--	2.33E-02

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Non-Fugitive	2.76E-03	--	5.33E-03	1.21E-02	--	2.33E-02
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Non-Fugitive	2.76E-03	--	5.33E-03	1.21E-02	--	2.33E-02
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Non-Fugitive	2.98E-03	--	5.75E-03	1.30E-02	--	2.52E-02
009-505	Stargo Holding Tank (108,900 gallons)	Non-Fugitive	3.43E-03	--	6.64E-03	1.50E-02	--	2.91E-02
009-506	Stargo Stormwater Tank (772,190 gallons)	Non-Fugitive	6.71E-02	--	1.30E-01	2.94E-01	--	5.68E-01
009-507	Stargo Tricanter Feed Tank (250 gallons)	Non-Fugitive	2.50E-04	--	4.82E-04	1.09E-03	--	2.11E-03
009-508	Stargo Slurry Tank (500 gallons)	Non-Fugitive	1.64E-04	--	3.18E-04	7.20E-04	--	1.39E-03
009-121	Central EW (548 cells)	Fugitive	--	--	7.13E-04	--	--	3.12E-03
009-122	Southside EW (220 cells)	Fugitive	--	--	2.50E-04	--	--	1.10E-03
009-221	Stargo EW (324 cells)	Fugitive	--	--	4.44E-04	--	--	1.95E-03
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Non-Fugitive	--	8.61E-06	3.25E-02	--	3.06E-05	1.16E-01
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Non-Fugitive	--	8.61E-06	3.25E-02	--	3.06E-05	1.16E-01

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Non-Fugitive	--	8.61E-06	3.25E-02	--	3.06E-05	1.16E-01
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Non-Fugitive	--	8.61E-06	3.25E-02	--	3.06E-05	1.16E-01
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Non-Fugitive	--	8.61E-06	3.25E-02	--	3.06E-05	1.16E-01
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Non-Fugitive	--	4.95E-06	2.85E-04	--	2.17E-05	1.25E-03
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Non-Fugitive	--	4.95E-06	2.85E-04	--	2.17E-05	1.25E-03
009-422	Modoc Test Facility SX (1,418.72 ft^2)	Fugitive	1.57E-03	--	5.54E-03	6.88E-03	--	2.43E-02
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Non-Fugitive	7.31E-05	--	2.58E-04	3.20E-04	--	1.13E-03
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Non-Fugitive	7.31E-05	--	2.58E-04	3.20E-04	--	1.13E-03
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Non-Fugitive	3.93E-05	--	1.39E-04	1.72E-04	--	6.07E-04
Operation 010: Concrete Batch Plant								
010-144a	Unloading Aggregate to the Aggregate Stockpiles	Fugitive	--	3.97E-06	4.48E-04	--	1.32E-06	1.49E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
010-144b	Wind Erosion of the Aggregate Stockpiles	Fugitive	--	8.81E-07	9.94E-05	--	3.86E-06	4.36E-04
010-144c	Loading Aggregate to the Feed Hopper	Fugitive	--	3.97E-06	4.48E-04	--	1.32E-06	1.49E-04
010-145	Feed Hopper to Aggregate Conveyor Belt	Non-Fugitive	--	3.97E-06	4.48E-04	--	1.32E-06	1.49E-04
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Non-Fugitive	--	1.37E-05	1.44E-04	--	4.57E-06	4.78E-05
010-147	Pneumatic Transfer of Cement to the Cement Silo	Non-Fugitive	--	1.95E-06	5.89E-04	--	6.48E-07	1.96E-04
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	Non-Fugitive	--	1.37E-04	1.44E-03	--	4.57E-05	4.78E-04
010-148b	Cement Screw Conveyor to Weigh Hopper	Non-Fugitive	--	1.95E-05	5.89E-03	--	6.48E-06	1.96E-03
010-148c	Aggregate Conveyor Belt to Weigh Hopper	Non-Fugitive	--	3.97E-06	4.48E-04	--	1.32E-06	1.49E-04
010-148d	Weigh Hopper to Concrete Mixing Truck	Non-Fugitive	--	1.15E-04	3.28E-03	--	3.82E-05	1.09E-03
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Non-Fugitive	--	4.95E-07	1.87E-03	--	2.17E-06	8.19E-03
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Non-Fugitive	--	4.95E-07	1.87E-03	--	2.17E-06	8.19E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Non-Fugitive	--	4.95E-07	1.87E-03	--	2.17E-06	8.19E-03
Operation 011: Storage Tanks								
011-150	Diesel Tank D1 (177,850 gallons)	Non-Fugitive	1.19E-03	--	1.75E-03	5.19E-03	--	7.66E-03
011-151	Diesel Tank D2 (200,434 gallons)	Non-Fugitive	1.56E-03	--	2.30E-03	6.82E-03	--	1.01E-02
011-154	Diesel Tank D5 (47,255 gallons)	Non-Fugitive	5.08E-04	--	7.50E-04	2.23E-03	--	3.29E-03
011-161	Diesel Tank Pit 95 (101,690 gallons)	Non-Fugitive	2.22E-03	--	3.28E-03	9.74E-03	--	1.44E-02
011-155	Gasoline Tank G1 (12,000 gallons)	Non-Fugitive	1.95E-03	--	3.81E-02	8.56E-03	--	1.67E-01
011-156	Gasoline Tank G2 (12,000 gallons)	Non-Fugitive	1.95E-03	--	3.81E-02	8.56E-03	--	1.67E-01
011-157	Gasoline Tank G3 (12,000 gallons)	Non-Fugitive	1.16E-03	--	2.27E-02	5.10E-03	--	9.93E-02
Operation 013: Grizzly Operations								
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	Fugitive	--	8.64E-06	3.17E-05	--	3.78E-05	1.39E-04
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	Fugitive	--	1.03E-05	3.76E-05	--	4.50E-05	1.65E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	Fugitive	--	1.78E-05	6.51E-05	--	7.78E-05	2.85E-04
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	Fugitive	--	5.08E-06	5.73E-04	--	2.22E-05	2.51E-03
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	Fugitive	--	6.03E-06	6.81E-04	--	2.64E-05	2.98E-03
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	Fugitive	--	1.25E-06	1.42E-04	--	5.49E-06	6.20E-04
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	Fugitive	--	5.08E-06	5.73E-04	--	2.22E-05	2.51E-03
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	Fugitive	--	6.03E-06	6.81E-04	--	2.64E-05	2.98E-03
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	Fugitive	--	1.25E-06	1.42E-04	--	5.49E-06	6.20E-04
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	Fugitive	--	5.08E-06	5.73E-04	--	2.22E-05	2.51E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	Fugitive	--	6.03E-06	6.81E-04	--	2.64E-05	2.98E-03
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	Fugitive	--	1.25E-06	1.42E-04	--	5.49E-06	6.20E-04
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	Fugitive	--	2.81E-05	5.50E-05	--	1.23E-04	2.41E-04
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	Fugitive	--	3.34E-05	6.53E-05	--	1.46E-04	2.86E-04
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	Fugitive	--	6.94E-06	1.36E-05	--	3.04E-05	5.95E-05
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	Fugitive	--	2.81E-05	5.50E-05	--	1.23E-04	2.41E-04
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	Fugitive	--	3.34E-05	6.53E-05	--	1.46E-04	2.86E-04
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	Fugitive	--	6.94E-06	1.36E-05	--	3.04E-05	5.95E-05

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
Operation 014: Concentrate Leach Plant								
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Non-Fugitive	--	8.65E-06	3.27E-02	--	1.50E-05	5.68E-02
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Non-Fugitive	--	1.48E-04	5.33E-04	--	6.47E-04	2.34E-03
014-240	PLV Cooling Tower	Fugitive	--	2.18E-09	1.11E-07	--	9.55E-09	4.86E-07
014-241	Oxygen Plant Cooling Tower 1	Fugitive	--	5.61E-10	2.86E-08	--	2.46E-09	1.25E-07
Operation 015: Diesel Emergency Engines								
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Non-Fugitive	1.09E-03	--	8.91E-03	1.64E-04	--	1.34E-03
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Non-Fugitive	1.09E-03	--	8.92E-03	2.74E-04	--	2.23E-03
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Non-Fugitive	6.46E-04	--	8.79E-03	1.62E-04	--	2.20E-03
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Non-Fugitive	4.39E-04	--	5.97E-03	1.10E-04	--	1.49E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Non-Fugitive	7.98E-05	--	1.09E-03	2.00E-05	--	2.71E-04
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Non-Fugitive	4.49E-04	--	6.10E-03	1.12E-04	--	1.53E-03
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Non-Fugitive	6.98E-04	--	9.49E-03	1.75E-04	--	2.37E-03
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Non-Fugitive	1.54E-03	--	1.26E-02	3.85E-04	--	3.14E-03
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Non-Fugitive	1.38E-04	--	1.87E-03	3.44E-05	--	4.68E-04
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Non-Fugitive	1.08E-03	--	1.46E-02	2.69E-04	--	3.65E-03
Operation 017: Metcalf Concentrator								
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	Non-Fugitive	--	1.77E-05	3.84E-05	--	7.76E-05	1.68E-04
017-280	Processes Controlled by Secondary Screening FFDC 1	Non-Fugitive	--	6.83E-05	1.48E-04	--	2.99E-04	6.47E-04
017-281	Processes Controlled by Secondary Screening FFDC 2	Non-Fugitive	--	6.75E-05	1.46E-04	--	2.96E-04	6.40E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	Non-Fugitive	--	9.64E-06	2.09E-05	--	4.22E-05	9.14E-05
017-283	Processes Controlled by Secondary Crushing FFDC 1	Non-Fugitive	--	2.29E-05	4.96E-05	--	1.00E-04	2.17E-04
017-284	Processes Controlled by Secondary Crushing FFDC 2	Non-Fugitive	--	2.92E-05	6.32E-05	--	1.28E-04	2.77E-04
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	Non-Fugitive	--	1.07E-05	2.31E-05	--	4.68E-05	1.01E-04
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	Non-Fugitive	--	5.32E-05	1.15E-04	--	2.33E-04	5.04E-04
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	Non-Fugitive	--	5.97E-05	1.29E-04	--	2.61E-04	5.66E-04
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	Non-Fugitive	--	5.21E-05	1.13E-04	--	2.28E-04	4.94E-04
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	Non-Fugitive	--	5.21E-05	1.13E-04	--	2.28E-04	4.94E-04
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	Non-Fugitive	--	5.21E-05	1.13E-04	--	2.28E-04	4.94E-04
017-291	Processes Controlled by Crushed Ore Transfers FFDC	Non-Fugitive	--	2.66E-05	5.75E-05	--	1.16E-04	2.52E-04

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	Non-Fugitive	--	2.61E-05	5.64E-05	--	1.14E-04	2.47E-04
017-294	Processes Controlled by Wet Screen Feed FFDC	Non-Fugitive	--	9.12E-06	1.97E-05	--	3.99E-05	8.65E-05
017-327	Metcalf Concentrator Bulk Flotation	Fugitive	8.68E-03	--	1.28E-02	3.80E-02	--	5.61E-02
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations								
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	Non-Fugitive	--	3.38E-09	1.54E-07	--	1.48E-08	6.73E-07
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	Fugitive	--	3.38E-09	1.54E-07	--	1.48E-08	6.73E-07
018-336	Processes Controlled by H_2S Scrubber System	Non-Fugitive	--	8.26E-06	3.76E-04	--	3.62E-05	1.65E-03
Operation 021: Propane and Natural Gas Emergency Engines								
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Non-Fugitive	2.59E-05	--	4.31E-03	6.48E-06	--	1.08E-03
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Non-Fugitive	2.00E-04	--	3.33E-02	5.00E-05	--	8.32E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Non-Fugitive	2.00E-04	--	3.33E-02	5.00E-05	--	8.32E-03
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Non-Fugitive	2.00E-04	--	3.33E-02	5.00E-05	--	8.32E-03
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Non-Fugitive	2.00E-04	--	3.33E-02	5.00E-05	--	8.32E-03
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Non-Fugitive	7.40E-05	--	1.23E-02	1.85E-05	--	3.08E-03
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Non-Fugitive	2.59E-05	--	4.31E-03	6.48E-06	--	1.08E-03
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Non-Fugitive	2.59E-05	--	4.31E-03	6.48E-06	--	1.08E-03
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Non-Fugitive	2.59E-05	--	4.31E-03	6.48E-06	--	1.08E-03
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Non-Fugitive	7.58E-05	--	1.26E-02	1.89E-05	--	3.15E-03

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Non-Fugitive	7.58E-05	--	1.26E-02	1.89E-05	--	3.15E-03
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Non-Fugitive	3.01E-04	--	5.01E-02	7.52E-05	--	1.25E-02
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Non-Fugitive	4.54E-05	--	7.56E-03	1.14E-05	--	1.89E-03
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Non-Fugitive	3.01E-04	--	5.01E-02	7.52E-05	--	1.25E-02
Operation 023: Tailings Operations								
023-418	Wind Erosion of Tailings	Fugitive	--	6.39E-04	1.12E-02	--	2.80E-03	4.91E-02
Operation 024: Miscellaneous Fuel Burning Equipment								
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Non-Fugitive	--	1.56E-07	5.89E-04	--	6.83E-07	2.58E-03
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Non-Fugitive	--	2.47E-07	9.33E-04	--	1.08E-06	4.09E-03
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Non-Fugitive	--	9.92E-06	3.75E-02	--	4.35E-05	1.64E-01
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Non-Fugitive	--	2.91E-06	1.10E-02	--	1.28E-05	4.82E-02

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Non-Fugitive	--	2.06E-06	7.80E-03	--	9.04E-06	3.42E-02
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Non-Fugitive	--	2.30E-07	8.68E-04	--	1.01E-06	3.80E-03
Operation 025: Diesel Non-Emergency Engines								
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Non-Fugitive	3.47E-04	--	4.71E-03	1.52E-03	--	2.06E-02
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Non-Fugitive	8.95E-05	--	1.22E-03	3.92E-04	--	5.33E-03
AOS1: Morenci Concentrator Quaternary Crushing Operations								
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Non-Fugitive	--	9.05E-06	1.58E-05	--	3.97E-05	6.93E-05
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Non-Fugitive	--	1.07E-05	1.88E-05	--	4.71E-05	8.22E-05
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	Non-Fugitive	--	4.40E-05	7.69E-05	--	1.93E-04	3.37E-04
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	Non-Fugitive	--	7.82E-06	1.37E-05	--	3.42E-05	5.98E-05

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	Non-Fugitive	--	2.42E-05	4.23E-05	--	1.06E-04	1.85E-04
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	Non-Fugitive	--	4.40E-05	7.69E-05	--	1.93E-04	3.37E-04
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	Non-Fugitive	--	7.82E-06	1.37E-05	--	3.42E-05	5.98E-05
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	Non-Fugitive	--	2.42E-05	4.23E-05	--	1.06E-04	1.85E-04
AOS2: Concentrate Leach Plant Upgrades								
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Non-Fugitive	--	1.03E-04	3.73E-04	--	4.53E-04	1.63E-03
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Non-Fugitive	--	1.03E-04	3.73E-04	--	4.53E-04	1.63E-03
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	Fugitive	--	1.96E-09	9.98E-08	--	8.59E-09	4.37E-07
AOS3: Primary Crushing and Overland Conveying Operations								
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	Non-Fugitive	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.					

Table 6.5 Identification and Description of Emission Unit and HAP Potential Emissions

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP [a]	Lead	Total HAPs	Greatest Single HAP [a]	Lead	Total HAPs
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	Non-Fugitive	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.					

Table 6.6 Summary of Facility-Wide Emissions

Regulated Air Pollutant Emitted	Hourly Emissions (lb/hr) [a]			Annual Emissions (tpy) [a]		
	Non-Fugitive Emissions	Fugitive Emissions	Total Emissions	Non-Fugitive Emissions	Fugitive Emissions	Total Emissions
PM (w/ CPM)	129.32	7,115.21	7,244.53	196.19	19,647.84	19,844.04
PM (w/o CPM)	126.06	7,115.21	7,241.27	191.37	19,647.84	19,839.21
PM_{10}	74.99	2,421.49	2,496.48	169.30	5,360.54	5,529.83
$PM_{2.5}$	44.94	278.62	323.56	157.72	732.39	890.11
CO	253.46	8,812.17	9,065.63	122.63	2,658.43	2,781.06
NO_X	323.77	390.26	714.03	232.08	117.73	349.81
SO_2	1.24	3.14	4.38	1.93	0.95	2.88
VOC	20.67	12.09	32.77	63.71	52.96	116.67
H_2SO_4	1.05	9.50	10.55	4.60	41.63	46.23
H_2S	0.47	--	0.47	2.06	--	2.06
CO_2e	72,849	88,471	161,320	94,538	26,690	121,228
Greatest Single HAP (Xylenes)	0.31	1.04	1.35	1.23	4.54	5.77
Lead	0.003	0.16	0.16	0.01	0.34	0.35
Total HAPs	1.73	3.30	5.03	4.14	11.30	15.44

[a] Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

Table 6.7 Potential to Emit and Threshold Comparison

Regulated Air Pollutant Emitted	PTE of Facility-Wide Operations [a]	Thresholds (tpy)		
		Title V Major Source Permitting	PSD Major for a Non-Categorical Source in an Attainment/ Unclassifiable Area	HAP Major Source
PM (w/ CPM)	196.19	--	--	--
PM (w/o CPM)	191.37	--	250	--
PM_{10}	169.30	100	250	--
$PM_{2.5}$	157.72	100	250	--
CO	122.63	100	250	--
NO_X	232.08	100	250	--
SO_2	1.93	100	250	--
VOC	63.71	100	250	--
H_2SO_4	4.60	100	250	--
H_2S	2.06	100	250	--
CO_2e	94,538	--	--	--
Greatest Single HAP (Xylenes)	5.77	--	--	10
Lead	0.35	--	250	10
Total HAPs	15.44	--	--	25

[a] The facility-wide operations are a non-categorical source. Therefore, except for HAPs, the PTE includes all non-fugitive emission units and fugitive emission units from embedded categorical sources. For HAPs, the PTE includes all non-fugitive and fugitive emission units.

7 INFORMATION NEEDED TO DETERMINE OR REGULATE EMISSIONS OR TO COMPLY WITH A.A.C. R18-2-306.01

7.1 PROCESS RATE INFORMATION

The maximum annual and rated hourly process rates for each emission unit at the FMMI facility is presented in Appendix E. Because the FMMI facility is composed of many different major and support operations, maximum annual and rated hourly process rates for the entire facility are not needed to determine or regulate emissions. Consequently, they are not included in this application.

7.2 FUEL USE INFORMATION

For the fuel burning equipment used at the FMMI facility, the type and quantity of fuel used on an annual and hourly basis, the percent used for process heat, the higher heating value of the fuel, and the potential sulfur and ash contents of the fuel (for solid fuels) are presented in Table 7.1.

7.3 RAW MATERIAL INFORMATION

Raw materials used at the FMMI facility include the fuels identified in Table 7.1 and other miscellaneous materials needed for the production of copper concentrate, copper cathodes, and molybdenum concentrate. A summary of the maximum annual and hourly, monthly, and quarterly quantities of the fuels is presented in Table 7.1. A summary of the maximum annual and hourly, monthly, and quarterly quantities of the remaining raw materials is presented in Table 7.2. The information is provided only where it is needed to determine or regulate emissions. Quantities of other raw materials are not included in this application.

7.4 ANTICIPATED OPERATING SCHEDULES

FMMI's facility-wide operations are available to operate 24 hr/day, 7 days/week, and 365 days/yr. Annual production is generally evenly distributed throughout the year (25% each quarter). Anticipated operating schedules for each individual emission unit at the facility are not needed to determine or regulate emissions. Consequently, they are not included in this application.

7.5 LIMITATIONS ON SOURCE OPERATIONS AND WORK PRACTICE STANDARDS AFFECTING EMISSIONS

Mining operations (drilling, blasting, loading, and vehicle use) are limited by the quantity of ore available to be mined and the number of mining and support vehicles used at the FMMI facility. Potential emissions are calculated taking into account these limitations.

The voluntary limitations discussed in Section 8 affect emissions from the associated emission units at the FMMI facility. Potential emissions are calculated assuming continuous compliance with the voluntary limitations.

Some operations at the FMMI facility are limited by the amount of material able or needed to be processed (including the operations that utilize off-site raw materials as discussed in Section 7.3).

Reasonable worst-case annual process rates (as described in Appendix E) are used to calculate emissions from these types of operations.

40 CFR 60 Subparts IIII and JJJJ and 40 CFR 63 Subpart ZZZZ limit the hours of operation of the emergency engines during maintenance checks, readiness testing, emergency demand response, and non-emergency situations. However, the requirements do not affect emissions as PTE is calculated using 500 hours of operation per year, based on the EPA memorandum distributed on September 6, 1995, providing guidance on calculating the PTE for emergency generators.

For the remaining emission units at the FMMI facility, there are no limitations on source operations and no work practice standards that affect emissions. Although some operations will not occur 24 hours per day, 7 days per week, emissions are calculated assuming continuous operation (8,760 hr/yr) as a worst-case estimate and to avoid permit limitations on operational flexibility.

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
Operation 004: Lime Slaking Plants and Lime Transloading												
004-446	Lime Transloading Engine (47.6 hp engine)	Diesel	21,305	2.43	2.43	1,775	5,326	gal	0%	137,000 Btu/gal	15 ppm	Negligible
Operation 005: Metcalf Power Plant												
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Natural Gas	5.27E+08	200,873	200,873	2.19E+07	6.58E+07	scf	0%	1,020 Btu/scf	Not a solid fuel/fuel oil	
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Natural Gas		200,873	200,873	2.19E+07	6.58E+07	scf	0%	1,020 Btu/scf	Not a solid fuel/fuel oil	
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Diesel	7,664	15.33	15.33	639	1,916	gal	0%	137,000 Btu/gal	15 ppm	Negligible
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Diesel	7,664	15.33	15.33	639	1,916	gal	0%	137,000 Btu/gal	15 ppm	Negligible
Operation 009: Solution Extraction/Electrowinning Operations												
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Natural Gas	6.13E+08	17,216	17,216	1.02E+07	3.06E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Natural Gas		17,216	17,216	1.02E+07	3.06E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Natural Gas		17,216	17,216	1.02E+07	3.06E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Natural Gas		17,216	17,216	1.02E+07	3.06E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Natural Gas	See Above	17,216	17,216	1.02E+07	3.06E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Diesel	35,168	4.01	4.01	2,931	8,792	gal	100%	137,000 Btu/gal	15 ppm	Negligible
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Diesel	35,168	4.01	4.01	2,931	8,792	gal	100%	137,000 Btu/gal	15 ppm	Negligible
Operation 010: Concrete Batch Plant												
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Propane	3.51E+06	400.79	400.79	292,579	877,738	scf	100%	2,520 Btu/scf	Not a solid fuel/fuel oil	
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Propane	3.51E+06	400.79	400.79	292,579	877,738	scf	100%	2,520 Btu/scf	Not a solid fuel/fuel oil	
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Propane	3.51E+06	400.79	400.79	292,579	877,738	scf	100%	2,520 Btu/scf	Not a solid fuel/fuel oil	
Operation 014: Concentrate Leach Plant												
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Natural Gas	6.01E+07	17,294	17,294	5.01E+06	1.50E+07	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
Operation 015: Diesel Emergency Engines												
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Diesel	12,401	41.34	41.34	1,033	3,100	gal	0%	137,000 Btu/gal	15 ppm	Negligible

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Diesel	20,693	41.39	41.39	1,724	5,173	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Diesel	8,277	16.55	16.55	690	2,069	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Diesel	5,620	11.24	11.24	468	1,405	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Diesel	1,686	3.37	3.37	141	422	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Diesel	5,748	11.50	11.50	479	1,437	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Diesel	8,942	17.88	17.88	745	2,235	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Diesel	29,150	58.30	58.30	2,429	7,287	gal	0%	137,000 Btu/gal	15 ppm	Negligible
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Diesel	1,763	3.53	3.53	147	441	gal	0%	137,000 Btu/gal	15 ppm	Negligible

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Diesel	13,770	27.54	27.54	1,148	3,443	gal	0%	137,000 Btu/gal	15 ppm	Negligible
Operation 021: Propane and Natural Gas Emergency Engines												
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Propane	26,354	52.71	52.71	2,196	6,589	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Propane	203,542	407.08	407.08	16,962	50,885	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Propane	203,542	407.08	407.08	16,962	50,885	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Propane	203,542	407.08	407.08	16,962	50,885	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Propane	203,542	407.08	407.08	16,962	50,885	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Propane	75,292	150.58	150.58	6,274	18,823	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Propane	26,354	52.71	52.71	2,196	6,589	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Propane	26,354	52.71	52.71	2,196	6,589	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Propane	26,354	52.71	52.71	2,196	6,589	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Propane	77,083	154.17	154.17	6,424	19,271	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Propane	77,083	154.17	154.17	6,424	19,271	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Propane	306,250	612.50	612.50	25,521	76,563	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Natural Gas	2,367,647	4,735.29	4,735.29	197,304	591,912	scf	0%	1,020 Btu/scf	Not a solid fuel/fuel oil	
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Propane	306,250	612.50	612.50	25,521	76,563	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
Operation 024: Miscellaneous Fuel Burning Equipment												
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Propane	1.11E+06	126.19	126.19	92,119	276,357	scf	100%	2,520 Btu/scf	Not a solid fuel/fuel oil	

Table 7.1 Fuel Usage Information

Process Number	Process/Emission Unit Description	Type of Fuel Used	Quantity of Fuel Used						Percent of Fuel Used for Process Heat	Higher Heating Value of the Fuel	Potential Sulfur Content [d]	Potential Ash Content
			Maximum Annual [a]	Maximum Hourly	Average Hourly [b]	Monthly [c]	Quar-terly [c]	Units[d]				
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Natural Gas	4.33E+06	494.12	494.12	360,706	1.08E+06	scf	100%	1,020 Btu/scf	Not a solid fuel/fuel oil	
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Natural Gas	1.74E+08	19,849	19,849	1.45E+07	4.35E+07	scf	0%	1,020 Btu/scf	Not a solid fuel/fuel oil	
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Natural Gas	5.11E+07	5,830	5,830	4.26E+06	1.28E+07	scf	0%	1,020 Btu/scf	Not a solid fuel/fuel oil	
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Propane	1.46E+07	1,671	1,671	1.22E+06	3.66E+06	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Propane	1,630,333	186.11	186.11	135,861	407,583	scf	0%	2,520 Btu/scf	Not a solid fuel/fuel oil	
Operation 025: Diesel Non-Emergency Engines												
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Diesel	77,791	8.88	8.88	6,483	19,448	gal	0%	137,000 Btu/gal	15 ppm	Negligible
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Diesel	33,122	3.78	3.78	2,760	8,280	gal	0%	137,000 Btu/gal	15 ppm	Negligible

[a] When applicable, the annual fuel usage rates are calculated using the voluntary fuel use limitations presented in Section 8. If there is not a voluntary fuel use limitation, the annual fuel usage rates are calculated using the maximum hourly usage rates multiplied by 8,760 hours/year for non-emergency equipment and 500 hours/year for emergency and black start equipment.

[b] The average hourly fuel usage rates are assumed equal to the maximum hourly fuel usage rates as a worst-case estimate.

[c] Estimated values based on even distribution throughout the year.

[d] gal = gallons, ppm = parts per million, scf = standard cubic feet

Table 7.2 Raw Material Usage Information

Process Number	Process/Emission Unit Description	Type of Raw Material	Usage Rates [a]				
			Maximum Annual	Maximum Hourly	Monthly	Quarterly	Units
Operation 001: Mining Operations							
001-003	Blasting	ANFO	130,815	216.81	10,901	32,704	tons
Operation 002: Morenci Concentrator							
002-352	Morenci Concentrator Bulk Flotation	Organic Reagent	542.14	0.062	45.18	135.54	tons
Operation 004: Lime Slaking Plants and Lime Transloading							
004-231	Transfer of Quicklime to the Lime Silo 1	Quicklime	54,750	25.00	4,563	13,688	tons
004-232	Transfer of Quicklime to the Lime Silo 2	Quicklime	54,750	25.00	4,563	13,688	tons
004-275	Transfer of Quicklime to Metcalf Lime Silo	Quicklime	109,500	25.00	9,125	27,375	tons
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Quicklime	220,752	50.00	18,396	55,188	tons
Operation 010: Concrete Batch Plant							
010-144a	Unloading Aggregate to the Aggregate Stockpiles	Aggregate	95,445	143.53	7,954	23,861	tons
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Fly Ash	3,516	5.29	293.03	879.10	tons
010-147	Pneumatic Transfer of Cement to the Cement Silo	Cement	17,613	26.48	1,468	4,403	tons

Table 7.2 Raw Material Usage Information

Process Number	Process/Emission Unit Description	Type of Raw Material	Usage Rates [a]				
			Maximum Annual	Maximum Hourly	Monthly	Quarterly	Units
Operation 011: Storage Tanks							
011-150	Diesel Tank D1 (177,850 gallons)	Diesel	3,570,000	407.53	297,500	892,500	gallons
011-151	Diesel Tank D2 (200,434 gallons)	Diesel	3,570,000	407.53	297,500	892,500	gallons
011-154	Diesel Tank D5 (47,255 gallons)	Diesel	1,550,000	176.94	129,167	387,500	gallons
011-161	Diesel Tank Pit 95 (101,690 gallons)	Diesel	36,270,000	4,140.41	3,022,500	9,067,500	gallons
011-155	Gasoline Tank G1 (12,000 gallons)	Gasoline	940,000	107.31	78,333	235,000	gallons
011-156	Gasoline Tank G2 (12,000 gallons)	Gasoline	940,000	107.31	78,333	235,000	gallons
011-157	Gasoline Tank G3 (12,000 gallons)	Gasoline	160,000	18.26	13,333	40,000	gallons
Operation 014: Concentrate Leach Plant							
014-348	Transfer of Flocculant to the Flocculant Bin	Flocculant	4,380	25.00	365.00	1,095.00	tons
014-254	Transfer of Lime to the Lime Silo	Quicklime	1,752	25.00	146.00	438.00	tons
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	Diatomaceous Earth	350	25.00	29.20	87.60	tons
Operation 017: Metcalf Concentrator							
017-327	Metcalf Concentrator Bulk Flotation	Organic Reagent	542.14	0.062	45.18	135.54	tons

Table 7.2 Raw Material Usage Information

Process Number	Process/Emission Unit Description	Type of Raw Material	Usage Rates [a]				
			Maximum Annual	Maximum Hourly	Monthly	Quarterly	Units
Operation 022: Prill Bins							
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	Ammonium Nitrate Prill	81,264	128.75	6,772	20,316	tons

[a] The monthly and quarterly usage rates assume even distribution throughout the year.

8 PROPOSED VOLUNTARY LIMITATIONS

FMMI does not propose to accept any new voluntary limitations. The previously accepted voluntary limitations in Class I Air Quality Permit #72683 that FMMI proposes to retain in its renewal permit are presented in Table 8.1. Additionally, the requested change to the natural gas usage limit for the Small Industrial Natural Gas Boilers in the pending SPR #99132 is incorporated into Table 8.1. The associated averaging period and monitoring, recordkeeping, and reporting requirements necessary to demonstrate that the voluntary limitations are permanent, quantifiable, and otherwise enforceable as a practical matter are also presented in Table 8.1.

The previously accepted voluntary limitations that FMMI proposes to remove from Class I Air Quality Permit #72683 are presented in Table 8.2.

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
Operation 001: Mining Operations					
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-015	Processes Controlled by P5/P6 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-325	Processes Controlled by DC2/P5 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-299	Processes Controlled by Mill IOS/R1A FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-300	Processes Controlled by Mill IOS/R1B FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-272	Processes Controlled by R1A and R1B/R7 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-278	Processes Controlled by R2/R11 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-228	Processes Controlled by MFL IOS/R8 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
001-229	Processes Controlled by R8/R9 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
Operation 002: Morenci Concentrator					
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
Operation 003: MFL Fine Crushing Plant					
003-273	Processes Controlled by R9/R10 FFDC	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-330	Processes Controlled by R10/R3 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-079	Processes Controlled by R3/R4 Bag Collector 3	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
003-082	Processes Controlled by Scrubber 3C	Emissions Limitations	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-317	Processes Controlled by FFDC 3A	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-301	Processes Controlled by FFDC 6A	Emissions Limitations	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-302	Processes Controlled by FFDC 6B	Emissions Limitations	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-304	Processes Controlled by FFDC 1	Emissions Limitations	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-089	Processes Controlled by Scrubber 5	Emissions Limitations	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-303	Processes Controlled by FFDC 8	Emissions Limitations	PM ≤ 0.005 gr/dscf PM_{10} ≤ 0.005 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-088	Processes Controlled by Scrubber 4	Emissions Limitations	PM ≤ 0.01 gr/dscf PM_{10} ≤ 0.01 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-320	Processes Controlled by 14/15 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-331	Processes Controlled by 15/16 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-309	Processes Controlled by 16/S11 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
003-202	Processes Controlled by A1A/A2A Bag Collector 8	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
003-203	Processes Controlled by A1A/A2C Bag Collector 9	Emissions Limitations	PM ≤ 0.007 gr/dscf PM_{10} ≤ 0.007 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
Operation 005: Metcalf Power Plant					
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Fuel Quantity Limitation	Natural Gas ≤ 537,140 MMBtu/yr	12-Month Rolling Total	Monitor and record the natural gas combusted in each unit during each calendar month. At the end of each month, compute and record the 12-month rolling total of fuel consumed (in units of MMBtu).
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)				
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Emissions Limitations	CO ≤ 0.082 lb/MMBtu NO_X ≤ 0.59 lb/MMBtu	Three Method 57E Test Runs Three Method 10 Test Runs	Complete performance testing
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Emissions Limitations	CO ≤ 0.082 lb/MMBtu NO_X ≤ 0.59 lb/MMBtu	Three Method 57E Test Runs Three Method 10 Test Runs	Complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
Operation 009: Solution Extraction/Electrowinning Operations					
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Fuel Quantity Limitation	Natural Gas ≤ 625,000 MMBtu/yr (as requested in the application for SPR #99132)	12-Month Rolling Total	Monitor and record the natural gas combusted in each unit during each calendar month. At the end of each month, compute and record the 12-month rolling total of fuel consumed (in units of MMBtu).
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)				
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)				
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)				
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)				
Operation 014: Concentrate Leach Plant					
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Fuel Quantity Limitation	Natural Gas ≤ 61,320 MMBtu/yr	12-Month Rolling Total	Monitor and record the natural gas combusted during each calendar month. At the end of each month, compute and record the 12-month rolling total of fuel consumed (in units of MMBtu).
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Emissions Limitations	PM ≤ 0.75 lb/hr PM_{10} ≤ 0.75 lb/hr VOC ≤ 5.82 lb/hr	Three Method 5 Test Runs Three Method 25A Test Runs	Perform periodic opacity monitoring and complete performance testing
Operation 015: Diesel Emergency Engines					
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Operating Hour Limitation	Operation ≤ 300 hours per 12-months	12-Month Rolling Total	Monitor and record the hours of operation during each calendar month. At the end of each month, compute and record the 12-month rolling total of hours operated.

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
Operation 017: Metcalf Concentrator					
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-280	Processes Controlled by Secondary Screening FFDC 1	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-281	Processes Controlled by Secondary Screening FFDC 2	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-283	Processes Controlled by Secondary Crushing FFDC 1	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-284	Processes Controlled by Secondary Crushing FFDC 2	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-291	Processes Controlled by Crushed Ore Transfers FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
017-294	Processes Controlled by Wet Screen Feed FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
AOS1: Morenci Concentrator Quaternary Crushing Operations					
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Emissions Limitations	PM ≤ 0.002 gr/dscf PM_{10} ≤ 0.001 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 8.1 Previously Accepted Voluntary Limitations

Process Number	Process/Emission Unit Description [a]	Description of Voluntary Limitation	Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
AOS2: Concentrate Leach Plant Upgrades					
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Emissions Limitations	PM ≤ 0.525 lb/hr PM_{10} ≤ 0.525 lb/hr VOC ≤ 4.074 lb/hr	Three Method 5 Test Runs Three Method 25A Test Runs	Perform periodic opacity monitoring and complete performance testing
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Emissions Limitations	PM ≤ 0.525 lb/hr PM_{10} ≤ 0.525 lb/hr VOC ≤ 4.074 lb/hr	Three Method 5 Test Runs Three Method 25A Test Runs	Perform periodic opacity monitoring and complete performance testing

[a] The voluntary limitation is applicable to the entire process controlled by the pollution control device and the pollution control device is used to demonstrate compliance with the voluntary emission limitation. See Table 5.1 for the emission units/processes controlled by the pollution control devices listed in this table.

Table 8.2 Proposed Revisions to Voluntary Limitations

Process Number	Process/Emission Unit Description	Description of Voluntary Limitation	Numeric Limit	Proposed Revision
Operation 001: Mining Operations				
001-353	Processes Controlled by In-Pit Crusher 1 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Remove the limit as FMMI proposes to remove the operation from the Class I permit
001-354	Processes Controlled by P1/P13 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Remove the limit as FMMI proposes to remove the operation from the Class I permit
001-355	Processes Controlled by P13/P14 and P13/R9 FFDC	Emissions Limitations	PM ≤ 0.004 gr/dscf PM_{10} ≤ 0.004 gr/dscf	Remove the limit as FMMI proposes to remove the operation from the Class I permit

9 APPLICABLE REQUIREMENTS AND PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE REQUIREMENTS

9.1 APPLICABLE REQUIREMENTS

Identification of the specific regulatory requirements applicable to each process and/or piece of equipment at the FMMI facility is presented in Table 3.2. Detailed descriptions of the regulatory requirements identified in Table 3.2 are presented in Tables 9.2 through 9.19. General facility-wide requirements are presented in Table 9.1. The methods used by FMMI to determine compliance with the applicable regulatory requirements are also presented in Tables 9.1 through 9.19.

9.2 PROPOSED EXEMPTION FROM OTHERWISE APPLICABLE REQUIREMENTS

FMMI does not propose to be exempt from any otherwise applicable regulatory requirement.

Table 9.1 Applicable Facility-Wide Regulatory Requirements and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-309.2.a	Submit compliance certification no less frequently than annually.	Record of compliance certification submittals.
A.A.C. R18-2-310.01.A	Report excess emissions in two parts: a) Notification by telephone or fax within 24 hours of first learning of excess emissions that includes all available information from A.A.C. R18-2-310.01.B, and b) Submittal of a written report within 72 hours of the telephone or fax notification that contains the information required by A.A.C. R18-2-310.01.B.	Facility procedures; training; record of excess emissions notifications and reports within required timeframes.
A.A.C. R18-2-315.A	Post the permit or certificate of permit issuance at the equipment site in such a manner as to be clearly visible and accessible. Mark all equipment covered by the permit with the current permit number or a serial number or other equipment number that is also listed in the permit to identify that piece of equipment.	Record of inspection confirming posting of the permit in FMMI's Environmental Office; records of inspection confirming all equipment covered by the permit is clearly marked with permit equipment number.
A.A.C. R18-2-315.B	Maintain a complete copy of the permit on the site.	Record of inspection confirming complete permit is maintained onsite.
A.A.C. R18-2-326	Payment of applicable fees.	Record of fees paid pursuant to A.A.C. R18-2-326.C.1 and 2 (File No. 3-3-2).
A.A.C. R18-2-327.A	Submit emission inventory questionnaires.	Records of annual emissions inventory questionnaires submitted to the Director by the due date.
A.A.C. R18-2-602	Receive authority to conduct open burning by obtaining a permit from the Director or delegated authority. Meet all requirements of the open burning permit.	Management of change procedures; maintenance of records of open burning applications and permits; facility procedures.

Table 9.1 Applicable Facility-Wide Regulatory Requirements and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-604 A.A.C. R18-2-605 A.A.C. R18-2-606 A.A.C. R18-2-607 A.A.C. R18-2-608	Implementation of reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne from: a) Open spaces; b) Plant roads and streets; c) Material handling operations; d) Storage piles; and e) Mineral tailings. Any affected facility subject to regulation under Article 7 or Article 9 of Title 18, Chapter 2 of the A.A.C. is not subject to the regulations under Article 6.	Operation & maintenance (O&M) plans; facility procedures; O&M records. Facility procedure; record of bi-weekly visual observations; record of dust management SOP.
A.A.C. R18-2-614	For all nonpoint sources as defined in A.A.C. R18-2-101.94: • Opacity ≤ 40% An open fire permitted under A.A.C. R18-2-602 or regulated under Article 15 of Title 18, Chapter 2 of the A.A.C. is exempt from this requirement.	Monitoring and recordkeeping; compliance review of bi-weekly surveys of visible emissions.
A.A.C. R18-2-726	Do not cause or permit sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Examples of good modern practices include wet blasting and the use of effective enclosures with necessary dust collecting equipment.	Facility procedure; records of abrasive blasting projects and good modern practices.
A.A.C. R18-2-727.A	Do not conduct any spray paint operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting, must be conducted in an enclosed area equipped with controls containing no less than 96% of the overspray.	Facility procedure; records of spray-painting projects, control measures employed, Safety Data Sheets (SDS) for all paints and solvents.

Table 9.1 Applicable Facility-Wide Regulatory Requirements and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-727.B	Do not: a) Employ, apply, evaporate or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or b) Thin or dilute any architectural coating with a photochemically reactive solvent.	Facility procedure; management of change process.
A.A.C. R18-2-727.C	For purposes of A.A.C. R18-2-727.B, a photochemically reactive solvent is any solvent with an aggregate of more than 20% of its total volume composed of the following chemical compounds, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent: a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation – hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5%. b) A combination of aromatic compounds with 8 or more carbon atoms to the molecule except ethylbenzene: 8%. c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichlorethylene or toluene: 20%.	Explanatory statement of law.
A.A.C. R18-2-727.D	Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described in A.A.C. R18-2-727.C, it must be considered to be a member of the group having the least allowable percent of the total volume of solvents.	Explanatory statement of law.
40 CFR 61 Subpart M A.A.C. R18-2-1101.A.12	Comply with all the requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants – Asbestos).	Facility procedure; adherence to Renovation/Demolition BMP; records of asbestos NESHAP notification for renovation and demolition activities and all supporting documents.

Table 9.1 Applicable Facility-Wide Regulatory Requirements and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 82	Comply with all applicable requirements including monitoring, recordkeeping, and reporting requirements of 40 CFR 82 (Protection of Stratospheric Ozone).	Facility procedure; adherence to Refrigerant Management BMP and Corporate ODS management SOP; management of change process.
40 CFR 98 Subpart A	Report GHG emissions for sources meeting the qualifications of the source categories listed in Subpart A (Mandatory Greenhouse Gas Reporting - General Provision).	Maintenance of records; electronic submittal of annual GHG report.
40 CFR 98 Subpart C	Calculate and report emissions for sources emitting more than 25,000 metric tons of CO_2e during any calendar year (Mandatory Greenhouse Gas Reporting – General Stationary Fuel Combustion Sources).	Maintenance of records; electronic submittal of annual GHG report.

Table 9.2 Applicable Regulatory Requirements of A.A.C. R18-2-306.01 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-306.01	Limit emissions as described in Table 8.1.	Records of performance tests; O&M plans; facility procedures; O&M records.
A.A.C. R18-2-306.01	Limit fuel usage as described in Table 8.1.	Facility procedure; records of natural gas combusted; design and configuration of turbines and boilers.
A.A.C. R18-2-306.01	Limit hours of operation as described in Table 8.1.	Facility procedure; records of engine operating hours.

Table 9.3 Applicable Regulatory Requirements of A.A.C. R18-2-702.B.3 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-702.B.3 A.A.C. R18-2-702.C	For all sources described in A.A.C. R18-2-702.A (except as otherwise provided in Title 18, Chapter 2 of the A.A.C. relating to specific types of sources): • Opacity ≤ 20% If the presence of uncombined water is the only reason for an exceedance of the opacity limit, the exceedance shall not constitute a violation.	Facility procedure; records of bi-weekly visual surveys; records of Method 9 observations.

Table 9.4 Applicable Regulatory Requirements of A.A.C. R18-2-710 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-710.B	Equip each petroleum liquid storage vessel less than 40,000 gallons with a submerged filling device or acceptable equivalent, for the control of hydrocarbon emissions.	Facility procedure; equipment design; records of installed gasoline infill pipes on all gasoline tanks.
A.A.C. R18-2-710.D	Equip all pumps and compressors that handle volatile organic compounds with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere.	Facility procedure; equipment design; records of installed mechanical seals on all gasoline tanks.
A.A.C. R18-2-710.E.1	For each petroleum liquid storage vessel, maintain a file of the type of petroleum liquid stored, typical Reid vapor pressure of each type of petroleum liquid stored, and dates of storage. Dates on which the storage vessel is empty shall be shown.	Facility procedure; records of type of gasoline stored, typical Reid vapor pressure of the gasoline stored, dates of storage, and dates when the storage tank is empty.

Table 9.5 Applicable Regulatory Requirements of A.A.C. R18-2-719 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-719.B A.A.C. R18-2-719.C	PM $\leq$ 1.02 $Q^{0.769}$, when Q $\leq$ 4,200 MMBtu/hr PM $\leq$ 17.0 $Q^{0.432}$, when Q > 4,200 MMBtu/hr (where PM = maximum allowable PM emission rate in lb/hr, Q = heat input in MMBtu/hr) The heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of PM which may be emitted.	Records of heat input, PM limits, potential emission calculations.
A.A.C. R18-2-719.E	For any smoke from stationary rotating machinery: • Opacity ≤ 40% for periods greater than 10 consecutive seconds Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.	Facility procedure; records of bi-weekly visual emission surveys.
A.A.C. R18-2-719.F	SO_2 $\leq$ 1.0 lb/MMBtu heat input when low sulfur fuel oil is fired	Facility procedures; records of fuel supplier certification; calculation of stoichiometric conversion of sulfur in fuel.
A.A.C. R18-2-719.H	Use of high sulfur oil is prohibited.	Facility procedure; O&M plans; fuel supplier certification records; records review.
A.A.C. R18-2-719.I	Record daily the sulfur content and lower heating value of the fuel being fired in the machine.	Facility procedures; records of the sulfur content and lower heating value of the fuel fired; records review.
A.A.C. R18-2-719.J	Report to ADEQ any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8%.	Facility procedures; record of deviation reporting to ADEQ (if necessary).

Table 9.6 Applicable Regulatory Requirements of A.A.C. R18-2-721 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-721.B A.A.C. R18-2-721.D	PM ≤ 4.10 $P^{0.67}$, when P ≤ 30 tons per hour (tph) PM ≤ 55.0 $P^{0.11}$ – 40, when P > 30 tph (where PM = maximum allowable PM emission rate in lb/hr, P = total process rate in tons/hr) The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of PM.	Records of process weight rate, PM limit, and potential emission calculations.
A.A.C. R18-2-721.F	Record the daily process rates and hours of operation of all material handling facilities.	Facility procedure; records of daily process rates and hours of operation; records review.

Table 9.7 Applicable Regulatory Requirements of A.A.C. R18-2-722 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-722.B	PM ≤ 4.10 $P^{0.67}$, when P ≤ 30 tph PM ≤ 55.0 $P^{0.11}$ – 40, when P > 30 tph (where PM = maximum allowable PM emission rate of non-fugitive emissions in lb/hr, P = total process rate in tons/hr)	Process weight rates, PM limits, potential emission calculations.
A.A.C. R18-2-722.D	Utilize spray bar pollution controls in accordance with “EPA Control of Air Emissions From Process Operations In The Rock Crushing Industry” (EPA 340/1-79-002), “Wet Suppression System” (pages 15-34, amended as of January 1979 (and no future amendments or editions)), with placement of spray bars and nozzles as required by the Director to minimize air pollution.	O&M plans; facility procedures; O&M records.
A.A.C. R18-2-722.E	Control fugitive emissions in accordance with A.A.C. R18-2-604 through A.A.C. R18-2-607 (see Table 9.1).	O&M plans; facility procedures; O&M records.
A.A.C. R18-2-722.F	Install, calibrate, maintain and operate monitoring devices which can be used to determine daily the process weight of gravel or crushed stone produced. The weighing devices shall have an accuracy of ± 5% over their operating range.	Facility procedures; O&M plans; records of installation, calibration, and operation and maintenance.
A.A.C. R18-2-722.G	Record the daily production rates of gravel or crushed stone produced.	Records of daily production rates; records review.

Table 9.8 Applicable Regulatory Requirements of A.A.C. R18-2-723 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-723	Control fugitive dust emissions using the methods described in A.A.C. R18-2-604 through A.A.C. R18-2-607 (see Table 9.1).	Facility procedure; record of bi-weekly visual observations; record of facility procedure for fugitive dust management.

Table 9.9 Applicable Regulatory Requirements of A.A.C. R18-2-724 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-724.B A.A.C. R18-2-724.C	PM ≤ 1.02 $Q^{0.769}$, when Q ≤ 4,200 MMBtu/hr PM ≤ 17.0 $Q^{0.432}$, when Q > 4,200 MMBtu/hr (where PM = maximum allowable PM emission rate in lb/hr, Q = heat input in MMBtu/hr) The heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of PM which may be emitted.	Records of heat input, PM limits, potential emission calculations.
A.A.C. R18-2-724.E	SO_2 ≤ 1.0 lb/MMBtu heat input when low sulfur oil is fired	Facility procedures; records of fuel supplier certification; calculation of stoichiometric conversion of sulfur in fuel.
A.A.C. R18-2-724.G	Use of high sulfur oil is prohibited.	Facility procedure; O&M plans; fuel supplier certification records; records review.
A.A.C. R18-2-724.J	For any plume or effluent: • Opacity ≤ 15% Report all six-minute periods in which the opacity of any plume or effluent exceeds 15%.	Facility procedure; records of bi-weekly visual surveys; O&M plans; O&M records; record of reporting to ADEQ (if necessary).

Table 9.10 Applicable Regulatory Requirements of A.A.C. R18-2-730 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-730.A.1 A.A.C. R18-2-730.B	$PM \leq 4.10\ P^{0.67}$, when $P \leq 30$ tph $PM \leq 55.0\ P^{0.11} - 40$, when $P > 30$ tph (where PM = maximum allowable PM emission rate in lb/hr, P = total process rate in tons/hr) The total process weight from all similar units employing a similar type process shall be used for determining the maximum allowable emission of PM.	Process weight rates, PM limits, potential emission calculations.
A.A.C. R18-2-730.A.2	$SO_2 \leq 600$ ppm	O&M plans; facility procedures; operations and maintenance records; engineering evaluation.
A.A.C. R18-2-730.A.3	$NO_X \leq 500$ ppm	O&M plans; facility procedures; operations and maintenance records; engineering evaluation.
A.A.C. R18-2-730.D	Operate equipment, processes, and premises such that gaseous or odorous materials are not emitted in such quantities or concentrations as to cause air pollution.	O&M plans; facility procedures; O&M records; H_2S monitoring system; facility configuration; review of odor complaints.
A.A.C. R18-2-730.F	Processing, storage, usage, and transportation of solvents or other volatile compounds, paints, acids, alkalis, pesticides, fertilizers and manure in such a manner and by such means that they will not evaporate, leak, escape, or otherwise be discharged into the ambient air as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, install and use such control methods, devices, or equipment.	O&M plan; facility procedures; O&M records; facility configuration.
A.A.C. R18-2-730.G	If required by the Director, install abatement equipment or alter the stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.	Explanatory statement of law.

Table 9.10 Applicable Regulatory Requirements of A.A.C. R18-2-730 and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
A.A.C. R18-2-730.H	H_2S ≤ 0.03 parts per million by volume (ppm_v) for any averaging period of 30 minutes or more at any occupied place beyond the premises of FMMI.	Facility procedures; O&M plans; O&M records; H_2S monitoring system; facility configuration; records of modeling results.

Table 9.11 Applicable Regulatory Requirements of A.A.C. R18-2-901.1 and 40 CFR 60 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 60.7(a)(1) A.A.C. R18-2-901.1	Provide notification of the date construction (or reconstruction as defined under 40 CFR 60.15) commenced postmarked no later than 30 days after such date. This requirement does not apply in the case of mass-produced facilities which are purchased in completed form.	Facility procedure; maintenance of records.
40 CFR 60.7(a)(3) A.A.C. R18-2-901.1	Provide notification of the actual date of initial startup postmarked within 15 days after such date.	Facility procedure; maintenance of records.
40 CFR 60.7(a)(4) A.A.C. R18-2-901.1	Submit a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.	Management of change procedure; submittal of notifications, maintenance of records.
40 CFR 60.7(a)(6) A.A.C. R18-2-901.1	Submit a notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1). The notification must also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification must be postmarked not less than 30 days prior to such date.	Facility procedure; submittal of notifications, maintenance of records.
40 CFR 60.7(b) A.A.C. R18-2-901.1	Maintain records of: • The occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; • Any malfunction of the air pollution control equipment; and • Any periods during which a continuous monitoring system or monitoring device is inoperative.	Facility procedure; records of startups, shutdowns, malfunctions, and monitoring system or monitoring device inoperative periods.

Table 9.11 Applicable Regulatory Requirements of A.A.C. R18-2-901.1 and 40 CFR 60 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 60.7(c) A.A.C. R18-2-901.1	For a required continuous monitoring device, submit excess emissions and monitoring systems performance report and/or summary report form to the Administrator semiannually, except when more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period.	Facility procedure; records of submittal of excess emissions and monitoring systems performance reports.
40 CFR 60.7(f) A.A.C. R18-2-901.1	Maintain a file of all measurements in a permanent form suitable for inspection. Retain the file for at least two years following the date of such measurements.	Facility procedure; record retention policy; records review. Facility procedure; maintenance of records.
40 CFR 60.8(a) A.A.C. R18-2-901.1	Completion of performance test in accordance with 40 CFR 60.8 demonstrating compliance with applicable limits within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup. Submittal of written report of the results of the performance tests to the Director or Administrator.	Facility procedure; performance of EPA reference method tests; records of performance tests.
40 CFR 60.8(d) A.A.C. R18-2-901.1	Notification to the Director and Administrator 30 days prior to performance testing.	Facility procedure; records of notifications.
40 CFR 60.11(d) A.A.C. R18-2-901.1	At all times, including periods of startup, shutdown, and malfunction, maintain, and operate, to the extent practicable, any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.	Facility procedure; O&M plans, O&M records.
40 CFR 60.11(e) A.A.C. R18-2-901.1	If no performance test under 40 CFR 60.8 is required, completion of opacity observations demonstrating compliance with applicable limits within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup.	Facility procedure; performance of EPA Reference Method 9 tests, records of performance tests.

Table 9.11 Applicable Regulatory Requirements of A.A.C. R18-2-901.1 and 40 CFR 60 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 60.13(b) A.A.C. R18-2-901.1	Install and operate all continuous monitoring devices prior to conducting performance tests under 40 CFR 60.8. Verification of operational status must, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.	Facility procedure; installation, operation, maintenance, calibration, and inspections records.
40 CFR 60.13(f) A.A.C. R18-2-901.1	All continuous monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained.	Facility procedure; O&M records.

[a] The individual subparts of 40 CFR 60 provide more details about the applicability of the general provisions of 40 CFR 60 Subpart A.

Table 9.12 Applicable Regulatory Requirements of A.A.C. R18-2-901.5 and 40 CFR 60 Subpart Dc and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.48c(g)(1) A.A.C. R18-2-901.5	Except as provided in 40 CFR 60.48c(g)(2) and (g)(3), record and maintain records of the amount of each fuel combusted during each operating day.	Facility procedures; fuel records; record retention policy; records review.
40 CFR 60.48c(g)(2) A.A.C. R18-2-901.5	As an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), for an affected facility that combusts only natural gas, maintain monthly records of the amount of fuel combusted during each calendar month.	Facility procedures; fuel records; record retention policy; records review.
40 CFR 60.48c(g)(3) A.A.C. R18-2-901.5	As an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), for an affected facility that combusts only natural gas, record and maintain records of the total amount of fuel delivered during each calendar month.	Facility procedures; fuel records; record retention policy; records review.
40 CFR 60.48c(i) A.A.C. R18-2-901.5	Maintain all records required by this section for a period of two years following the date of such record.	Facility procedures; fuel records; record retention policy; records review.

Table 9.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.382(a)(1) A.A.C. R18-2-901.46	On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, do not cause to be discharged into the atmosphere from an affected facility any stack emissions that contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.05 g/dscm).	Records of performance test results; O&M plan; facility procedures; O&M records.
40 CFR 60.382(a)(2) A.A.C. R18-2-901.46	On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, do not cause to be discharged into the atmosphere from an affected facility any stack emissions that exhibit greater than 7 percent opacity.	Facility procedure; records of biweekly visual surveys.
40 CFR 60.382(b) A.A.C. R18-2-901.46	On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, do not cause to be discharged into the atmosphere from an affected facility any process fugitive emissions that exhibit greater than 10 percent opacity.	Facility procedure; records of biweekly visual surveys.
40 CFR 60.384(a) A.A.C. R18-2-901.46	Calibrate, maintain, and operate continuous monitoring devices for the continuous measurement of the change in pressure of the gas stream through the scrubber for any affected facility using a wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1-inch water) gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.	O&M plans; facility procedures; records of certification, calibration, operation, and maintenance.
40 CFR 60.384(b) A.A.C. R18-2-901.46	Calibrate, maintain, and operate continuous monitoring devices for the continuous measurement of the scrubbing liquid flow rate to a wet scrubber for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with manufacturer's instructions.	O&M plans; facility procedures; records of certification, calibration, operation, and maintenance.

Table 9.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.385(a) A.A.C. R18-2-901.46	Conduct a performance test and submit to the Administrator a written report of the results of the test as specified in 40 CFR 60.8(a).	Facility procedure; records of performance test results and reports.
40 CFR 60.385(b) A.A.C. R18-2-901.46	During the initial performance test of a wet scrubber, and at least weekly thereafter, record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.	Facility procedure; records of performance test results; O&M plan; facility procedures; O&M records.
40 CFR 60.385(c) 40 CFR 60.385(d) A.A.C. R18-2-901.46	After the initial performance test of a wet scrubber, submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) or liquid flow rate differ by more than ±30 percent from the average obtained during the most recent performance test. The reports shall be postmarked within 30 days following the end of the second and fourth calendar quarters.	Record of semiannual report of occurrences.
40 CFR 60.386(a) A.A.C. R18-2-901.46	In conducting the performance tests required in 40 CFR 60.8, use as reference methods and procedures the test methods in 40 CFR 60, Appendix A or other methods and procedures as specified in 40 CFR 60 Subpart LL, except as provided in 40 CFR 60.8(b).	Facility procedure; records of performance test procedures.

Table 9.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.46 and 40 CFR 60 Subpart LL and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.386(b) A.A.C. R18-2-901.46	Determine compliance with the particulate matter standards by: • Using Method 5 or 17 to determine the particulate matter concentration. The sample volume for each run must be at least 60 dscf. The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient temperature. For gas streams above ambient temperature, the Method 5 sampling train must be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 250°F) in order to prevent water condensation on the filter. • Using Method 9 and the procedures in 40 CFR 60.11 to determine opacity from stack emissions and process fugitive emissions. The observer must read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval. This option is subject to the following limitations: o No more than three emission points are read concurrently; o All three emission points must be within a 70° viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points; and o If an opacity reading for any one of the three emission points is within 5 percent opacity of the application standard, then the observer must stop taking readings for the other two points and continue reading just that single point.	Facility procedure; records of performance test procedures.
40 CFR 60.386(c) A.A.C. R18-2-901.46	To comply with 40 CFR 60.385(c), use the monitoring devices in 40 CFR 60.384(a) and (b) to determine the pressure loss of the gas stream through the scrubber and scrubbing liquid flow rate at any time during each particulate matter run, and the average of the three determinations must be computed.	Facility procedure; records of performance test procedures and operational parameters.

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4204(b) 40 CFR 60.4201(a) A.A.C. R18-2-901.84	For a 2007 model year and later non-emergency stationary compression ignition (CI) engine with a maximum engine power less than or equal to 3,000 hp and a displacement of less than 10 liters per cylinder, comply with the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 1039.102, 1039.104, 1039.105, 1039.107, and 1039.115 and 40 CFR 1039 Appendix I, as applicable, for all pollutants, for the same model year and maximum engine power.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4205(b) 40 CFR 60.4202(a)(1) A.A.C. R18-2-901.84	For an emergency stationary CI engine with a maximum engine power less than 50 hp with a displacement of less than 10 liters per cylinder that are not fire pump engines, comply with the following emission standards: • The Tier 2 emission standards for new nonroad CI engines for the appropriate rated power as described in 40 CFR 1039 Appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 for model year 2007 engines, and • The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and Table 2 of 40 CFR 60 Subpart IIII, for 2008 model year and later engines.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4205(b) 40 CFR 60.4202(a)(2) A.A.C. R18-2-901.84	For an emergency stationary CI engine with a rated power greater than or equal to 50 hp but less than or equal to 3,000 hp with a displacement of less than 10 liters per cylinder that are not fire pump engines, comply with the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR 1039 Appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4205(b) 40 CFR 60.4202(b) A.A.C. R18-2-901.84	For a 2007 model year and later emergency stationary CI engine with a maximum engine power greater than 2,237 kiloWatt (kW) (3,000 hp) and a displacement of less than 10 liters per cylinder that are not fire pump engines, comply with the following emission standards: • The emission standards in Table 1 of 40 CFR 60 Subpart IIII, for all pollutants, for the same maximum engine power, for 2007 through 2010 model year engines. • The Tier 2 emission standards as described in 40 CFR 1039 Appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 for 2011 model year and later engines.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4205(c) A.A.C. R18-2-901.84	For fire pump engines with a displacement of less than 30 liters per cylinder, comply with the emission standards in Table 4 of 40 CFR 60 Subpart IIII, for all pollutants.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4206 A.A.C. R18-2-901.84	Operate and maintain the stationary CI engine that achieves the emission standards of 40 CFR 60.4205 over the entire life of the engine.	O&M plans; facility procedures; operation inspection, and O&M records.
40 CFR 60.4207(b) A.A.C. R18-2-901.84	For a stationary CI engine with a displacement of less than 30 liters per cylinder that uses diesel fuel, use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. The requirements of 40 CFR 1090.305 include: • Sulfur content ≤ 15 ppm; and • Cetane index ≥ 40 or aromatic content ≤ 35% by volume.	Facility procedure; records of fuel specifications from fuel supplier.

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4209(a) A.A.C. R18-2-901.84	If the emergency stationary CI engine does not meet the standards applicable to non-emergency engines, install a non-resettable hour meter prior to startup of the engine.	Facility procedure; record of non-resettable hour meter installed on all emergency engines.
40 CFR 60.4209(b) A.A.C. R18-2-901.84	For stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, install the diesel particulate filter with a backpressure monitor that notifies when the high backpressure limit of the engine is approached.	Installation records showing a back pressure monitor (if applicable); O&M plans.
40 CFR 60.4211(a) A.A.C. R18-2-901.84	Operate and maintain the engine according to the manufacturer’s emission-related written instructions, except as permitted by 40 CFR 60.4211(g). Change only those emission-related settings that are permitted by the manufacturer, except as permitted by 40 CFR 60.4211(g). Meet the requirements of 40 CFR Part 1068, as they apply.	O&M plans; manufacturer’s emission-related written instructions; facility procedures; O&M records.
40 CFR 60.4211(c) A.A.C. R18-2-901.84	Purchase an engine certified to the emission standards in 40 CFR 60.4204(b), 40 CFR 60.4205(b), or 40 CFR 60.4205(c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer’s emission-related specifications, except as permitted by 40 CFR 60.4211(g).	Records of manufacturer’s certifications; records of installation and configuration according to the manufacturer’s emission-related specifications; O&M plans; manufacturer’s emission-related written instructions; facility procedures; O&M records.

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4211(f)(1) 40 CFR 60.4211(f)(2) 40 CFR 60.4211(f)(3) A.A.C. R18-2-901.84	Operate the emergency stationary CI engine as follows to retain classification as an emergency engine: • Unlimited operation for use in emergency situations; • Maximum of 100 hr/yr for maintenance checks and readiness testing (provided that the tests are recommended); and • Maximum of 50 hr/yr in non-emergency situations (counted towards the 100 hr/yr in 40 CFR 60.4211(f)(2)). The 50 hr/yr for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless all conditions in 40 CFR 60.4211(f)(3)(i) are met.	O&M plans; facility procedures; O&M records; records of hourly meter readings and engine use; records review.
40 CFR 60.4211(g)(1) A.A.C. R18-2-901.84	If the engine that is less than 100 hp is not installed, configured, operated, or maintained according to the manufacturer's emission-related written instructions, or if emission-related settings are changed in a way that is not permitted by the manufacturer, then a maintenance plan and records of conducted maintenance must be kept and, to the extent practicable, the engine must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if the engine is not installed and configured according to the manufacturer's emission-related written instructions, or the emission-related settings are changed in a way that is not permitted by the manufacturer, an initial performance test must be conducted to demonstrate compliance with the applicable emission standards within 1 year of such action.	Facility procedure; records of O&M plans; O&M records; records of performance test results and reports (if necessary).

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4211(g)(2) A.A.C. R18-2-901.84	If the engine that is greater than or equal to 100 hp and less than or equal to 500 hp is not installed, configured, operated, or maintained according to the manufacturer's emission-related written instructions, or if emission-related settings are changed in a way that is not permitted by the manufacturer, then a maintenance plan and records of conducted maintenance must be kept and, to the extent practicable, the engine must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions. In addition, an initial performance test shall be conducted to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after the engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the emission-related settings are changed in a way that is not permitted by the manufacturer.	Facility procedure; records of O&M plans; O&M records; records of performance test results and reports (if necessary).
40 CFR 60.4211(g)(3) A.A.C. R18-2-901.84	If the engine that is greater than 500 hp is not installed, configured, operated, or maintained according to the manufacturer's emission-related written instructions, or if emission-related settings are changed in a way that is not permitted by the manufacturer, then a maintenance plan and records of conducted maintenance must be kept and, to the extent practicable, the engine must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions. In addition, an initial performance test shall be conducted to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after the engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the emission-related settings are changed in a way that is not permitted by the manufacturer. Subsequent performance testing must be completed every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards.	Facility procedure; records of O&M plans; O&M records; records of performance test results and reports (if necessary).

Table 9.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart IIII (Emergency and Non-Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4214(b) A.A.C. R18-2-901.84	For an emergency stationary engine, initial notification is not required. Starting with the model years in Table 5 of 40 CFR 60 Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The time of operation of the engine and the reason the engine was in operation during that time must be recorded.	Facility procedure; records of hourly meter readings, engine use, and the reason the engine was in operation; records review.
40 CFR 60.4214(c) A.A.C. R18-2-901.84	If the stationary CI internal combustion engine is equipped with a diesel particulate filter, keep records of any corrective action taken after the backpressure monitor has notified that the high backpressure limit of the engine is approached.	Installation records showing a back pressure monitor (if applicable), records of corrective action (if necessary).
40 CFR 60.4214(d) A.A.C. R18-2-901.84	For an emergency stationary CI engine with a maximum engine power more than 100 hp that for the purpose specified in 40 CFR 60.4211(f)(3)(i), submit an annual report according to the requirements in 40 CFR 60.4214(d)(1) through (3).	Submittal of annual reports (if necessary); maintenance of records.
40 CFR 60.4218 A.A.C. R18-2-901.84	Comply with the General Provisions as specified in Table 8 of 40 CFR 60 Subpart IIII.	Facility procedure; records review.

Table 9.15Applicable Regulatory Requirements of A.A.C. R18-2-901.85 and 40 CFR 60 Subpart JJJJ (Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4233(a) 40 CFR 60.4231(a) A.A.C. R18-2-901.85	For a stationary spark ignition (SI) engine with a maximum engine power less than or equal to 25 hp manufactured on or after July 1, 2008, comply with the emission standards of 40 CFR 1054 as specified in 40 CFR 60.4231(a).	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4233(c) 40 CFR 60.4231(c) A.A.C. R18-2-901.85	For emergency SI engine greater than 25 hp and less than 130 hp that are rich burn engines that use LPG and that are manufactured on or after the applicable date in 40 CFR 60.4230(a)(4), comply with the Phase 1 emission standards in 40 CFR 1054 Appendix I, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR 1054.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4233(e) (Table 1 of Subpart JJJJ) A.A.C. R18-2-901.85	For emergency SI engine greater than or equal to 100 hp that use natural gas, comply with the emission standards in Table 1 of 40 CFR 60 Subpart JJJJ.	Records of manufacturer's certifications; O&M plans; manufacturer's emission-related instructions; operations and maintenance records.
40 CFR 60.4234 A.A.C. R18-2-901.85	Operate and maintain the stationary SI engine that achieves the emission standards of 40 CFR 60.4233 over the entire life of the engine.	O&M plans; facility procedures; operation inspection, and O&M records.
40 CFR 60.4237(b) A.A.C. R18-2-901.85	For an emergency stationary SI engine that is greater than or equal to 130 hp and less than 500 hp that was built on or after January 1, 2011, and does not meet the standards applicable to non-emergency engines, install a non-resettable hour meter.	Facility procedure; record of non-resettable hour meter installed on all emergency engines.
40 CFR 60.4237(c) A.A.C. R18-2-901.85	For an emergency stationary SI engine that is less than 130 hp, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, install a non-resettable hour meter upon startup.	Facility procedure; record of non-resettable hour meter installed on all emergency engines.

Table 9.15 Applicable Regulatory Requirements of A.A.C. R18-2-901.85 and 40 CFR 60 Subpart JJJJ (Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4243(a) A.A.C. R18-2-901.85	For an SI engine subject to the emission standards specified in 40 CFR 60.4233(a) through (c), purchase an engine certified to the emission standards in 40 CFR 60.4231(a) and (c) for the same engine class and maximum engine power and meet one of the following: (1) Operate and maintain the engine and control device according to manufacturer's emission-related written instructions, keep records of conducted maintenance, and meet the applicable requirements of 40 CFR 1068, Subparts A and D. (2) Do not operate and maintain the engine and control device according to manufacturer's emission-related written instructions but keep a maintenance plan and records of conducted maintenance and, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. No performance testing is required.	Records of manufacturer's certifications; records of installation and configuration according to the manufacturer's emission-related specifications; O&M plans; manufacturer's emission-related written instructions; facility procedures; O&M records.
40 CFR 60.4243(b) A.A.C. R18-2-901.85	For an SI engine subject to the emission standards specified in 40 CFR 60.4233(d) or (e), meet one of the following: (1) Purchase an engine certified according to procedures specified in 40 CFR 60 Subpart JJJJ, for the same model year and demonstrate compliance according to one of the methods specified in 40 CFR 60.4243(a). (2) Purchase a non-certified engine and demonstrate compliance with the emission standards specified in 40 CFR 60.4233(d) or (e) according to the requirements specified in 40 CFR 60.4244, as applicable, and according to 40 CFR 60.4243(b)(2)(i) and (ii).	Records of manufacturer's certifications; records of installation and configuration according to the manufacturer's emission-related specifications; O&M plans; manufacturer's emission-related instructions; facility procedures; O&M records; records of performance test results and reports (if necessary).

Table 9.15 Applicable Regulatory Requirements of A.A.C. R18-2-901.85 and 40 CFR 60 Subpart JJJJ (Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4243(d) A.A.C. R18-2-901.85	Operate the emergency stationary SI engine as follows to retain classification as an emergency engine: • Unlimited operation for use in emergency situations; • Maximum of 100 hr/yr for maintenance checks and readiness testing (provided that the tests are recommended); and • Maximum of 50 hr/yr in non-emergency situations (counted towards the 100 hr/yr in 40 CFR 60.4243(d)(2)). The 50 hr/yr for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless all conditions in 40 CFR 60.4243(d)(3)(i) are met.	O&M plans; facility procedures; O&M records; records of hourly meter readings and engine use; records review.
40 CFR 60.4243(e) A.A.C. R18-2-901.85	For a stationary SI natural gas fired engine, operate the engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233.	Facility procedure; records of engine hours.

Table 9.15Applicable Regulatory Requirements of A.A.C. R18-2-901.85 and 40 CFR 60 Subpart JJJJ (Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4243(f) A.A.C. R18-2-901.85	For an SI engine that is less than or equal to 500 hp and either a non-certified engine or not operated and maintained according to the manufacturer's written emission-related instructions, perform initial performance testing as indicated in 40 CFR 60.4243, but do not conduct subsequent performance testing unless the stationary engine undergoes rebuild, major repair or maintenance. Engine rebuilding means to overhaul an engine or to otherwise perform extensive service on the engine (or on a portion of the engine or engine system). For the purpose of 40 CFR 60.4243(f), perform extensive service means to disassemble the engine (or portion of the engine or engine system), inspect and/or replace many of the parts, and reassemble the engine (or portion of the engine or engine system) in such a manner that significantly increases the service life of the resultant engine.	Facility procedure; records of O&M plans; O&M records; records of performance test results and reports (if necessary).
40 CFR 60.4245(a) A.A.C. R18-2-901.85	Maintain records of the following: • All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification; • Maintenance conducted on the engine; • If the stationary SI engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 1048, 1054, and 1060, as applicable; and • If the stationary SI engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards.	Facility procedures; records of notifications and supporting documentation (if necessary), manufacturer's certifications, maintenance conducted on the engines, and performance test results and reports (if necessary).

Table 9.15 Applicable Regulatory Requirements of A.A.C. R18-2-901.85 and 40 CFR 60 Subpart JJJJ (Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.4245(b) A.A.C. R18-2-901.85	For a stationary SI emergency engine greater than or equal to 130 hp and less than 500 hp manufactured on or after July 1, 2011 that does not meet the standards applicable to non-emergency engines, keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For a stationary SI emergency engine greater than 25 hp and less than 130 hp manufactured on or after July 1, 2008, that does not meet the standards applicable to non-emergency engines, keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.	Facility procedure; records of hourly meter readings, engine use, and what classified the operation as emergency; records review.
40 CFR 60.4245(d) A.A.C. R18-2-901.85	For a stationary SI engine that is subject to performance testing, submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.	Records of performance test reports (if necessary).
40 CFR 60.4245(e) A.A.C. R18-2-901.85	For an emergency stationary SI engine with a maximum engine power more than 100 hp that operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), submit an annual report according to the requirements in 40 CFR 60.4245(e)(1) through (3).	Submittal of annual reports (if necessary); maintenance of records.
40 CFR 60.4246 A.A.C. R18-2-901.85	Comply with the General Provisions as specified in Table 3 of 40 CFR 60 Subpart JJJJ.	Facility procedure; records review.

Table 9.16 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.1 and 40 CFR 63 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 63.1(b)(3) A.A.C. R18-2-1101.B.1	When it is determined that the source that is in the relevant source category is not subject to a relevant standard or other requirement established under 40 CFR 63, keep a record as specified in 40 CFR 63.10(b)(3).	Facility procedure; maintenance of records.
40 CFR 63.1(c)(1) A.A.C. R18-2-1101.B.1	If a relevant standard has been established under 40 CFR 63, comply with the provisions of that standard and of 40 CFR 63 Subpart A as provided in 40 CFR 63.1(a)(4).	Facility procedure; maintenance of records.
40 CFR 63.1(b)(5) A.A.C. R18-2-1101.B.1	If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR 63 if it were a major source subsequently increases its emissions of HAPs (or its PTE of HAPs) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of 40 CFR 63 Subpart A.	Management of change procedure; records of notification (if necessary).
40 CFR 63.4(b) A.A.C. R18-2-1101.B.1	Do not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard.	Facility procedure.
40 CFR 63.5(b)(4) A.A.C. R18-2-1101.B.1	After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, notify the Administrator of any intended construction or reconstruction when constructing a new affected source that is not major-emitting or reconstructing an affected source that is not major-emitting that is subject to such standard, or reconstructing a source such that the source becomes an affected source subject to the standard. The notification must be submitted in accordance with the procedures in 40 CFR 63.9(b).	Management of change procedure; records of notifications (if necessary).

Table 9.16 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.1 and 40 CFR 63 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 63.6(a)(2) A.A.C. R18-2-1101.B.1	If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR 63 if it were a major source subsequently increases its emissions of HAPs (or its PTE of HAPs) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.	Management of change procedure.
40 CFR 63.6(e)(1)(i) A.A.C. R18-2-1101.B.1	At all times, including periods of startup, shutdown, and malfunction, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that emissions from the affected source be reduced to the greatest extent which is consistent with safety and good air pollution control practices.	Facility procedure; O&M plans; O&M records.
40 CFR 63.9(b)(1)(ii) A.A.C. R18-2-1101.B.1	If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR 63 if it were a major source subsequently increases its emissions of HAPs (or its PTE of HAPs) such that the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of 40 CFR 63.9.	Management of change procedure; records of notifications (if necessary).
40 CFR 63.9(b)(5)(i) A.A.C. R18-2-1101.B.1	Submit a notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source.	Management of change procedure; records of notification (if necessary).
40 CFR 63.9(b)(5)(ii) A.A.C. R18-2-1101.B.1	Submit a notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.	Management of change procedure; records of notifications (if necessary).

Table 9.16 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.1 and 40 CFR 63 Subpart A and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements [a]	Methods Used to Demonstrate Compliance
40 CFR 63.9(h)(3) A.A.C. R18-2-1101.B.1	Comply with all requirements for compliance status reports contained in the Title V permit, including reports required under 40 CFR 63. When notification of compliance status is required under 40 CFR 63, submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.	Facility procedure; records of compliance status reports and notifications.
40 CFR 63.10(b)(1) A.A.C. R18-2-1101.B.1	Maintain files of all information (including all reports and notifications) required by 40 CFR 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.	Facility procedure; record retention policy; records review.
40 CFR 63.10(b)(3) A.A.C. R18-2-1101.B.1	If it is determined that a stationary source that emits (or has the PTE, without considering controls) one or more HAPs regulated by any standard established pursuant to section 112(d) or (f), and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR 63) because of limitations on the source's PTE or an exclusion, keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first.	Management of change procedure; records of applicability determinations (if necessary); record retention policy.

[a] The individual subparts of 40 CFR 63 provide more details about the applicability of the general provisions of 40 CFR 63 Subpart A.

Table 9.17 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (New Emergency Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6590(c) A.A.C. R18-2-1101.B.81	For a new stationary reciprocating internal combustion engine located at an area source, meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII for compression ignition engines or 40 CFR 60 Subpart JJJJ for spark ignition engines (as applicable). No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ.	See individual permit conditions for engines subject to NSPS Subparts IIII and JJJJ.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6603(a) (Table 2d, Entry 4) A.A.C. R18-2-1101.B.81	Perform the following required management practice requirements: • Change oil and filter every 500 hours of operation or annually, whichever comes first; • Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; • Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. To extend the specified oil change requirement, utilize the oil analysis program as described in 40 CFR 63.6625(i). If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on schedule, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.	Records of engine operating hours; O&M plans; facility procedures; O&M records.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6604(b) A.A.C. R18-2-1101.B.81	For an existing emergency CI engine greater than 100 hp and a displacement of less than 30 liters per cylinder that uses diesel fuel and for the purpose specified in 40 CFR 63.6640(f)(4)(ii), use diesel fuel that meets the requirements in 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. The requirements of 40 CFR 1090.305 include: • Sulfur content ≤ 15 ppm; and • Cetane index ≥ 40 or aromatic content ≤ 35% by volume.	Facility procedure; records of fuel specifications from fuel supplier.
40 CFR 63.6605(a) A.A.C. R18-2-1101.B.81	Be in compliance with the emission limitations, operating limitations, and other applicable requirements of 40 CFR 63 Subpart ZZZZ at all times.	O&M plans; facility procedures; operation inspection, and O&M records.
40 CFR 63.6605(b) A.A.C. R18-2-1101.B.81	Operate and maintain any affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by 40 CFR 63 Subpart ZZZZ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	O&M plans; facility procedures; operation inspection, and O&M records.
40 CFR 63.6625(e)(3) A.A.C. R18-2-1101.B.81	Operate and maintain the stationary engine according to the manufacturer's emission-related written instructions or develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	O&M plans; manufacturer's emission-related written instructions; facility procedures; O&M records.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6625(f) A.A.C. R18-2-1101.B.81	For an existing emergency stationary engine, install a non-resettable hour meter if one is not already installed.	Facility procedure; record of non-resettable hour meter installed on all emergency engines.
40 CFR 63.6625(h) A.A.C. R18-2-1101.B.81	Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	O&M plans; facility procedures; operation inspection, and O&M records.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6625(i) A.A.C. R18-2-1101.B.81	Utilize an optional oil analysis program in order to extend the specified oil change requirements in 40 CFR 63.6603(a). The oil analysis must be performed at the same frequency specified for changing the oil in 40 CFR 63.6603(a). The analysis program must at a minimum analyze the following three parameters: • Total Base Number; • Viscosity; and • Percent water content. The condemning limits for these parameters are as follows: • Total Base Number is less than 30 percent of the Total Base Number of the oil when new; • Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or • Percent water content (by volume) is greater than 0.5. If all these condemning limits are not exceeded, it is not required to change the oil. If any of the condemning limits are exceeded, change the oil within 2 business days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, change the oil within 2 business days or before commencing operation, whichever is later. Keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.	O&M plans; facility procedures; O&M records; records of oil analysis program (if utilized).

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6640(a) (Table 6, Entry 9) A.A.C. R18-2-1101.B.81	Demonstrate continuous compliance by: • Operating and maintaining the stationary engine according to the manufacturer's emission-related operation and maintenance instructions; or • Develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	O&M plans; manufacturer's written emission-related instructions; maintenance plan; facility procedures; O&M records.
40 CFR 63.6640(f)(1), 40 CFR 63.6640(f)(2), 40 CFR 63.6640(f)(4) A.A.C. R18-2-1101.B.81	Operate the emergency stationary engine as follows to retain classification as an emergency engine: • Unlimited operation for use in emergency situations; • Maximum of 100 hr/yr for maintenance checks and readiness testing (provided that the tests are recommended); and • Maximum of 50 hr/yr in non-emergency situations (counted towards the 100 hr/yr in 40 CFR 63.6640(f)(2)). The 50 hr/yr for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless all conditions in 40 CFR 63.6640(f)(4)(ii) are met.	O&M plans; facility procedures; O&M records; records of engine operating times, hours, and purposes; records review.
40 CFR 63.6645(a)(5) A.A.C. R18-2-1101.B.81	The notification requirements in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) do not apply to an existing stationary emergency engine.	Explanatory statement of law.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6650(a) (Table 7, Entry 4) 40 CFR 63.6650(h) A.A.C. R18-2-1101.B.81	For an emergency stationary engine with a site rating of more than 100 brake hp that operates for the purposes specified in 40 CFR 63.6640(f)(4)(ii), submit an annual report according to the requirements in 40 CFR 63.6650(h)(1) through (3).	Submittal of annual reports (if necessary); maintenance of records.
40 CFR 63.6650(f) A.A.C. R18-2-1101.B.81	Report all deviations as defined in 40 CFR 63 Subpart ZZZZ along with the semiannual compliance certifications required by FMMI's Title V permit.	Facility procedures; O&M records; records retention policy; records review.
40 CFR 63.6655(e)(3) A.A.C. R18-2-1101.B.81	Maintain records of the maintenance conducted on the stationary engine in order to demonstrate that the stationary engine was operated and maintained according to any developed maintenance plan.	O&M plans; facility procedures; records of operation and maintenance.
40 CFR 63.6655(f)(2) A.A.C. R18-2-1101.B.81	For an existing emergency stationary engine that does not meet the standards applicable to non-emergency engines, maintain records of the hours of operation of the engine, recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in 40 CFR 63.6640(f)(4)(ii), keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.	Facility procedures; records of hourly meter readings, engine use and what classified the operation as emergency; records review.
40 CFR 63.6660(a) A.A.C. R18-2-1101.B.81	Records must be made and kept in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).	Facility procedures; O&M records; records retention policy; records review.
40 CFR 63.6660(b) A.A.C. R18-2-1101.B.81	As specified in 40 CFR 63.10(b)(1), keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.	Facility procedures; O&M records; records retention policy; records review.

Table 9.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Black Start and Emergency CI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6660(c) A.A.C. R18-2-1101.B.81	Keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).	Facility procedures; O&M records; records retention policy; records review.
40 CFR 63.6665 A.A.C. R18-2-1101.B.81	Comply with the General Provisions as specified in Table 8 of 40 CFR 63 Subpart ZZZZ.	Facility procedure; records review.

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11111(b) A.A.C. R18-2-1101.B.105	For gasoline dispensing facility (GDF) that has a monthly throughput of less than 10,000 gallons of gasoline, comply with the requirements in 40 CFR 63.11116.	Explanatory statement of law.
40 CFR 63.11111(c) A.A.C. R18-2-1101.B.105	For GDF that has a monthly throughput of 10,000 gallons of gasoline or more, comply with the requirements in 40 CFR 63.11117.	Explanatory statement of law.
40 CFR 63.11111(e) A.A.C. R18-2-1101.B.105	Upon request by the Administrator, demonstrate that the monthly throughput of an affected source is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, begin recordkeeping to document monthly throughput upon startup. Document the monthly throughput and maintain records for 5 years.	Management of change procedure; records of monthly throughput; and record retention policy.
40 CFR 63.11111(h) A.A.C. R18-2-1101.B.105	Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.	Explanatory statement of law.
40 CFR 63.11111(i) A.A.C. R18-2-1101.B.105	If the affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.	Explanatory statement of law.
40 CFR 63.11111(j) A.A.C. R18-2-1101.B.105	The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to 40 CFR 63.11116.	Explanatory statement of law.

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11113(c) A.A.C. R18-2-1101.B.105	If an existing affected source becomes subject to the control requirements in 40 CFR 63 Subpart CCCCCC because of an increase in the monthly throughput, as specified in 40 CFR 63.11111(c) or 40 CFR 63.11111(d), comply with the standards in 40 CFR 63 Subpart CCCCCC no later than 3 years after the affected source becomes subject to the control requirements in 40 CFR 63 Subpart CCCCCC.	Management of change procedure; records review.
40 CFR 63.11115(a) A.A.C. R18-2-1101.B.105	At all times, operate and maintain any affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	Facility procedures; O&M plans; O&M records.
40 CFR 63.11115(b) A.A.C. R18-2-1101.B.105	Keep applicable records and submit reports as specified in 40 CFR 63.11125(d) and 40 CFR 63.11126(b).	Facility procedure; records of reports; records review.
40 CFR 63.11116(a) A.A.C. R18-2-1101.B.105	For GDF with monthly throughputs of less than 10,000 gallons of gasoline, do not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include: • Minimizing gasoline spills; • Cleaning up spills as expeditiously as practicable; • Covering all open gasoline containers and all gasoline storage tank fill pipes with a gasketed seal when not in use; and • Minimizing gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.	Facility procedure; records of monthly gasoline throughput; gasoline fill pipe cap visual inspections; record of SOP for management of spills.

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11116(b) A.A.C. R18-2-1101.B.105	For GDF with monthly throughputs of less than 10,000 gallons of gasoline, do not submit notifications or reports as specified in 40 CFR 63.11125, 40 CFR 63.11126, or 40 CFR 63 Subpart A, but have records available within 24 hours of a request by the Administrator to document gasoline throughput.	Facility procedures; records of gasoline throughput.
40 CFR 63.11116(d) A.A.C. R18-2-1101.B.105	Portable gasoline containers that meet the requirements of 40 CFR 59 Subpart F are considered acceptable for compliance with 40 CFR 63.11116(a)(3).	Explanatory statement of law.
40 CFR 63.11117(a) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, comply with the requirements of 40 CFR 63.11116(a).	Facility procedure; records of monthly gasoline throughput; gasoline fill pipe cap visual inspections; record of SOP for management of spills.
40 CFR 63.11117(b) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, only load gasoline into storage tanks by utilizing submerged filling according to the following: • Submerged fill pipes installed on or before November 9, 2006 must be no more than 12 inches from the bottom of the tank; • Submerged fill pipes installed after November 9, 2006 must be no more than 6 inches from the bottom of the tank; or • Submerged fill pipes not meeting the above requirements, are allowed if it can be demonstrated that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator’s delegated representative during the course of a site visit. The applicable distances are measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.	Facility procedure; records of installed gasoline infill pipes on all gasoline tanks.

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11117(c) A.A.C. R18-2-1101.B.105	Gasoline storage tanks with a capacity of less than 250 gallons (associated with a gasoline dispensing facility with monthly throughput of 10,000 gallons of gasoline or more) are not required to comply with the submerged fill requirements in 40 CFR 63.11117(b) but must comply only with all the requirements in 40 CFR 63.11116.	Explanatory statement of law.
40 CFR 63.11117(d) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, have records available within 24 hours of a request by the Administrator to document gasoline throughput.	Facility procedures; records of gasoline throughput.
40 CFR 63.11117(e) A.A.C. R18-2-1101.B.105	Submit the applicable notifications as required under 40 CFR 63.11124(a).	Facility procedure; records of notifications.
40 CFR 63.11124(a)(1) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, submit an Initial Notification no later than 120 days after the source becomes subject to this subpart, whichever is later, or at the time a GDF becomes subject to the control requirements of 40 CFR 63.11117. The Initial Notification must contain the information specified in paragraphs 40 CFR 63.11124(a)(1)(i) through (iii). The notification must be submitted to the applicable EPA Regional office and delegated state authority as specified in 40 CFR 63.13.	Facility procedure; records of throughput and notifications submitted.

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11124(a)(2) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in 40 CFR 63.13 within 60 days of the applicable compliance date specified in 40 CFR 63.11113. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of 40 CFR 63 Subpart CCCCCC, and must indicate whether the GDF's monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If the GDF is in compliance with the requirements of this 40 CFR 63 Subpart CCCCCC at the time the Initial Notification is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph 40 CFR 63.11124(a)(1).	Facility procedure; records of throughput and notifications submitted.
40 CFR 63.11125(d) A.A.C. R18-2-1101.B.105	For all GDF, keep records of the following: • Occurrence and duration of each malfunction of operation (i.e., process equipment); and • The actions taken during the periods of malfunction to minimize emissions in accordance with 40 CFR 63.11115(a), including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation.	Facility procedures; records of any malfunction and corrective actions taken (if necessary).

Table 9.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.105 and 40 CFR 63 Subpart CCCCCC and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.11126(b) A.A.C. R18-2-1101.B.105	For GDF with monthly throughput of 10,000 gallons of gasoline or more, submit a report by March 15th of each year indicating the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.	Facility procedure; records of throughput and reports submitted (if necessary).
40 CFR 63.11130 A.A.C. R18-2-1101.B.105	Comply with the General Provisions as specified in Table 3 of 40 CFR 63 Subpart CCCCCC.	Facility procedure; records review.

10 INSIGNIFICANT AND TRIVIAL ACTIVITY INFORMATION

10.1 INSIGNIFICANT ACTIVITIES

The proposed insignificant activities associated with the FMMI facility are presented in Table 10.1. Pursuant to A.A.C. R18-2-304.F.8, insignificant activities shall be listed in a permit application, but the application need not provide emissions data, except as requested by ADEQ following submittal of the application. Therefore, any emissions from the equipment and activities presented in Table 10.1 are not considered in this application.

10.2 TRIVIAL ACTIVITIES

The proposed trivial activities associated with the FMMI facility are presented in Table 10.2. Although trivial activities can be omitted from permit applications, FMMI is identifying them in this application for ADEQ's concurrence and future reference purposes. Table 10.2 is not intended to be an exhaustive list of all the equipment and activities at the FMMI facility that meet the trivial activities classification.

Table 10.1 Proposed Insignificant Activities

Proposed Insignificant Activity	Insignificant Activity Reference
Diesel Fuel and Fuel Oil Storage Tanks with a Capacity of 40,000 Gallons or Less	A.A.C. R18-2-101.68.a.i
Lubricating Oil, Transformer Oil, and Used Oil Storage Tanks	A.A.C. R18-2-101.68.a.i
Gasoline Storage Tanks with a Capacity of 10,000 Gallons or Less	A.A.C. R18-2-101.68.a.ii
Storage and Piping of Natural Gas, Butane, Propane, or Liquified Petroleum Gas	A.A.C. R18-2-101.68.a.iii
Piping of Fuel Oils, Used Oil and Transformer Oil	A.A.C. R18-2-101.68.a.iv
Storage and Handling of Drums or Other Transportable Containers Where the Containers are Sealed During Storage, and Covered During Loading and Unloading, Including Containers of Waste and Used Oil	A.A.C. R18-2-101.68.a.v
Storage Tanks Containing Exclusively Soaps, Detergents, Waxes, Greases, Aqueous Salt Solutions, Aqueous Solutions of Acids That Are Not Regulated Air Pollutants, or Aqueous Caustic Solutions (e.g., raffinate and electrolyte tanks in the SX/EW Operations)	A.A.C. R18-2-101.68.a.vi
Internal Combustion Engine-Driven Compressors, Internal Combustion Engine-Driven Electrical Generator Sets, and Internal Combustion Engine-Driven Water Pumps Used for Less than 500 Hours per Calendar Year for Emergency Replacement or Standby Service	A.A.C. R18-2-101.68.b
Batch Mixers with Rated Capacity of 5 Cubic Feet (ft^3) or Less	A.A.C. R18-2-101.68.c.i
Blast-Cleaning Equipment Using a Suspension of Abrasive in Water and any Exhaust System or Collector Serving them Exclusively	A.A.C. R18-2-101.68.c.v
Plastic Pipe Welding	A.A.C. R18-2-101.68.c.vi
Housekeeping Activities and Associated Products Used for Cleaning Purposes, Including Collecting Spilled and Accumulated Materials at the Source, Including Operation of Fixed Vacuum Cleaning Systems Specifically for Such Purposes	A.A.C. R18-2-101.68.d.i
Street and Parking Lot Striping	A.A.C. R18-2-101.68.d.iii

Table 10.1 Proposed Insignificant Activities

Proposed Insignificant Activity	Insignificant Activity Reference
Architectural Painting and Associated Surface Preparation for Maintenance Purposes at Industrial or Commercial Facilities	A.A.C. R18-2-101.68.d.iv
Noncommercial (In-House) Experimental, Analytical Laboratory Equipment, Which is Bench Scale in Nature, Including Quality Control/Quality Assurance Laboratories Supporting a Stationary Source and Research and Development Laboratories	A.A.C. R18-2-101.68.e.i
Individual Sampling Points, Analyzers, and Process Instrumentation, Whose Operation May Result in Emissions but That Are Not Regulated as Emission Units	A.A.C. R18-2-101.68.e.ii
General Office Activities, Such as Paper Shredding, Copying, Photographic Activities, and Blueprinting, but Not to Include Incineration	A.A.C. R18-2-101.68.f.i
Use of Consumer Products, Including Hazardous Substances Where the Product Is Used at a Source in the Same Manner as Normal Consumer Use	A.A.C. R18-2-101.68.f.ii
Activities Directly Used in the Diagnosis and Treatment of Disease, Injury or Other Medical Condition	A.A.C. R18-2-101.68.f.iii
Installation and Operation of Potable, Process and Waste Water Observation Wells, Including Drilling, Pumping, and Filtering Apparatus	A.A.C. R18-2-101.68.g.i
Transformer Vents	A.A.C. R18-2-101.68.g.ii

Table 10.2Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Facility-Wide	
Combustion Emissions from Propulsion of Mobile Sources	A.A.C. R18-2-101.146.a.i
Portable Electrical Generators That Can Be Moved by Hand from One Location to Another	A.A.C. R18-2-101.146.a.iii
Hand-Held or Manually Operated Equipment Used for Buffing, Polishing, Carving, Cutting, Drilling, Sawing, Grinding, Turning, Routing or Machining of Ceramic Art Work, Precision Parts, Leather, Metals, Plastics, Fiberboard, Masonry, Carbon, Glass, or Wood	A.A.C. R18-2-101.146.b.ii
Brazing, Soldering, and Welding Equipment, and Cutting Torches Related to Manufacturing and Construction Activities That Do Not Result in Emission of HAP Metals	A.A.C. R18-2-101.146.b.iii
Drop Hammers or Hydraulic Presses for Forging or Metalworking	A.A.C. R18-2-101.146.b.iv
Air Compressors and Pneumatically Operated Equipment, Including Hand Tools	A.A.C. R18-2-101.146.b.v
Batteries and Battery Charging Stations	A.A.C. R18-2-101.146.b.vi
Hand-Held Applicator Equipment for Hot Melt Adhesives with No VOC in the Adhesive Formulation	A.A.C. R18-2-101.146.b.ix
Equipment Used for Surface Coating, Painting, Dipping, or Spraying Operations, Except Those That Will Emit VOC or HAPs	A.A.C. R18-2-101.146.b.x
Electric or Steam-Heated Drying Ovens and Autoclaves, But Not the Emissions from the Articles or Substances Being Processed in the Ovens or Autoclaves or the Boilers Delivering the Steam	A.A.C. R18-2-101.146.b.xii
Salt Baths Using Nonvolatile Salts That Do Not Result in Emissions of Any Regulated Air Pollutants	A.A.C. R18-2-101.146.b.xiii

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Process Water Filtration Systems and Demineralizers	A.A.C. R18-2-101.146.b.xv
Demineralized Water Tanks and Demineralizer Vents	A.A.C. R18-2-101.146.b.xvi
Oxygen Scavenging or De-Aeration of Water	A.A.C. R18-2-101.146.b.xvii
Steam Vents and Safety Relief Valves	A.A.C. R18-2-101.146.b.xix
Steam Leaks	A.A.C. R18-2-101.146.b.xx
Steam Cleaning Operations and Steam Sterilizers	A.A.C. R18-2-101.146.b.xxi
Use of Vacuum Trucks and High-Pressure Washer/Cleaning Equipment Within the FMMI Facility Boundaries for Cleanup and Transfer of Liquids and Slurried Solids to Waste Water Treatment Units or Conveyances	A.A.C. R18-2-101.146.b.xxii
Equipment Using Water, Water and Soap or Detergent, or a Suspension of Abrasives in Water for Purposes of Cleaning or Finishing	A.A.C. R18-2-101.146.b.xxiii
Electric Motors	A.A.C. R18-2-101.146.b.xxiv
Plant and Building Maintenance and Upkeep Activities, Including Groundskeeping, General Repairs, Cleaning, Painting, Welding, Plumbing, Re-Tarring Roofs, Installing Insulation, and Paving Parking Lots	A.A.C. R18-2-101.146.c.i
Repair or Maintenance Shop Activities Not Related to FMMI's Primary Business Activity and Not Including Emissions from Surface Coating, De-Greasing, or Solvent Metal Cleaning Activities	A.A.C. R18-2-101.146.c.ii
Janitorial Services and Consumer Use of Janitorial Products	A.A.C. R18-2-101.146.c.iii

Table 10.2Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Landscaping Activities	A.A.C. R18-2-101.146.c.iv
Routine Calibration and Maintenance of Laboratory Equipment or Other Analytical Instruments	A.A.C. R18-2-101.146.c.v
Sanding of Streets and Roads to Abate Traffic Hazards Caused by Ice and Snow	A.A.C. R18-2-101.146.c.vi
Street and Parking Lot Striping	A.A.C. R18-2-101.146.c.vii
Caulking Operations Which Are Not Part of a Production Process	A.A.C. R18-2-101.146.c.viii
Air-Conditioning Units Used for Human Comfort That Do Not Have Applicable Requirements under Title VI of the Act	A.A.C. R18-2-101.146.d.i
Ventilating Units Used for Human Comfort That Do Not Exhaust Air Pollutants into the Ambient Air From Any Manufacturing, Industrial or Commercial Process	A.A.C. R18-2-101.146.d.ii
Tobacco Smoking Rooms and Areas	A.A.C. R18-2-101.146.d.iii
Non-Commercial Food Preparation	A.A.C. R18-2-101.146.d.iv
General Office Activities, Such as Paper Shredding, Copying, Photographic Activities, Pencil Sharpening and Blueprinting	A.A.C. R18-2-101.146.d.v
Laundry Activities	A.A.C. R18-2-101.146.d.vi
Bathroom and Toilet Vent Emissions	A.A.C. R18-2-101.146.d.vii
Use of Consumer Products, Including Hazardous Substances Where the Product is Used at the FMMI Facility in the Same Manner as Normal Consumer Use	A.A.C. R18-2-101.146.d.ix

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Activities Directly Used in the Diagnosis and Treatment of Disease, Injury or Other Medical Condition	A.A.C. R18-2-101.146.d.x
Circuit Breakers	A.A.C. R18-2-101.146.d.xi
Adhesive Use Which is Not Related to Production	A.A.C. R18-2-101.146.d.xii
Storage Tanks, Vessels, and Containers Holding or Storing Liquid Substances That Will Not Emit Any VOC or HAP	A.A.C. R18-2-101.146.e.i
Storage Tanks, Reservoirs, and Pumping and Handling Equipment of Any Size Containing Soaps, Vegetable Oil, Grease, Animal Fat, and Nonvolatile Aqueous Salt Solutions, If Appropriate Lids and Covers Are Used	A.A.C. R18-2-101.146.e.ii
Chemical Storage Associated with Water and Wastewater Treatment Where the Water is Treated for Consumption and/or Use Within the Permitted Facility (limited to chemicals not listed in 40 CFR 68.13, chemicals listed in 40 CFR 68.13 but stored in quantities less than threshold levels, and not subject to any applicable regulation under the Act or the Arizona Revised Statutes)	A.A.C. R18-2-101.146.e.iii
Storage Cabinets for Flammable Products	A.A.C. R18-2-101.146.e.v
Natural Gas Pressure Regulator Vents	A.A.C. R18-2-101.146.e.vi
Equipment Used to Mix and Package Soaps, Vegetable Oil, Grease, Animal Fat, and Nonvolatile Aqueous Salt Solutions, If Appropriate Lids and Covers Are Used	A.A.C. R18-2-101.146.e.vii
Vents from Continuous Emissions Monitors and Other Analyzers	A.A.C. R18-2-101.146.f.i
Bench-Scale Laboratory Equipment Used for Physical or Chemical Analysis, But Not Laboratory Fume Hoods or Vents	A.A.C. R18-2-101.146.f.ii

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Equipment Used for Quality Control, Quality Assurance, or Inspection Purposes, Including Sampling Equipment Used to Withdraw Materials for Analysis	A.A.C. R18-2-101.146.f.iii
Hydraulic and Hydrostatic Testing Equipment	A.A.C. R18-2-101.146.f.iv
Environmental Chambers Not Using HAP Gases	A.A.C. R18-2-101.146.f.v
Soil Gas Sampling	A.A.C. R18-2-101.146.f.vi
Individual Sampling Points, Analyzers, and Process Instrumentation, Whose Operation May Result in Emissions but That Are Not Regulated As Emission Units	A.A.C. R18-2-101.146.f.vii
Fire Suppression Systems	A.A.C. R18-2-101.146.g.i
Emergency Road Flares	A.A.C. R18-2-101.146.g.ii
Shock Chambers	A.A.C. R18-2-101.146.h.i
Humidity Chambers	A.A.C. R18-2-101.146.h.ii
Solar Simulators	A.A.C. R18-2-101.146.h.iii
Cathodic Protection Systems	A.A.C. R18-2-101.146.h.iv
High Voltage Induced Corona	A.A.C. R18-2-101.146.h.v
Filter Draining	A.A.C. R18-2-101.146.h.vi

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Electric Pumps	A.A.C. R18-2-101.146
Water Treatment or Storage for Boiler Feed Water	A.A.C. R18-2-101.146
Water Treatment or Storage or Cooling Systems for Process Water	A.A.C. R18-2-101.146
Collection, Transmission, Liquid Treatment and Solids Treatment Process and Domestic Type Wastewater and Sewage Treatment, or Treatment Facilities, Including Septic Tank Systems Which Treat Only Domestic Type Wastewater and Sewage	A.A.C. R18-2-101.146
Waste Motor Oil Collection and Recycling	A.A.C. R18-2-101.146
Air Lance Operations	A.A.C. R18-2-101.146
Mechanized or Manual Cleanup and Haulage Operations	A.A.C. R18-2-101.146
Railroad Track Maintenance	A.A.C. R18-2-101.146
Potable Wellfield Maintenance	A.A.C. R18-2-101.146
Cleanup of Ditches	A.A.C. R18-2-101.146
Storm Water Drainage Control	A.A.C. R18-2-101.146
Cleanout of Water Collection Sumps	A.A.C. R18-2-101.146
Cleanup of Railcars	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Cleanup of Clogged Chutes	A.A.C. R18-2-101.146
Manual Cleanup Around Conveyor Belts and Chutes	A.A.C. R18-2-101.146
Activities Associated with the Maintenance, Repair or Dismantlement of an Emission Unit, Including Preparation for Maintenance, Repair or Dismantlement and Preparation for Subsequent Startup, Including Preparation of a Shutdown Vessel for Entry, Replacement of Insulation, Welding and Cutting, and Steam Purging of a Vessel Prior to Startup (Does Not Include Activities Involving Asbestos)	A.A.C. R18-2-101.146
Aerosol Can Usage	A.A.C. R18-2-101.146
Plastic Pipe Welding	A.A.C. R18-2-101.146
Surface Impoundments Such as Ash Ponds, Cooling Ponds, Evaporation Ponds, Settling Ponds, Collection Ponds, Sumps, and Storm Water Ponds	A.A.C. R18-2-101.146
Transformer Vents	A.A.C. R18-2-101.146
Lubrication System Vents	A.A.C. R18-2-101.146
Hydraulic System Reservoirs	A.A.C. R18-2-101.146
General Vehicle Maintenance and Servicing Activities	A.A.C. R18-2-101.146
Station Transformers	A.A.C. R18-2-101.146
Generation Unit Gas Vents	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Regrind Media Processing	A.A.C. R18-2-101.146
Incineration of Methane Gas and Bar Screen Residue That Is Retained by the Solids Bar Screen from the Primary Wastewater Treatment Facility	A.A.C. R18-2-101.146
Tire Shredding	A.A.C. R18-2-101.146
Addition of Dry Reagents to Liquid Tanks	A.A.C. R18-2-101.146
Anti-Freeze Storage Tanks	A.A.C. R18-2-101.146
Belt Scales	A.A.C. R18-2-101.146
Chemical Storage and Process Holding Tanks (limited to chemicals not listed in 40 CFR 68.13, chemicals listed in 40 CFR 68.13 but stored in quantities less than threshold levels, and not subject to any applicable regulation under the Act or the Arizona Revised Statutes)	A.A.C. R18-2-101.146
Condenser/Moisture Trap/Mist Eliminator	A.A.C. R18-2-101.146
Equipment Transferring Material with Negligible Potential to Emit	A.A.C. R18-2-101.146
Filters and Membranes for Water Treatment	A.A.C. R18-2-101.146
General Research Activities Such As Testing Water Mist/Spray Controls for Dust Abatement	A.A.C. R18-2-101.146
Heat Exchangers (not including fuel burning equipment)	A.A.C. R18-2-101.146
Hydraulic Power Units	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Hydraulic Slide Gates	A.A.C. R18-2-101.146
Liquid Chemical Reagent Systems	A.A.C. R18-2-101.146
Magnets and Bins Associated with Removal of Tramp Metal	A.A.C. R18-2-101.146
Maintenance, Repair or Dismantlement of Buildings, Utility Lines, Pipelines, Wells, and Other Structures that Do Not Constitute an Emissions Unit	A.A.C. R18-2-101.146
Metal Detectors	A.A.C. R18-2-101.146
Production of Hot/Chilled Water for On-Site Use Not Related to Any Industrial Application and Not Using Fuel Burning Equipment	A.A.C. R18-2-101.146
Pump/Motor Oil Reservoirs, Such as Gearbox Lubrication	A.A.C. R18-2-101.146
Railroad and Railroad Track Maintenance	A.A.C. R18-2-101.146
Stockpiles with Limited Potential for Wind Erosion (minimal fugitive dust due to large rock size, low silt content, and/or wetting with an acid solution)	A.A.C. R18-2-101.146
Use of Pesticides, Fumigants, and Herbicides	A.A.C. R18-2-101.146
Transfer of Collected Dust Back to the Process	A.A.C. R18-2-101.146
Emission units that exhaust inside a building under negative pressure. Emissions are accounted for and collected by other pollution control devices that capture emissions within the building and exhaust to the atmosphere.	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Operation 001: Mining Operations	
Surfactant Storage Tanks	A.A.C. R18-2-101.146
Rehandle of Ore Near the In-pit Crushers, storage of material that has not been crushed	A.A.C. R18-2-101.146
Storage of Material that Has Not Been Crushed	A.A.C. R18-2-101.146
Operation 002: Morenci Concentrator	
Spiral Classifiers	A.A.C. R18-2-101.146
Hydro Cone Clusters	A.A.C. R18-2-101.146
Copper/Molybdenum Concentrate Thickeners	A.A.C. R18-2-101.146
Electric Pumps and Sumps in the Flotation Operations	A.A.C. R18-2-101.146
Operation 003: MFL Fine Crushing Plant	
Surfactant Storage Tanks	A.A.C. R18-2-101.146
Material Handling of Agglomerated Ore	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Operation 004: Lime Slaking Plants and Lime Transloading	
Milk of Lime Slurry Tanks	A.A.C. R18-2-101.146
Milk of Lime Storage Tanks	A.A.C. R18-2-101.146
Operation 005: Metcalf Power Plant	
Generator Potion of the Natural Gas Turbines	A.A.C. R18-2-101.146
Switch Yard	A.A.C. R18-2-101.146
Operation 006: Copper Concentrate Processing Operations	
Filter Feed Trash Bin	A.A.C. R18-2-101.146
Copper Filters 1 and 2	A.A.C. R18-2-101.146
Concentrate Reclamation	A.A.C. R18-2-101.146
Operation 009: Solution Extraction/Electrowinning Operations	
Electrolyte Tanks	A.A.C. R18-2-101.146
H_2SO_4 Tanks	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
PLS Tanks	A.A.C. R18-2-101.146
Tanks with Only Traces of Organic	A.A.C. R18-2-101.146
Tanks that are Skimmed of Organic	A.A.C. R18-2-101.146
Closed Organic Tanks with a Capacity of 40,000 Gallons or Less	A.A.C. R18-2-101.146
Leaching Stockpiles	A.A.C. R18-2-101.146
PLS Collection Ponds	A.A.C. R18-2-101.146
Cathode Washing and Stripping	A.A.C. R18-2-101.146
Cathode Packaging and Weighing	A.A.C. R18-2-101.146
Electric Heaters and Boilers	A.A.C. R18-2-101.146
Operation 010: Concrete Batch Plant	
Waste Concrete Handling	A.A.C. R18-2-101.146
Operation 011: Storage Tanks	
Sulfuric Acid Storage Tank	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Sulfuric Acid Stand Pipe Tank	A.A.C. R18-2-101.146
Storage Tanks with a Capacity of 40,000 Gallons or Less Containing a Liquid with a Vapor Pressure Less Than Diesel	A.A.C. R18-2-101.146
Storage Tanks with a Capacity of 10,000 Gallons or Less Containing a Liquid with a Vapor Pressure Less Than Gasoline	A.A.C. R18-2-101.146
Storage Tanks Storing Liquid Substances That Will Not Emit any VOC or HAP	A.A.C. R18-2-101.146
Operation 014: Concentrate Leach Plant	
Ground Concentrate Tank	A.A.C. R18-2-101.146
Filter Feed Tanks	A.A.C. R18-2-101.146
Flocculant Mix Tank	A.A.C. R18-2-101.146
Flash Vessel	A.A.C. R18-2-101.146
Emergency Relief Vessel	A.A.C. R18-2-101.146
Evaporative Cooler and Condenser	A.A.C. R18-2-101.146
Oxygen Plant	A.A.C. R18-2-101.146
Diatomaceous Earth Mix Tanks and Storage Tanks	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Silica Removal Equipment and Preparation Tanks	A.A.C. R18-2-101.146
Milk of Lime Tank	A.A.C. R18-2-101.146
Thickeners	A.A.C. R18-2-101.146
Neutralization Tanks	A.A.C. R18-2-101.146
Slurry Conditioning Tank	A.A.C. R18-2-101.146
Recirculating Condensate Cooler	A.A.C. R18-2-101.146
PLS Cooler	A.A.C. R18-2-101.146
Vacuum Pump	A.A.C. R18-2-101.146
PLS Holding Tank	A.A.C. R18-2-101.146
Operation 017: Metcalf Concentrator	
Cyclones	A.A.C. R18-2-101.146
Copper/Molybdenum Concentrate Thickeners	A.A.C. R18-2-101.146
Electric Pumps and Sumps in the Flotation Operations	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations	
Trash Bin	A.A.C. R18-2-101.146
Molybdenum Feed Tank	A.A.C. R18-2-101.146
Molybdenum High Shear Conditioning Tanks	A.A.C. R18-2-101.146
Electric Pumps, Sumps, and Process Tanks in the Combined Molybdenum Flotation Operations	A.A.C. R18-2-101.146
Copper Concentrate Thickeners	A.A.C. R18-2-101.146
Molybdenum Intermediate Thickeners	A.A.C. R18-2-101.146
Molybdenum Concentrate Thickeners	A.A.C. R18-2-101.146
Molybdenum Filter	A.A.C. R18-2-101.146
Concentrate Reclamation	A.A.C. R18-2-101.146
Electric Orfom MCO (or equivalent) Metering Pumps	A.A.C. R18-2-101.146
Nitrogen (N_2) Pressure Tank	A.A.C. R18-2-101.146
Sodium Ferrocyanide Mixing Tank	A.A.C. R18-2-101.146

Table 10.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Sodium Ferrocyanide Storage Tank	A.A.C. R18-2-101.146
Flocculant Skids	A.A.C. R18-2-101.146
Lime Day Tank	A.A.C. R18-2-101.146
CO_2 Tank	A.A.C. R18-2-101.146
NaOH Storage Tank (electrically heated)	A.A.C. R18-2-101.146
Operation 022: Prill Bins	
Ammonium Nitrate Emulsion Bins	A.A.C. R18-2-101.146
Operation 023: Tailings Operations	
Tailings Thickeners	A.A.C. R18-2-101.146
Tailings Storage Areas That Are Covered by Pond Water	A.A.C. R18-2-101.146

11 STACK INFORMATION

Stack information for the emission units at the FMMI facility is currently unavailable.

12 SITE DIAGRAM

Class I air quality permit applications are required to include site diagrams showing the following information:

- Property boundaries;
- Adjacent streets or roads;
- Directional arrow;
- Elevation;
- Closest distance between equipment and property boundary;
- Equipment and building layout;
- Building height;
- Relative location of emission sources/points;
- Location of emission points and non-point emission areas;
- Location of air pollution control equipment; and
- Scale.

Site diagrams of the FMMI facility showing much of the above information are presented in Figures 12.1 and 12.2. The remaining information is not necessary for issuance of FMMI's Class I renewal permit.

Figure 12.1 Site Diagram of the FMMI Facility – Mining Operations

Figure 12.2 Site Diagram of the FMMI Facility – Processing Operations

13 COMPLIANCE PLAN

13.1 COMPLIANCE STATUS

Except as provided below, FMMI is in compliance with the applicable requirements of Articles 6, 7, 8, 9, and 11 of Title 18, Chapter 2 of the A.A.C., the rules promulgated pursuant to Arizona Revised Statutes (A.R.S.) § 49-426.03, and voluntarily accepted limitations pursuant to A.A.C. R18-2-306.01. The methods used to demonstrate compliance with applicable requirements are incorporated in Class I Air Quality Permit #72683, presented in Tables 9.1 through 9.19 of this application, and identified in FMMI's most recent compliance certification report.

As reported to ADEQ on May 1, 2023, FMMI discovered that it had exceeded the voluntary natural gas usage limit of 458,148 MMBtu/yr for Small Industrial Natural Gas Boilers 1, 2, 3, 4, and 5 in Class I Air Quality Permit #72683, Attachment "B" Condition II.B.3.a. On June 8, 2023, as directed by ADEQ's May 10, 2023 Notice of Violation, FMMI provided a proposed interim 12-month rolling total natural gas consumption limit of 625,000 MMBtu along with a demonstration that FMMI's facility-wide potential to emit NO_X will remain below 250 tpy and an incremental increase in NO_X below 20 tpy following the proposed increase in the allowable fuel consumption limit. Concurrent with that proposal, FMMI submitted a significant permit revision application (SPR #99132) requesting revision of the allowable fuel consumption limit to 625,000 MMBtu. FMMI understands that its proposed interim limit will be incorporated into a Consent Order and that FMMI must comply with that limit until ADEQ issues a revised permit incorporating the limit requested in its significant permit revision application.

13.2 COMPLIANCE SCHEDULE

For current applicable requirements, FMMI will continue to comply with such requirements. For applicable requirements that become effective during the permit term, FMMI will meet such requirements in a timely manner. Because FMMI will be in compliance with the revised natural gas usage limit in Class I Air Quality Permit #72683, Attachment "B" Condition II.B.3.a requested by the application for SPR #99132 and incorporated as part this renewal application at the time of permit renewal issuance, a schedule of compliance is not required.

14 COMPLIANCE CERTIFICATION

A certification of compliance with all requirements applicable to FMMI is presented in Appendix A and signed by the facility's responsible official. Except as described in Section 13 of this application, FMMI is in compliance with all applicable requirements, including voluntarily accepted limitations pursuant to A.A.C. R18-2-306.01. The applicable requirements which are the basis of the certification are incorporated in Class I Air Quality Permit #72683 and presented in Sections 8 and 9.1 of this application. The methods used for determining compliance, including a description of monitoring requirements, recordkeeping requirements, reporting requirements, and test methods are incorporated in Class I Air Quality Permit #72683, presented in Tables 9.1 through 9.19 of this application, and identified in FMMI's most recent compliance certification report.

As described in Appendix A, compliance certifications will be submitted during the permit term no less frequently than annually or more frequently if specified by the underlying applicable requirements or by ADEQ (FMMI currently submits compliance certifications semiannually). FMMI is not currently subject and will not become subject to any applicable enhanced monitoring or compliance certification requirements as a result of this application.

A certification of truth, accuracy, and completeness pursuant to A.A.C. R18-2-304.I is also presented in Appendix A.

15 ACID RAIN COMPLIANCE PLAN

The Acid Rain Program applies to the affected units defined in 40 CFR 72.6. Because the FMMI facility does not include any of these affected units, the federal acid rain program regulations do not apply, and a compliance plan is not necessary.

16 NEW MAJOR SOURCE OR MAJOR MODIFICATION INFORMATION

16.1 GENERAL INFORMATION

For purposes of Article 4 of Chapter 2 of the A.A.C., “major source” means any stationary source that emits, or has the potential to emit, 100 tpy or more of any regulated New Source Review (NSR) pollutant if the source is classified as a categorical source, or 250 tpy or more of any regulated NSR pollutant if the source is not classified as a categorical source.[4]

A major modification is defined as any physical change in or change in the method of operation of a major stationary source that would result in both:

- A significant emissions increase (SEI) of a regulated NSR pollutant; and
- A significant net emissions increase (NEI) of that pollutant from the stationary source.

16.2 APPLICABILITY DETERMINATION

The primary activity of the FMMI facility is mining and ore processing operations, which makes FMMI a “non-categorical” source for PSD purposes. Because FMMI’s facility-wide PTE is below the PSD major source thresholds (for a non-categorical source in an attainment/unclassifiable area), the facility-wide operations are considered a minor PSD source and are not capable of making a major modification. Therefore, Article 4 of Chapter 2 of the A.A.C. does not apply.

[4] Lower thresholds exist in certain nonattainment areas, but the FMMI facility is located in an attainment/unclassifiable area.

17 MINOR NEW SOURCE REVIEW APPLICABILITY DETERMINATION

17.1 GENERAL INFORMATION

According to A.A.C. R18-2-334.A.1, minor NSR applies to:

- Construction of any new Class I or Class II source, including the construction of any source requiring a Class II permit under A.A.C. R18-2-302.01.C.4; or
- Any minor NSR modification to a Class I or Class II source.

A minor NSR modification is:

1. Any physical change in or change in the method of operation of an emission unit or a stationary source that either:
   a. Increases the PTE of a regulated minor NSR pollutant by an amount greater than the permitting exemption thresholds; or
   b. Results in emissions of a regulated minor NSR pollutant not previously emitted by such emission unit or stationary source in an amount greater than the permitting exemption thresholds.
2. Construction of one or more new emissions units that have a PTE of regulated minor NSR pollutants at an amount greater than the permitting exemption threshold.

Minor NSR does not apply to the emissions of a pollutant from any of the activities identified above, if the emissions of that pollutant are subject to the requirements for a new major source or a major modification (see Section 16).

17.2 APPLICABILITY DETERMINATION

FMMI is not a new source. Furthermore, this application does not propose to construct any new emissions unit or make any physical change in or change in the method of operation of an emission unit that either increases the PTE of a regulated minor NSR pollutant by an amount greater than the permitting exemption thresholds or results in emissions of a regulated minor NSR pollutant not previously emitted in an amount greater than the permitting exemption thresholds. Consequently, minor NSR does not apply.

18 COMPLIANCE ASSURANCE MONITORING (CAM) ANALYSIS

18.1 GENERAL INFORMATION

Pursuant to 40 CFR 64.2(a), CAM applies to pollutant-specific emission units (PSEUs) located at a Title V major source if the following criteria are met:

(1) The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1);

(2) The PSEU uses a control device to achieve compliance with any such emission limitation or standard; and

(3) The PSEU has potential pre-control device emissions (i.e., PTE without consideration of emission reductions due to the use of pollution control devices) of the applicable regulated air pollutant that are equal to or greater than 100% of the amount, in tpy, required for a source to be classified as a Title V major source.

The applicability of CAM as described above relies on the definition of several terms in 40 CFR 64.1. A PSEU is defined as an emissions unit considered separately with respect to each regulated air pollutant. Furthermore, an emission limitation or standard is defined as "any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the Act" including "a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement." Documentation[5] suggests that a PSEU can be a collection of emission units if they are subject to a single emission limitation or standard (e.g., a voluntary emission limitation for affected facilities vented to a common pollution control device and discharged to the atmosphere via a stack). The potential pre-control device emissions for a PSEU containing multiple emission units would therefore be determined by summing emissions from the individual emission units. CAM requirements would be applicable if the sum is equal to or greater than 100% of the amount, in tpy, required for a source to be classified as a Title V major source.

40 CFR 64.1 defines a control device as "equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere." Inherent process equipment is defined as "equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations." Furthermore, guidance[6] clarifies that pollution prevention techniques such as water sprays and inherent moisture content are not considered control devices because they help to prevent air pollutants from being generated instead of destroying or removing air pollutants once they have already been generated. Due to pollution prevention

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[5] Ohio EPA/U.S. EPA. *Frequently Asked Questions Concerning the CAM Rule.*

[6] U.S. Environmental Protection Agency. (1998). *Summary of Comments and Responses on the Draft CAM Technical Guidance Document.*

techniques not being considered control devices, they can be taken into consideration when determining the potential pre-control device emissions from the PSEUs.

18.2 DETERMINATION OF CAM APPLICABILITY

The PSEUs at the FMMI facility that meet the requirements of 40 CFR 64.2(a)(1) and (2) are presented in Table 18.1. Table 18.1 identifies the pollution control device used to capture and control emissions from the PSEUs in order to achieve compliance with the applicable emission limitations or standards. Table 3.2 and Sections 8 and 9.1 identify the emission limitations or standards applicable to each PSEU. Opacity limitations and standards act as a surrogate for PM_{10}, $PM_{2.5}$, and particulate-based HAP emission limitations and standards.

Potential pre-control device emissions for the PSEUs are also presented in Table 18.1. If the PSEUs' potential pre-control device emissions of the applicable regulated air pollutant are greater than or equal to 100% of the amount required for a source to be classified as a Title V "major source," then the PSEU and the corresponding pollution control device are subject to CAM requirements. For the PSEUs with multiple emission units that are subject to a single emission limitation or standard, the calculation of potential pre-control device emissions is the sum of emissions from the individual emission units. As shown in Table 18.1, there are no PSEUs addressed in this CAM Analysis that have potential pre-control device emissions in the amount required for a source to be classified as a Title V "major source." Consequently, CAM requirements do not apply, and CAM plans are not necessary.

As noted in Table 5.1, there are other PSEUs at the FMMI facility that use control methods but are not addressed in the CAM Analysis. This is because they do not meet the general applicability requirements of 40 CFR 64.2(a)(1) and (2). Consequently, it is not necessary to evaluate the potential pre-control device emissions from these PSEUs. Identification of the PSEUs and why they do not meet the general applicability requirements of 40 CFR 64.2(a)(1) and (2) is presented in Table 18.2.

18.3 CALCULATION METHODOLOGY

The methodology used to calculate the potential pre-control device emissions for each PSEU is presented in Appendix G. The Excel spreadsheets used to calculate potential pre-control device emissions are reproduced in Appendix H. An electronic copy of the emission calculations will be provided via email with this Class I permit renewal application.

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
Operation 001: Mining Operations								
001-006	In-Pit Crusher 2 In-Pit Crusher 2 to Discharge Conveyor DC2	In-Pit Crusher 2 FFDC	21.05	3.79	0.002	0.002	0.003	No
001-250	In-Pit Crusher 3 In-Pit Crusher 3 to Feeder Belt FB3 Feeder Belt FB3 to Discharge Conveyor P11	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	21.92	3.86	0.002	0.002	0.003	No
001-251	Discharge Conveyor P11 to Conveyor Belt P5 Discharge Conveyor P11 to Conveyor Belt P12	P11/P5 and P11/P12 FFDC	6.35	0.96	0.0005	0.0005	0.0009	No
001-015	Conveyor Belt P5 to Conveyor Belt P6	P5/P6 FFDC	3.97	0.60	0.0003	0.0003	0.0006	No
001-225	Discharge Conveyor DC2 to Conveyor Belt P9 via Diverter Gate 2 Conveyor Belt P9 to Conveyor Belt P10	DC2/P9 and P9/P10 FFDC	6.26	0.95	0.0005	0.0005	0.0009	No
001-325	Discharge Conveyor DC2 to Conveyor Belt P5 via Diverter Gate 2	DC2/P5 FFDC	3.31	0.50	0.0003	0.0003	0.0005	No
001-299	Reclaim Feeder 1 to Conveyor Belt R1A Reclaim Feeder 2 to Conveyor Belt R1A Reclaim Feeder 3 to Conveyor Belt R1A	Mill IOS/R1A FFDC	3.53	0.53	0.0003	0.0003	0.0005	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
001-299 (cont'd)	Reclaim Feeder 4 to Conveyor Belt R1A	Mill IOS/R1A FFDC (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
001-300	Reclaim Feeder 5 to Conveyor Belt R1B Reclaim Feeder 6 to Conveyor Belt R1B Reclaim Feeder 7 to Conveyor Belt R1B	Mill IOS/R1B FFDC	3.17	0.48	0.0002	0.0002	0.0005	No
001-272	Conveyor Belt R1A to Conveyor Belt R7 Conveyor Belt R1B to Conveyor Belt R7	R1A and R1B/R7 FFDC	4.85	0.73	0.0004	0.0004	0.0006	No
001-277	Conveyor Belt R1A to Conveyor Belt R2 Conveyor Belt R1B to Conveyor Belt R2	R1A and R1B/R2 Bag Collector 1	4.88	0.74	0.0004	0.0004	0.0008	No
001-278	Conveyor Belt R2 to Conveyor Belt R11	R2/R11 FFDC	2.44	0.37	0.0002	0.0002	0.0004	No
001-228	Apron Feeder 1 to Conveyor Belt R8 Apron Feeder 2 to Conveyor Belt R8	MFL IOS/R8 FFDC	5.29	0.80	0.0004	0.0004	0.0008	No
001-229	Conveyor Belt R8 to Conveyor Belt R9	R8/R9 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
Operation 002: Morenci Concentrator								
002-022	Conveyor Belt R7 to Conveyor Belt 1A via Coarse Ore Splitter Conveyor Belt R7 to Conveyor Belt 1B via Coarse Ore Splitter	R7/1A and 1B FFDC (vented inside)	2.43	0.37	0.0002	0.0002	0.0003	No
002-023	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 1 (vented inside)	10.91	1.65	0.0008	0.0008	0.001	No
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 2 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 3 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 4 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 5 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 6 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 7 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 8 (vented inside)						
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 9 (vented inside)						

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-024	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 1 (vented inside)	10.91	1.65	0.0008	0.0008	0.001	No
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 2 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 3 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 4 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 5 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 6 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 7 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 8 (vented inside)						
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 9 (vented inside)						
002-025	Coarse Ore Storage Bin (COSB) to Apron Feeder A1	COSB/AFA/2A FFDC (vented inside)	1.41	0.21	0.0001	0.0001	0.0002	No
	Coarse Ore Storage Bin (COSB) to Apron Feeder A2							
	Coarse Ore Storage Bin (COSB) to Apron Feeder A3							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-025 (cont'd)	Coarse Ore Storage Bin (COSB) to Apron Feeder A4 Apron Feeder A1 to Conveyor Belt 2A Apron Feeder A2 to Conveyor Belt 2A Apron Feeder A3 to Conveyor Belt 2A Apron Feeder A4 to Conveyor Belt 2A	COSB/AFA/2A FFDC (vented inside) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
002-026	Coarse Ore Storage Bin (COSB) to Apron Feeder B1 Coarse Ore Storage Bin (COSB) to Apron Feeder B2 Coarse Ore Storage Bin (COSB) to Apron Feeder B3 Coarse Ore Storage Bin (COSB) to Apron Feeder B4 Apron Feeder B1 to Conveyor Belt 2B Apron Feeder B2 to Conveyor Belt 2B Apron Feeder B3 to Conveyor Belt 2B Apron Feeder B4 to Conveyor Belt 2B	COSB/AFB/2B FFDC (vented inside)	1.41	0.21	0.0001	0.0001	0.0002	No
002-027	Coarse Ore Storage Bin (COSB) to Apron Feeder C1 Coarse Ore Storage Bin (COSB) to Apron Feeder C2 Coarse Ore Storage Bin (COSB) to Apron Feeder C3	COSB/AFC/2C FFDC (vented inside)	1.41	0.21	0.0001	0.0001	0.0002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-027 (cont'd)	Coarse Ore Storage Bin (COSB) to Apron Feeder C4 Apron Feeder C1 to Conveyor Belt 2C Apron Feeder C2 to Conveyor Belt 2C Apron Feeder C3 to Conveyor Belt 2C Apron Feeder C4 to Conveyor Belt 2C	COSB/AFC/2C FFDC (vented inside) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
002-028	Coarse Ore Storage Bin (COSB) to Apron Feeder D1 Coarse Ore Storage Bin (COSB) to Apron Feeder D2 Coarse Ore Storage Bin (COSB) to Apron Feeder D3 Coarse Ore Storage Bin (COSB) to Apron Feeder D4 Apron Feeder D1 to Conveyor Belt 2D Apron Feeder D2 to Conveyor Belt 2D Apron Feeder D3 to Conveyor Belt 2D Apron Feeder D4 to Conveyor Belt 2D	COSB/AFD/2D FFDC (vented inside)	1.41	0.21	0.0001	0.0001	0.0002	No
002-029	Conveyor Belt 2A to Vibrating Grizzly 1 and Operation of Vibrating Grizzly 1 Vibrating Grizzly 1 Oversize to Secondary Crusher 1 and Operation of Secondary Crusher 1	Fine Crushing Line A FFDC 1 (vented inside)	13.77	1.56	0.001	0.001	0.002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-029 (cont'd)	Vibrating Grizzly 1 Undersize to Shaker Screen 1AN and Operation of Shaker Screen 1AN	Fine Crushing Line A FFDC 1 (vented inside) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	Vibrating Grizzly 1 Undersize to Shaker Screen 1BN and Operation of Shaker Screen 1BN							
	Secondary Crusher 1 to Shaker Screen 1AS and Operation of Shaker Screen 1AS							
	Secondary Crusher 1 to Shaker Screen 1BS and Operation of Shaker Screen 1BS							
	Shaker Screen 1AN and Shaker Screen 1AS Oversize to Tertiary Crusher 1A and Operation of Tertiary Crusher 1A							
	Shaker Screen 1BN and Shaker Screen 1BS Oversize to Tertiary Crusher 1B and Operation of Tertiary Crusher 1B							
002-033	Shaker Screen 1AN Undersize to Conveyor Belt 3	Fine Crushing Line A FFDC 2 (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No
	Shaker Screen 1AS Undersize to Conveyor Belt 3							
	Shaker Screen 1BN Undersize to Conveyor Belt 3							
	Shaker Screen 1BS Undersize to Conveyor Belt 3							
	Tertiary Crusher 1A to Conveyor Belt 3							
	Tertiary Crusher 1B to Conveyor Belt 3							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-030	Conveyor Belt 2B to Vibrating Grizzly 2 and Operation of Vibrating Grizzly 2	Fine Crushing Line B FFDC 1	13.77	1.56	0.001	0.001	0.002	No
	Vibrating Grizzly 2 Oversize to Secondary Crusher 2 and Operation of Secondary Crusher 2							
	Vibrating Grizzly 2 Undersize to Shaker Screen 2AN and Operation of Shaker Screen 2AN							
	Vibrating Grizzly 2 Undersize to Shaker Screen 2BN and Operation of Shaker Screen 2BN							
	Secondary Crusher 2 to Shaker Screen 2AS and Operation of Shaker Screen 2AS							
	Secondary Crusher 2 to Shaker Screen 2BS and Operation of Shaker Screen 2BS							
	Shaker Screen 2AN and Shaker Screen 2AS Oversize to Tertiary Crusher 2A and Operation of Tertiary Crusher 2A							
	Shaker Screen 2BN and Shaker Screen 2BS Oversize to Tertiary Crusher 2B and Operation of Tertiary Crusher 2B							
002-034	Shaker Screen 2AN Undersize to Conveyor Belt 3	Fine Crushing Line B FFDC 2 (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No
	Shaker Screen 2AS Undersize to Conveyor Belt 3							
	Shaker Screen 2BN Undersize to Conveyor Belt 3							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-034 (cont'd)	Shaker Screen 2BS Undersize to Conveyor Belt 3 Tertiary Crusher 2A to Conveyor Belt 3 Tertiary Crusher 2B to Conveyor Belt 3	Fine Crushing Line B FFDC 2 (vented inside) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
002-031	Conveyor Belt 2C to Vibrating Grizzly 3 and Operation of Vibrating Grizzly 3 Vibrating Grizzly 3 Oversize to Secondary Crusher 3 and Operation of Secondary Crusher 3 Vibrating Grizzly 3 Undersize to Shaker Screen 3AN and Operation of Shaker Screen 3AN Vibrating Grizzly 3 Undersize to Shaker Screen 3BN and Operation of Shaker Screen 3BN Secondary Crusher 3 to Shaker Screen 3AS and Operation of Shaker Screen 3AS Secondary Crusher 3 to Shaker Screen 3BS and Operation of Shaker Screen 3BS Shaker Screen 3AN and Shaker Screen 3AS Oversize to Tertiary Crusher 3A and Operation of Tertiary Crusher 3A Shaker Screen 3BN and Shaker Screen 3BS Oversize to Tertiary Crusher 3B and Operation of Tertiary Crusher 3B	Fine Crushing Line C FFDC 1	13.77	1.56	0.001	0.001	0.002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-035	Shaker Screen 3AN Undersize to Conveyor Belt 3B Shaker Screen 3AS Undersize to Conveyor Belt 3B Tertiary Crusher 3A to Conveyor Belt 3B Conveyor Belt 3B to Conveyor Belt 3	Fine Crushing Line C to 3B to 3 FFDC	1.19	0.18	0.00009	0.00009	0.0002	No
002-036	Shaker Screen 3BN Undersize to Conveyor Belt 3B Shaker Screen 3BS Undersize to Conveyor Belt 3B Tertiary Crusher 3B to Conveyor Belt 3B Conveyor Belt 3B to Conveyor Belt 3A	Fine Crushing Line C to 3B to 3A FFDC	1.19	0.18	0.00009	0.00009	0.0002	No
002-032	Conveyor Belt 2D to Vibrating Grizzly 4 and Operation of Vibrating Grizzly 4 Vibrating Grizzly 4 Oversize to Secondary Crusher 4 and Operation of Secondary Crusher 4 Vibrating Grizzly 4 Undersize to Shaker Screen 4AN and Operation of Shaker Screen 4AN Vibrating Grizzly 4 Undersize to Shaker Screen 4BN and Operation of Shaker Screen 4BN Secondary Crusher 4 to Shaker Screen 4AS and Operation of Shaker Screen 4AS	Fine Crushing Line D FFDC 1	13.77	1.56	0.001	0.001	0.002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-032 (cont'd)	Secondary Crusher 4 to Shaker Screen 4BS and Operation of Shaker Screen 4BS Shaker Screen 4AN and Shaker Screen 4AS Oversize to Tertiary Crusher 4A and Operation of Tertiary Crusher 4A Shaker Screen 4BN and Shaker Screen 4BS Oversize to Tertiary Crusher 4B and Operation of Tertiary Crusher 4B	Fine Crushing Line D FFDC 1 (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
002-326	Shaker Screen 4AN Undersize to Conveyor Belt 3A Shaker Screen 4AS Undersize to Conveyor Belt 3A Shaker Screen 4BN Undersize to Conveyor Belt 3A Shaker Screen 4BS Undersize to Conveyor Belt 3A Tertiary Crusher 4A to Conveyor Belt 3A Tertiary Crusher 4B to Conveyor Belt 3A	Fine Crushing Line D FFDC 2 (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No
002-038	Conveyor Belt 3 to Conveyor Belt 4 Conveyor Belt 4 to Conveyor Belt 5	3/4/5 FFDC (vented inside)	2.29	0.35	0.0002	0.0002	0.0003	No
002-039	Conveyor Belt 3A to Conveyor Belt 4A Conveyor Belt 4A to Conveyor Belt 5A	3A/4A/5A FFDC (vented inside)	2.29	0.35	0.0002	0.0002	0.0003	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-040	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 1 (vented inside)	10.32	1.56	0.0008	0.0008	0.001	No
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 2 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 3 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 4 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 5 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 6 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 7 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 8 (vented inside)						
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 9 (vented inside)						
002-041	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 1 (vented inside)	10.32	1.56	0.0008	0.0008	0.001	No
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 2 (vented inside)						

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-041 (cont'd)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 3 (vented inside)	See Above	See Above	See Above	See Above	See Above	See Above
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 4 (vented inside)						
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 5 (vented inside)						
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 6 (vented inside)						
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 7 (vented inside)						
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 8 (vented inside)						
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 9 (vented inside)						
Operation 003: MFL Fine Crushing Plant								
003-273	Conveyor Belt R9 to Conveyor Belt R10	R9/R10 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No
003-330	Conveyor Belt R10 to Conveyor Belt R3	R10/R3 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No
003-079	Conveyor Belt R3 to Conveyor Belt R4	R3/R4 Bag Collector 3	2.65	0.40	0.0002	0.0002	0.0004	No
003-080	Conveyor Belt R4 to Conveyor Belt R5	R4/R5/R6 Bag Collector 4	5.29	0.80	0.0004	0.0004	0.0008	No
	Conveyor Belt R5 to Conveyor Belt R6							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-082	Conveyor Belt R6 to Metcalf Track Hopper Storage Bin (MTHSB)	Scrubber 3C	2.65	0.40	0.0002	0.0002	0.0004	No
003-317	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C1	FFDC 3A	11.46	1.74	0.0009	0.0009	0.002	No
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C2							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C3							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C4							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B3							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B4							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B5							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B6							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A3							
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A4							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-317 (cont'd)	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A5	FFDC 3A (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A6							
	Apron Feeder 2C1 to Conveyor Belt 3C							
	Apron Feeder 2C2 to Conveyor Belt 3C							
	Apron Feeder 2C3 to Conveyor Belt 3C							
	Apron Feeder 2C4 to Conveyor Belt 3C							
	Apron Feeder 2B3 to Conveyor Belt 3B2							
	Apron Feeder 2B4 to Conveyor Belt 3B2							
	Apron Feeder 2B5 to Conveyor Belt 3B3							
	Apron Feeder 2B6 to Conveyor Belt 3B3							
	Apron Feeder 2A3 to Conveyor Belt 3A2							
	Apron Feeder 2A4 to Conveyor Belt 3A2							
	Apron Feeder 2A5 to Conveyor Belt 3A3							
	Apron Feeder 2A6 to Conveyor Belt 3A3							
	Conveyor Belt 3C to MFL Conveyor Belt 4C							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-317 (cont'd)	Conveyor Belt 3B2 to MFL Conveyor Belt 4B Conveyor Belt 3B3 to MFL Conveyor Belt 4B Conveyor Belt 3A2 to MFL Conveyor Belt 4A Conveyor Belt 3A3 to MFL Conveyor Belt 4A	FFDC 3A (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
003-301	MFL Conveyor Belt 4A to Scalping Screen A and Operation of Scalping Screen A Scalping Screen A Oversize to Secondary Crusher A and Operation of Secondary Crusher A Secondary Crusher A to Secondary Screen A1 and Operation of Secondary Screen A1 Secondary Crusher A to Secondary Screen A2 and Operation of Secondary Screen A2 Secondary Screen A1 Oversize to Conveyor Belt 8 Secondary Screen A2 Oversize to Conveyor Belt 7	FFDC 6A	18.58	1.89	0.001	0.001	0.003	No
003-302	MFL Conveyor Belt 4B to Scalping Screen B and Operation of Scalping Screen B Scalping Screen B Oversize to Secondary Crusher B and Operation of Secondary Crusher B Secondary Crusher B to Secondary Screen B1 and Operation of Secondary Screen B1	FFDC 6B	18.58	1.89	0.001	0.001	0.003	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-302 (cont'd)	Secondary Crusher B to Secondary Screen B2 and Operation of Secondary Screen B2	FFDC 6B (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	Secondary Screen B1 Oversize to Conveyor Belt 8							
	Secondary Screen B2 Oversize to Conveyor Belt 7							
003-304	MFL Conveyor Belt 4C to Scalping Screen C and Operation of Scalping Screen C	FFDC 1	18.58	1.89	0.001	0.001	0.003	No
	Scalping Screen C Oversize to Secondary Crusher C and Operation of Secondary Crusher C							
	Secondary Crusher C to Secondary Screen C1 and Operation of Secondary Screen C1							
	Secondary Crusher C to Secondary Screen C2 and Operation of Secondary Screen C2							
	Secondary Screen C1 Oversize to Conveyor Belt 8							
	Secondary Screen C2 Oversize to Conveyor Belt 7							
003-089	Conveyor Belt 7 to MFL Conveyor Belt 5	Scrubber 5	3.97	0.60	0.0003	0.0003	0.0006	No
	Conveyor Belt 8 to MFL Conveyor Belt 11							
	MFL Conveyor Belt 11 to MFL Conveyor Belt 5							
003-303	MFL Conveyor Belt 5 to Conveyor Belt 6	FFDC 8	2.65	0.40	0.0002	0.0002	0.0004	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-088	Conveyor Belt 6 to Tertiary Crushing Surge Bin (TCSB) Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-1 Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-2 Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-3 Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-4 Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-5 Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-6	Scrubber 4	4.63	0.70	0.0004	0.0004	0.0007	No
003-306	Belt Feeder 12-1 to Tertiary Crusher C1 and Operation of Tertiary Crusher C1 Belt Feeder 12-2 to Tertiary Crusher C2 and Operation of Tertiary Crusher C2 Belt Feeder 12-3 to Tertiary Crusher C3 and Operation of Tertiary Crusher C3 Belt Feeder 12-4 to Tertiary Crusher C4 and Operation of Tertiary Crusher C4 Belt Feeder 12-5 to Tertiary Crusher C5 and Operation of Tertiary Crusher C5 Belt Feeder 12-6 to Tertiary Crusher C6 and Operation of Tertiary Crusher C6	Tertiary Crushing Dust Collector (vented inside)	10.64	1.97	0.0008	0.0008	0.002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-307	Scalping Screen A Undersize to Conveyor Belt 9 Scalping Screen B Undersize to Conveyor Belt 9 Scalping Screen C Undersize to Conveyor Belt 9 Secondary Screen A1 Undersize to Conveyor Belt 9 Secondary Screen A2 Undersize to Conveyor Belt 9 Secondary Screen B1 Undersize to Conveyor Belt 9 Secondary Screen B2 Undersize to Conveyor Belt 9 Secondary Screen C1 Undersize to Conveyor Belt 9 Secondary Screen C2 Undersize to Conveyor Belt 9 Tertiary Crusher C1 to Conveyor Belt 9 Tertiary Crusher C2 to Conveyor Belt 9 Tertiary Crusher C3 to Conveyor Belt 9 Tertiary Crusher C4 to Conveyor Belt 9 Tertiary Crusher C5 to Conveyor Belt 9 Tertiary Crusher C6 to Conveyor Belt 9 Conveyor Belt 9 to Conveyor Belt 14	Conveyor Belt 9 Dust Collector (vented inside)	9.92	1.50	0.0008	0.0008	0.001	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
003-320	Conveyor Belt 14 to Conveyor Belt 15	14/15 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No
003-331	Conveyor Belt 15 to Conveyor Belt 16	15/16 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No
003-309	Conveyor Belt 16 to Conveyor Belt S11	16/S11 FFDC	2.65	0.40	0.0002	0.0002	0.0004	No
003-201	Belt Feeder SF1 to Conveyor Belt A1A Belt Feeder SF2 to Conveyor Belt A1A	FOIS/A1A Bag Collector 7	3.31	0.50	0.0003	0.0003	0.0005	No
003-202	Conveyor Belt A1A to Conveyor Belt A2A via Agglomeration Splitter	A1A/A2A Bag Collector 8	1.32	0.20	0.0001	0.0001	0.0002	No
003-203	Conveyor Belt A1A to Conveyor Belt A2C via Agglomeration Splitter	A1A/A2C Bag Collector 9	1.32	0.20	0.0001	0.0001	0.0002	No
Operation 004: Lime Slaking Plants and Lime Transloading								
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Lime Transloading Dust Collector	47.13	7.14	0	0	0	No
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks							
Operation 014: Concentrate Leach Plant								
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2	PLV 2-Stage Scrubber	88.30	88.30	0.02	0.02	0.06	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
Operation 017: Metcalf Concentrator								
017-318	Conveyor Belt R11 to Secondary Screen Feed Bin B2 Secondary Crusher Discharge Conveyor to Secondary Screen Feed Bin	Secondary Screen Feed Bin FFDC	0.88	0.13	0.00007	0.00007	0.0001	No
017-280	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 1 Secondary Screen Belt Feeder 1 to Secondary Screen 1 and Operation of Secondary Screen 1 Secondary Screen 1 Oversize to B1 Secondary Crusher Feed Conveyor Secondary Screen 1 Undersize to B3 Crushed Ore A Conveyor	Secondary Screening FFDC 1	17.59	1.53	0.001	0.001	0.003	No
017-281	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 2 Secondary Screen Belt Feeder 2 to Secondary Screen 2 and Operation of Secondary Screen 2 Secondary Screen 2 Oversize to B1 Secondary Crusher Feed Conveyor Secondary Screen 2 Undersize to B3 Crushed Ore A Conveyor	Secondary Screening FFDC 2	17.59	1.53	0.001	0.001	0.003	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-319	B1 Secondary Crusher Feed Conveyor to Secondary Crusher Feed Bin	Secondary Crusher Feed Bin FFDC	0.44	0.07	0.00003	0.00003	0.00007	No
017-283	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 1 Secondary Crusher Belt Feeder 1 to Metcalf Secondary Crusher 1 and Operation of Metcalf Secondary Crusher 1 Metcalf Secondary Crusher 1 to B2 Secondary Crusher Discharge Conveyor	Secondary Crushing FFDC 1	5.57	0.99	0.0004	0.0004	0.0009	No
017-284	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 2 Secondary Crusher Belt Feeder 2 to Metcalf Secondary Crusher 2 and Operation of Metcalf Secondary Crusher 2 Metcalf Secondary Crusher 2 to B2 Secondary Crusher Discharge Conveyor	Secondary Crushing FFDC 2	5.57	0.99	0.0004	0.0004	0.0009	No
017-285	B3 Crushed Ore A Conveyor to B4 Crushed Ore B Conveyor	Crushed Ore A/B Conveyor Transfer Point FFDC	2.12	0.32	0.0002	0.0002	0.0003	No
017-286	B4 Crushed Ore B Conveyor to B5 Crushed Ore Bin Tripper Conveyor	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	2.12	0.32	0.0002	0.0002	0.0003	No
017-287	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin A	Crushed Ore Bin FFDC 1	24.85	3.76	0.002	0.002	0.004	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-287 (cont'd)	Crushed Ore Bin A to Crushed Ore Belt Feeder 1	Crushed Ore Bin FFDC 1 (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	Crushed Ore Bin A to Crushed Ore Belt Feeder 2							
	Crushed Ore Bin A to Crushed Ore Belt Feeder 3							
	Crushed Ore Bin A to Crushed Ore Belt Feeder 4							
	Crushed Ore Bin A to Crushed Ore Belt Feeder 5							
	Crushed Ore Bin A to Crushed Ore Belt Feeder 6							
	Crushed Ore Belt Feeder 1 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 2 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 3 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 4 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 5 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 6 to B6 Crushed Ore Feed Conveyor							
	B6 Crushed Ore Feed Conveyor to B7 Crushed Ore Feed Transfer Conveyor							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-288	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B Crushed Ore Bin B to Crushed Ore Belt Feeder 7 Crushed Ore Bin B to Crushed Ore Belt Feeder 8 Crushed Ore Bin B to Crushed Ore Belt Feeder 9 Crushed Ore Bin B to Crushed Ore Belt Feeder 10 Crushed Ore Bin B to Crushed Ore Belt Feeder 11 Crushed Ore Bin B to Crushed Ore Belt Feeder 12 Crushed Ore Belt Feeder 7 to B6 Crushed Ore Feed Conveyor Crushed Ore Belt Feeder 8 to B6 Crushed Ore Feed Conveyor Crushed Ore Belt Feeder 9 to B6 Crushed Ore Feed Conveyor Crushed Ore Belt Feeder 10 to B6 Crushed Ore Feed Conveyor Crushed Ore Belt Feeder 11 to B6 Crushed Ore Feed Conveyor Crushed Ore Belt Feeder 12 to B6 Crushed Ore Feed Conveyor	Crushed Ore Bin FFDC 2	21.41	3.24	0.002	0.002	0.004	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-289	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	Crushed Ore Bin FFDC 3	21.41	3.24	0.002	0.002	0.004	No
	Crushed Ore Bin B to Crushed Ore Belt Feeder 13							
	Crushed Ore Bin B to Crushed Ore Belt Feeder 14							
	Crushed Ore Bin B to Crushed Ore Belt Feeder 15							
	Crushed Ore Bin B to Crushed Ore Belt Feeder 16							
	Crushed Ore Bin B to Crushed Ore Belt Feeder 17							
	Crushed Ore Bin B to Crushed Ore Belt Feeder 18							
	Crushed Ore Belt Feeder 13 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 14 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 15 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 16 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 17 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 18 to B6 Crushed Ore Feed Conveyor							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-290	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin C	Crushed Ore Bin FFDC 4	21.41	3.24	0.002	0.002	0.004	No
	Crushed Ore Bin C to Crushed Ore Belt Feeder 19							
	Crushed Ore Bin C to Crushed Ore Belt Feeder 20							
	Crushed Ore Bin C to Crushed Ore Belt Feeder 21							
	Crushed Ore Bin C to Crushed Ore Belt Feeder 22							
	Crushed Ore Bin C to Crushed Ore Belt Feeder 23							
	Crushed Ore Bin C to Crushed Ore Belt Feeder 24							
	Crushed Ore Belt Feeder 19 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 20 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 21 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 22 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 23 to B6 Crushed Ore Feed Conveyor							
	Crushed Ore Belt Feeder 24 to B6 Crushed Ore Feed Conveyor							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
017-291	B7 Crushed Ore Feed Transfer Conveyor to Crusher Surge Bin Crusher Surge Bin to B8-A Crusher Belt Feeder Crusher Surge Bin to B8-B Crusher Belt Feeder B8-A Crusher Belt Feeder to B9 Crusher Feed Conveyor B8-B Crusher Belt Feeder to B9 Crusher Feed Conveyor B9 Crusher Feed Conveyor to Crusher Feed Hopper	Crushed Ore Transfers FFDC	12.87	1.95	0.001	0.001	0.002	No
017-292	HRC/HPGR Crusher HRC/HPGR Crusher to B10 Crusher Discharge Conveyor	HRC/HPGR Crusher FFDC	20.48	3.68	0.002	0.002	0.003	No
017-294	B10 Crusher Discharge Conveyor to Wet Screen Feed Bin	Wet Screen Feed FFDC	0.44	0.07	0.00003	0.00003	0.00007	No
AOS1: Morenci Concentrator Quaternary Crushing Operations								
002-033 (AOS1)	Shaker Screen 1AN Undersize to Conveyor Belt 3 (AOS1) Shaker Screen 1AS Undersize to Conveyor Belt 3 (AOS1) Shaker Screen 1BN Undersize to Conveyor Belt 3 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-033 (AOS1) (cont'd)	Shaker Screen 1BS Undersize to Conveyor Belt 3 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	Tertiary Crusher 1A to Conveyor Belt 3 (AOS1)							
	Tertiary Crusher 1B to Conveyor Belt 3 (AOS1)							
002-034 (AOS1)	Shaker Screen 2AN Undersize to Conveyor Belt 3 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No
	Shaker Screen 2AS Undersize to Conveyor Belt 3 (AOS1)							
	Shaker Screen 2BN Undersize to Conveyor Belt 3 (AOS1)							
	Shaker Screen 2BS Undersize to Conveyor Belt 3 (AOS1)							
	Tertiary Crusher 2A to Conveyor Belt 3 (AOS1)							
	Tertiary Crusher 2B to Conveyor Belt 3 (AOS1)							
002-035 (AOS1)	Shaker Screen 3AN Undersize to Conveyor Belt 3B (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	1.19	0.18	0.00009	0.00009	0.0002	No
	Shaker Screen 3AS Undersize to Conveyor Belt 3B (AOS1)							
	Tertiary Crusher 3A to Conveyor Belt 3B (AOS1)							
	Conveyor Belt 3B (AOS1) to Conveyor Belt 3 (AOS1)							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-036 (AOS1)	Shaker Screen 3BN Undersize to Conveyor Belt 3B (AOS1) Shaker Screen 3BS Undersize to Conveyor Belt 3B (AOS1) Tertiary Crusher 3B to Conveyor Belt 3B (AOS1) Conveyor Belt 3B (AOS1) to Conveyor Belt 3A (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	1.19	0.18	0.00009	0.00009	0.0002	No
002-326 (AOS1)	Shaker Screen 4AN Undersize to Conveyor Belt 3A (AOS1) Shaker Screen 4AS Undersize to Conveyor Belt 3A (AOS1) Shaker Screen 4BN Undersize to Conveyor Belt 3A (AOS1) Shaker Screen 4BS Undersize to Conveyor Belt 3A (AOS1) Tertiary Crusher 4A to Conveyor Belt 3A (AOS1) Tertiary Crusher 4B to Conveyor Belt 3A (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	1.23	0.19	0.00009	0.00009	0.0002	No
002-311 (AOS1)	Conveyor Belt 3 (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 1 (AOS1) West RC Product Conveyor (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	West Transfer Points FFDC (AOS1)	3.57	0.54	0.0003	0.0003	0.0005	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-311 (AOS1) (cont'd)	West RC Product Conveyor (AOS1) to West Transfer Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	West Transfer Points FFDC (AOS1) (cont'd)	See Above	See Above	See Above	See Above	See Above	See Above
	West Transfer Conveyor (AOS1) to Conveyor Belt 4 (AOS1)							
002-312 (AOS1)	West RC Feed Conveyor (AOS1) to West Surge Bin (AOS1)	West Surge Bin FFDC (AOS1)	0.13	0.02	0.00001	0.00001	0.00002	No
002-313 (AOS1)	West Surge Bin (AOS1) to West RC Feeder (AOS1)	West RC FFDC (AOS1)	8.61	1.49	0.0007	0.0007	0.001	No
	West RC Feeder (AOS1) to West RC Feed Bin (AOS1) via West Flop Gate (AOS1)							
	West RC Feeder (AOS1) to West RC Product Conveyor (AOS1) via West Flop Gate (AOS1)							
	West RC (AOS1)							
	West RC (AOS1) to West RC Product Conveyor (AOS1)							
002-314 (AOS1)	Conveyor Belt 3A (AOS1) to East RC Feed Conveyor (AOS1) via East Proportioning Gate 1 (AOS1)	East Transfer Points FFDC (AOS1)	2.27	0.34	0.0002	0.0002	0.0003	No
	East RC Product Conveyor (AOS1) to East Transfer Conveyor (AOS1) via East Proportioning Gate 2 (AOS1)							
	East Transfer Conveyor (AOS1) to East RC Feed Conveyor (AOS1)							
	East RC Product Conveyor (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 2 (AOS1)							

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-315 (AOS1)	East RC Feed Conveyor (AOS1) to East Surge Bin (AOS1)	East Surge Bin FFDC (AOS1)	0.13	0.02	0.00001	0.00001	0.00002	No
002-316 (AOS1)	East Surge Bin (AOS1) to East RC Feeder (AOS1)	East RC FFDC (AOS1)	8.61	1.49	0.0007	0.0007	0.001	No
	East RC Feeder (AOS1) to East RC Feed Bin (AOS1) via East Flop Gate (AOS1)							
	East RC Feeder (AOS1) to East RC Product Conveyor (AOS1) via East Flop Gate (AOS1)							
	East RC (AOS1)							
	East RC (AOS1) to East RC Product Conveyor (AOS1)							
002-038 (AOS1)	Conveyor Belt 3 (AOS1) to Conveyor Belt 4 (AOS1) via West Proportioning Gate 1 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	2.29	0.35	0.0002	0.0002	0.0003	No
	Conveyor Belt 4 (AOS1) to Conveyor Belt 5 (AOS1)							
002-039 (AOS1)	Conveyor Belt 3A (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 1 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	1.54	0.23	0.0001	0.0001	0.0002	No
	Conveyor Belt 4A (AOS1) to Conveyor Belt 5A (AOS1)							
002-040 (AOS1)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	10.32	1.56	0.0008	0.0008	0.001	No
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 2 (AOS1) (vented inside)						

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
002-040 (AOS1) (cont'd)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 3 (AOS1) (vented inside)	See Above	See Above	See Above	See Above	See Above	See Above
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 4 (AOS1) (vented inside)						
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 5 (AOS1) (vented inside)						
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 6 (AOS1) (vented inside)						
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 7 (AOS1) (vented inside)						
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 8 (AOS1) (vented inside)						
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 9 (AOS1) (vented inside)						
AOS2: Concentrate Leach Plant Upgrades								
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2)	PLV Scrubber 1 (AOS2)	22.78	22.78	0.004	0.004	0.02	No
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2)	PLV Scrubber 2 (AOS2)	22.78	22.78	0.004	0.004	0.02	No

Table 18.1 Potential Pre-Control Device Emissions and CAM Applicability for the PSEUs

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Potential Pre-Control Device Emissions (tpy)					Subject to CAM?
			PM_{10}	$PM_{2.5}$	Lead Com-pounds	Greatest Single HAP	Total HAPs	
AOS3: Primary Crushing and Overland Conveying Operations								
001-256a (AOS3)	Crushers To Be Determined	Pollution Control Device for Crushers (AOS3)	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.					
001-256b (AOS3)	Conveyor Belts To Be Determined	Pollution Control Device for Conveyor Belts (AOS3)	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.					

Table 18.2 PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
Operation 001: Mining Operations				
001-001a	Vehicle Travel on Unpaved Roads	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-344	Conveyor Belt P12 to Conveyor Belt P10	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
Operation 003: MFL Fine Crushing Plant				
003-199	Conveyor Belt S11 (transfer to FOIS)	Water Spray/Wet Suppression	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
Operation 004: Lime Slaking Plants and Lime Transloading				
004-231	Transfer of Quicklime to the Lime Silo 1	Mac Dust Filter	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
004-232	Transfer of Quicklime to the Lime Silo 2	Mac Dust Filter	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
004-233	Lime Slaker 1	Water Spray Mist System	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment needed for safe operation of the slaker (i.e., not a pollution control device).
004-234	Lime Slaker 2	Water Spray Mist System	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment needed for safe operation of the slaker (i.e., not a pollution control device).
004-275	Transfer of Quicklime to Metcalf Lime Silo	FARR Bin Vent	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
004-276	Metcalf Lime Slaker	Metcalf Lime Slaker Wet Scrubber	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used to reduce chute plugging at the dry solids feed inlet by keeping the slaker under a slight negative pressure (i.e., not a pollution control device).
Operation 006: Copper Concentrate Processing Operations				
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	3-Sided Enclosure	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
Operation 009: Solution Extraction/Electrowinning Operations				
009-117	Central SX (21,175 ft^2)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-463	Central Barren Organic Tank (60,900 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-118	Metcalf SX (40,585.41 ft^2)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-481	Metcalf Holding Tank (122,200 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-119	Modoc SX (88,229.16 ft^2)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-496	Modoc Holding Tank (118,000 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-349	Stargo SX (48,846.87 ft^2)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-505	Stargo Holding Tank (108,900 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-508	Stargo Slurry Tank (500 gallons)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-121	Central EW (548 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	PM, PM_{10}, $PM_{2.5}$, H_2SO4, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
009-122	Southside EW (220 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	PM, PM_{10}, $PM_{2.5}$, H_2SO4, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-221	Stargo EW (324 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	PM, PM_{10}, $PM_{2.5}$, H_2SO4, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-422	Modoc Test Facility SX (1,418.72 ft^2)	Covers	VOC, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
009-423	Modoc Test Facility EW (771.2 ft^2)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	PM, PM_{10}, $PM_{2.5}$, H_2SO4	The control method is a pollution prevention technique (i.e., not a pollution control device).
Operation 010: Concrete Batch Plant				
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Unspecified Bin Vent	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
010-147	Pneumatic Transfer of Cement to the Cement Silo	Unspecified Bin Vent	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
Operation 014: Concentrate Leach Plant				
014-240	PLV Cooling Tower	Mist Eliminators	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
014-241	Oxygen Plant Cooling Tower 1	Mist Eliminators	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
014-348	Transfer of Flocculant to the Flocculant Bin	Combination of an Unspecified Bin Vent and Emissions Exhaust Inside a Building Under Positive Pressure	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
014-254	Transfer of Lime to the Lime Silo	Modu-Kleen Bin Vent	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	Modu-Kleen Bin Vent	PM, PM_{10}, $PM_{2.5}$	The control method is inherent process equipment used for product recovery (i.e., not a pollution control device).
Operation 017: Metcalf Concentrator				
017-327	Wet Screen Feed Bin to Wet Screens 1/2	Saturation	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations				
018-336	Combined Molybdenum Flotation	H_2S Scrubber System	PM, PM_{10}, $PM_{2.5}$, H_2S	The control device is used for health, safety, and industrial hygiene purposes (not to achieve compliance with an emission limitation or standard).

Table 18.2PSEUs Not Meeting 40 CFR 64.2(a)(1) and (2)

Process Number	Process/Emission Unit Description	Air Pollution Control Method	Pollutant Emitted	Why 40 CFR 64.2(a)(1) and (2) are Not Met
Operation 023: Tailings Operations				
023-418	Wind Erosion of Tailings	Use of a Wet Dam Construction Technique, Applying Water, Treating the Active Areas with Polymer and/or Magnesium Chloride, Hydro-seeding or Hydro-mulching, Limiting Vehicle Access and Speed, Covering, Utilizing Wind Breaks, Facilitating Encrustation, Maintaining the Inherent Moisture Content, and Wetting the Active Areas with Slurry	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).
AOS2: Concentrate Leach Plant Upgrades				
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	Mist Eliminators	PM, PM_{10}, $PM_{2.5}$, HAPs	The control method is a pollution prevention technique (i.e., not a pollution control device).

19 IDENTIFICATION OF CONFIDENTIAL INFORMATION

FMMI claims confidentiality of the design of the CLP as identified in process flow diagrams. This application does not contain the confidential process flow diagrams and is, therefore, appropriate for public review. The process flow diagrams of the CLP are provided to ADEQ and other appropriate regulatory agencies under a separate confidential and proprietary submittal.

The process flow diagrams of the CLP, if made public, would divulge trade secrets of FMMI as defined by A.R.S. §49-201. Processing of copper and molybdenum concentrate via pressure leaching has been developed by, and is intended for, the exclusive use of Freeport-McMoRan Inc. facilities. The CLP operations have been protected from public disclosure and efforts to maintain the operations as a trade secret will continue. There is no law that specifically requires the process flow diagrams to be disclosed to the public, and because FMMI has a substantial investment, in both time and money, into the development of the CLP operations, disclosure of the process flow diagrams is likely to cause substantial harm to FMMI's competitive position.

FMMI does not claim confidentiality of any of the remaining information presented in this application. All remaining information can be made available to the public.

APPENDIX A STANDARD CLASS I PERMIT APPLICATION FORM

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD CLASS I PERMIT APPLICATION FORM
(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to (Business license name of organization that is to receive permit):
   Freeport-McMoRan Morenci Inc.
2. Mailing Address: 4521 U.S. Highway 191
   City: Morenci State: Arizona ZIP: 85540
3. Name (or names) of Owners/Principals: Freeport-McMoRan Morenci Inc.
   Phone: 602-234-8100 Fax: 602-234-8337 Email: N/A
4. Name of Owner's Agent: N/A
   Phone: N/A Fax: N/A Email: N/A
5. Plant/Site Manager/Contact Person and Title: Brent Fletcher, Manager, Environmental Services
   Phone: 928-865-6484 Fax: 928-865-7810 Email: bfletche@fmi.com
6. Plant Site Name: Freeport-McMoRan Morenci Inc.
7. Plant Site Location Address: 4521 U.S. Highway 191
   City: Morenci County: Greenlee ZIP: 85540
   Indian Reservation (if applicable, which one): N/A
   Latitude/Longitude, Elevation: 33° 03' 54" N. Latitude/109° 20' 32" W. Longitude, 4,300 feet
   Section/Township/Range:
8. General Nature of Business: Open pit mining and processing.
9. Type of Organization:
   ■ Corporation ☐ Individual Owner ☐ Partnership ☐ Government Entity (Government Facility Code:)
   ☐ Other
10. Permit Application Basis: ☐ New Source ☐ Revision ■ Renewal of Existing Permit
    For renewal or modification, include existing permit number (and exp. date): #72683, 12/20/2023
    Date of Commencement of Construction or Modification: N/A
    Primary Standard Industrial Classification Code: 1021 (Copper Mining/Processing)
11. I certify that I have knowledge of the facts herein set forth, that the same are true, accurate, and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the Permit. I will present a certification of compliance to ADEQ no less than annually and more frequently if specified by ADEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.
    Signature of Responsible Official: RL for Mike Kridel
    Official Title of Signer: Sr. Vice President, Morenci
    Typed or Printed Name of Signer: Mike Kridel
    Date: 6-16-2023 Telephone Number: 928-865-6200

APPENDIX B EQUIPMENT LIST

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Operation 001: Mining Operations						
Dump Pocket Feed Hopper 2	NA	NA	NA	NA	NA	001-002
Dump Pocket Feed Hopper 3	NA	NA	NA	NA	NA	
Apron Feeder AF2	NA	NA	NA	NA	NA	001-187
In-Pit Crusher 2	7,500 tph	Traylor by Fuller	60" Type 'C'	87-2037-720-2	1988	
Apron Feeder AF3	7,200 tph	NA	96"W	NA	NA	001-249
In-Pit Crusher 3	6,750 tph	Metso	60-110 Gyratory Crusher	251-CRU-310	2009	
In-Pit Crusher 2 FFDC	17,900 dscfm	FARR	GS32	213052	2006	001-006
In-Pit Crusher 2	7,500 tph	Traylor by Fuller	60" Type 'C'	87-2037-720-2	1988	
Rock Hammer 2	NA	Allied	3418	710411	2008	
Discharge Conveyor DC2	7,500 tph	FMMI	637'L x 96"W	Custom Fabricated	1988	
In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	12,000 dscfm	FARR	GS 24/20	839043002	2008	001-250
In-Pit Crusher 3	6,750 tph	Metso	60-110 Gyratory Crusher	251-CRU-310	2009	
Rock Hammer 3	NA	NA	NA	NA	NA	
Feeder Belt FB3	6,750 tph	Continental	7200-96	251-FDA-301	2009	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Discharge Conveyor P11	7,200 tph	Continental	72”W	251-CVB-316	2009	001-250 (cont’d)
P11/P5 and P11/P12 FFDC	15,300 dscfm	FARR	GS-20/16	T 251-CDCD-340	2008	001-251
Discharge Conveyor P11	7,200 tph	Continental	72”W	251-CVB-316	2009	
Conveyor Belt P12	7,200 tph	Continental	72”W	251-CVB-346	2009	
Conveyor Belt P5	9,000 tph	FMMI	NA x 72”W	703490	1988	
Conveyor Belt P12	7,200 tph	Continental	72”W	251-CVB-346	2009	001-344
Conveyor Belt P10	7,000 tph	FMMI	4000’L x 54”W	Custom Fabricated 850302	2006	
P5/P6 FFDC	12,800 dscfm	FARR	GS-20/60	862022004	2009	001-015
Conveyor Belt P5	9,000 tph	FMMI	NA x 72”W	703490	1988	
Conveyor Belt P6	9,100 tph	FMMI	8,898’L x 60”W	703491	1988	
Conveyor Belt P6 (transfer to Mill IOS)	9,100 tph	FMMI	8,898’L x 60”W	703491	1988	001-016
DC2/P9 and P9/P10 FFDC	18,400 dscfm	FARR	GS-32	213053	2006	001-225
Discharge Conveyor DC2	7,500 tph	FMMI	637’L x 96”W	Custom Fabricated	1988	
Diverter Gate 2	NA	NA	NA	NA	NA	
Conveyor Belt P9	7,200 tph	FMMI	253’L x 72”W	Custom Fabricated 839009	2006	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt P10	7,000 tph	FMMI	4,000'L x 54"W	Custom Fabricated 850302	2006	001-225 (cont'd)
Conveyor Belt P10 (transfer to MFL IOS)	7,000 tph	FMMI	4,000'L x 54"W	Custom Fabricated 850302	2006	001-226
DC2/P5 FFDC	7,300 dscfm	FARR	GS-16	213054	2006	001-325
Discharge Conveyor DC2	7,500 tph	FMMI	637'L x 96"W	Custom Fabricated	1988	
Diverter Gate 2	NA	NA	NA	NA	NA	
Conveyor Belt P5	9,000 tph	FMMI	NA x 72"W	Custom Fabricated 703490	1988	
Portable Cleanup Conveyor	50 tph	NA	NA	NA	2010	001-323
Mill IOS/R1A FFDC	12,500 dscfm	FARR	GS36/30	A21007018	NA	001-299
Reclaim Feeder 1	2,000 tph	NICO	FD4486	FD911	1988	
Reclaim Feeder 2	2,000 tph	NICO	FD4486	253-FDA-201	1988	
Reclaim Feeder 3	2,000 tph	NICO	FD4486	253-FDA-301	1988	
Reclaim Feeder 4	2,000 tph	NICO	FD4486	253-FDA-401	1988	
Conveyor Belt R1A	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
Mill IOS/R1B FFDC	10,000 dscfm	FARR	GS-24/20	A21007017	NA	001-300
Reclaim Feeder 5	2,400 tph	NICO	FD4486	253-FDA-501	1988	
Reclaim Feeder 6	2,400 tph	NICO	FD4486	253-FDA-601	1988	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Reclaim Feeder 7	2,400 tph	NICO	FD4486	253-FDA-701	1988	001-300 (cont'd)
Conveyor Belt R1B	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
R1A and R1B/R7 FFDC	3,000 dscfm	FARR	GS-6	A21007019	2012	001-272
Conveyor Belt R1A	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
Conveyor Belt R1B	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
Conveyor Belt R7	5,500 tph	FMMI	1,162'L x 60"W	Custom Fabricated	1988	
R1A and R1B/R2 Bag Collector 1	3,100 dscfm	MikroPul	49S-8-20-TR-B	200077H8GA	2001	001-277
Conveyor Belt R1A	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
Conveyor Belt R1B	5,600 tph	FMMI	1,400'L x 60"W	Custom Fabricated	1988	
Conveyor Belt R2	5,538 tph	FMMI	249'L x 60"W	Custom Fabricated	1988	
R2/R11 FFDC	4,600 dscfm	FARR	GS6BV	A21007004	NA	001-278
Conveyor Belt R2	5,538 tph	FMMI	249'L x 60"W	Custom Fabricated	1988	
Conveyor Belt R11	5,538 tph	NA	501'L x 60"W	NA	NA	
MFL IOS/R8 FFDC	12,800 dscfm	FARR	GS-24	213056	2006	001-228
Apron Feeder 1	NA	NA	NA	NA	NA	
Apron Feeder 2	NA	NA	NA	NA	NA	
Conveyor Belt R8	6,000 tph	FMMI	2,000'L x 54"W	839018	2006	
R8/R9 FFDC	10,600 dscfm	FARR	GS-16	213057	2006	001-229

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt R8	6,000 tph	FMMI	2,000'L x 54"W	839018	2006	001-229 (cont'd)
Conveyor Belt R9	6,000 tph	FMMI	1,300'L x 54"W	839020	2006	
Operation 002: Morenci Concentrator						
R7/1A and 1B FFDC (vented inside)	10,000 cfm	FARR	GS16	212582	2006	002-022
Conveyor Belt R7	5,500 tph	FMMI	1,162'L x 60"W	Custom Fabricated	1988	
Coarse Ore Splitter	5,500 tph	FMMI	Custom Fabricated	Custom Fabricated	1941	
Conveyor Belt 1A	2,750 tph	FMMI	820'L x 54"W	Custom Fabricated	1988	
Conveyor Belt 1B	2,750 tph	FMMI	820'L x 54"W	Custom Fabricated	1988	
1A/COSB FFDC 1 (vented inside)	3,500 cfm	FARR	GS6BV	212564-1	2006	002-023
1A/COSB FFDC 2 (vented inside)	3,500 cfm	FARR	GS6BV	212564-2	2006	
1A/COSB FFDC 3 (vented inside)	3,500 cfm	FARR	GS6BV	212564-3	2006	
1A/COSB FFDC 4 (vented inside)	3,500 cfm	FARR	GS6BV	212564-4	2006	
1A/COSB FFDC 5 (vented inside)	3,500 cfm	FARR	GS6BV	212564-5	2006	
1A/COSB FFDC 6 (vented inside)	3,500 cfm	FARR	GS6BV	212564-6	2006	
1A/COSB FFDC 7 (vented inside)	3,500 cfm	FARR	GS6BV	212564-7	2006	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
1A/COSB FFDC 8 (vented inside)	3,500 cfm	FARR	GS6BV	212564-8	2006	002-023 (cont'd)
1A/COSB FFDC 9 (vented inside)	3,500 cfm	FARR	GS6BV	212564-9	2006	
Conveyor Belt 1A	2,750 tph	FMMI	820'L x 54"W	Custom Fabricated	1988	
Coarse Ore Storage Bin (COSB)	NA	NA	NA	NA	NA	
1B/COSB FFDC 1 (vented inside)	3,500 cfm	FARR	GS6BV	212564-10	2006	002-024
1B/COSB FFDC 2 (vented inside)	3,500 cfm	FARR	GS6BV	212564-11	2006	
1B/COSB FFDC 3 (vented inside)	3,500 cfm	FARR	GS6BV	212564-12	2006	
1B/COSB FFDC 4 (vented inside)	3,500 cfm	FARR	GS6BV	212564-13	2006	
1B/COSB FFDC 5 (vented inside)	3,500 cfm	FARR	GS6BV	212564-14	2006	
1B/COSB FFDC 6 (vented inside)	3,500 cfm	FARR	GS6BV	212564-15	2006	
1B/COSB FFDC 7 (vented inside)	3,500 cfm	FARR	GS6BV	212564-16	2006	
1B/COSB FFDC 8 (vented inside)	3,500 cfm	FARR	GS6BV	212564-17	2006	
1B/COSB FFDC 9 (vented inside)	3,500 cfm	FARR	GS6BV	212564-18	2006	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 1B	2,750 tph	FMMI	820'L x 54"W	Custom Fabricated	1988	002-024 (cont'd)
Coarse Ore Storage Bin (COSB)	NA	NA	NA	NA	NA	
COSB/AFA/2A FFDC (vented inside)	19,500 cfm	FARR	GS36	212565	2006	002-025
Apron Feeder A1	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder A2	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder A3	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder A4	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Conveyor Belt 2A	1,300 tph	FMMI	328'L x 60"W	Custom Fabricated	1941	
COSB/AFB/2B FFDC (vented inside)	19,500 cfm	FARR	GS36	212566	2006	002-026
Apron Feeder B1	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder B2	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder B3	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Apron Feeder B4	400 tph	Stevens Adams	25'L x 60"W	NA	1941	
Conveyor Belt 2B	1,300 tph	FMMI	328'L x 60"W	Custom Fabricated	1941	
COSB/AFC/2C FFDC (vented inside)	19,500 cfm	FARR	GS36	212567	2006	002-027
Apron Feeder C1	400 tph	Stevens Adams	25'L x 60"W	NA	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Apron Feeder C2	400 tph	Stevens Adams	25’L x 60”W	NA	1941	002-027 (cont’d)
Apron Feeder C3	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Apron Feeder C4	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Conveyor Belt 2C	1,300 tph	FMMI	328’L x 60”W	Custom Fabricated	1941	
COSB/AFD/2D FFDC (vented inside)	19,500 cfm	FARR	GS36	212568	2006	002-028
Apron Feeder D1	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Apron Feeder D2	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Apron Feeder D3	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Apron Feeder D4	400 tph	Stevens Adams	25’L x 60”W	NA	1941	
Conveyor Belt 2D	1,300 tph	FMMI	328’L x 60”W	Custom Fabricated	1941	
Fine Crushing Line A FFDC 1 (vented inside)	26,000 cfm	FARR	GS48	212569	2006	002-029
Conveyor Belt 2A	1,300 tph	FMMI	328’L x 60”W	Custom Fabricated	1941	
Vibrating Grizzly 1	1,300 tph	FMMI	6’L x 16’W	Custom Fabricated	1941	
Secondary Crusher 1	760 tph	Sandvik	CH 870	NA	Post-8/24/1982	
Shaker Screen 1AN	286 tph	WS Tyler	F-600 5’x10’	NA	1941	
Shaker Screen 1AS	364 tph	WS Tyler	F-600 5’x10’	NA	1941	
Shaker Screen 1BN	286 tph	WS Tyler	F-600 5’x10’	NA	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Shaker Screen 1BS	364 tph	WS Tyler	F-600 5'x10'	NA	1941	002-029 (cont'd)
Tertiary Crusher 1A	750 tph	Symons	7'	7144	1941	
Tertiary Crusher 1B	750 tph	Symons	7'	NA	1941	
Fine Crushing Line A FFDC 2 (vented inside)	13,000 cfm	FARR	GS48	NA	2006	002-033
Conveyor Belt 3	2,600 tph	FMMI	652'L x 54"W	Custom Fabricated	1941	
Fine Crushing Line B FFDC 1	23,700 dscfm	FARR	GS36	212507	2006	002-030
Conveyor Belt 2B	1,300 tph	FMMI	328'L x 60"W	Custom Fabricated	1941	
Vibrating Grizzly 2	1,300 tph	FMMI	6'L x 16'W	Custom Fabricated	1941	
Secondary Crusher 2	760 tph	Sandvik	CH 870	NA	Post-8/24/1982	
Shaker Screen 2AN	286 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 2AS	364 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 2BN	286 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 2BS	364 tph	WS Tyler	F-600 5'x10'	NA	1941	
Tertiary Crusher 2A	750 tph	Symons	7'	NA	1941	
Tertiary Crusher 2B	750 tph	Symons	7'	761E	1941	
Fine Crushing Line B FFDC 2 (vented inside)	12,000 cfm	FARR	NA	NA	2006	002-034
Conveyor Belt 3	2,600 tph	FMMI	652'L x 54"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Fine Crushing Line C FFDC 1	25,100 dscfm	FARR	GS36	212572	2006	002-031
Conveyor Belt 2C	1,300 tph	FMMI	328’L x 60”W	Custom Fabricated	1941	
Vibrating Grizzly 3	1,300 tph	FMMI	6’L x 16’W	Custom Fabricated	1941	
Secondary Crusher 3	760 tph	Sandvik	CH 870	NA	Post-8/24/1982	
Shaker Screen 3AN	286 tph	WS Tyler	F-600 5’x10’	NA	1941	
Shaker Screen 3AS	364 tph	WS Tyler	F-600 5’x10’	NA	1941	
Shaker Screen 3BN	286 tph	WS Tyler	F-600 5’x10’	NA	1941	
Shaker Screen 3BS	364 tph	WS Tyler	F-600 5’x10’	NA	1941	
Tertiary Crusher 3A	750 tph	Symons	7’	NA	1941	
Tertiary Crusher 3B	750 tph	Symons	7’	7263	1941	
Fine Crushing Line C to 3B to 3 FFDC	13,900 dscfm	FARR	GS24	212577	2006	002-035
Conveyor Belt 3B	1,300 tph	FMMI	96’L x 54”W	Custom Fabricated	1941	
Conveyor Belt 3	2,600 tph	FMMI	652’L x 54”W	Custom Fabricated	1941	
Fine Crushing Line C to 3B to 3A FFDC	16,500 dscfm	FARR	GS24	212578	2006	002-036
Conveyor Belt 3B	1,300 tph	FMMI	96’L x 54”W	Custom Fabricated	1941	
Conveyor Belt 3A	2,600 tph	FMMI	440’L x 54”W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Fine Crushing Line D FFDC 1	23,700 dscfm	FARR	GS48	705626	2006	002-032
Conveyor Belt 2D	1,300 tph	FMMI	328'L x 60"W	Custom Fabricated	1941	
Vibrating Grizzly 4	1,300 tph	FMMI	6'L x 16'W	Custom Fabricated	2011	
Secondary Crusher 4	760 tph	Sandvik	CH 870	NA	2012	
Shaker Screen 4AN	286 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 4AS	364 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 4BN	286 tph	WS Tyler	F-600 5'x10'	NA	1941	
Shaker Screen 4BS	364 tph	WS Tyler	F-600 5'x10'	NA	1941	
Tertiary Crusher 4A	750 tph	Symons	NA	NA	1941	
Tertiary Crusher 4B	750 tph	Symons	7'	7263	1941	
Fine Crushing Line D FFDC 2 (vented inside)	13,000 cfm	FARR	GS24	212574	2006	002-326
Conveyor Belt 3A	2,600 tph	FMMI	440'L x 54"W	Custom Fabricated	1941	
3/4/5 FFDC (vented inside)	17,700 cfm	FARR	GS36	NA	2006	002-038
Conveyor Belt 3	2,600 tph	FMMI	652'L x 54"W	Custom Fabricated	1941	
Conveyor Belt 4	2,600 tph	FMMI	147'L x 54"W	Custom Fabricated	1941	
Conveyor Belt 5	2,600 tph	FMMI	1,086'L x 54"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
3A/4A/5A FFDC (vented inside)	17,700 cfm	FARR	GS36	NA	2006	002-039
Conveyor Belt 3A	2,600 tph	FMMI	440’L x 54”W	Custom Fabricated	1941	
Conveyor Belt 4A	2,600 tph	FMMI	150’L x 54”W	Custom Fabricated	1941	
Conveyor Belt 5A	2,600 tph	FMMI	1,200’L x 54”W	Custom Fabricated	1941	
5A/FOSB FFDC 1 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-10	2006	002-040
5A/FOSB FFDC 2 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-11	2006	
5A/FOSB FFDC 3 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-12	2006	
5A/FOSB FFDC 4 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-13	2006	
5A/FOSB FFDC 5 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-14	2006	
5A/FOSB FFDC 6 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-15	2006	
5A/FOSB FFDC 7 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-16	2006	
5A/FOSB FFDC 8 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-17	2006	
5A/FOSB FFDC 9 (vented inside)	3,500 cfm	FARR	NA	DC059-FO-18	2006	
Conveyor Belt 5A	2,600 tph	FMMI	1,200’L x 54”W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Fine Ore Storage Bin (FOSB)	NA	NA	NA	NA	Pre-8/24/1982	002-040 (cont'd)
5/FOSB FFDC 1 (vented inside)	3,500 cfm	FARR	GS6BV	212581-1	2006	002-041
5/FOSB FFDC 2 (vented inside)	3,500 cfm	FARR	GS6BV	212581-2	2006	
5/FOSB FFDC 3 (vented inside)	3,500 cfm	FARR	GS6BV	212581-3	2006	
5/FOSB FFDC 4 (vented inside)	3,500 cfm	FARR	GS6BV	212581-4	2006	
5/FOSB FFDC 5 (vented inside)	3,500 cfm	FARR	GS6BV	212581-5	2006	
5/FOSB FFDC 6 (vented inside)	3,500 cfm	FARR	GS6BV	212581-6	2006	
5/FOSB FFDC 7 (vented inside)	3,500 cfm	FARR	GS6BV	212581-7	2006	
5/FOSB FFDC 8 (vented inside)	3,500 cfm	FARR	GS6BV	212581-8	2006	
5/FOSB FFDC 9 (vented inside)	3,500 cfm	FARR	GS6BV	212581-9	2006	
Conveyor Belt 5	2,600 tph	FMMI	1,086'L x 54"W	Custom Fabricated	1941	
Fine Ore Storage Bin (FOSB)	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 1E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-045

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Belt Feeder 1W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-045 (cont’d)
Conveyor 6-1	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-1	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 1	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 2E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-046
Belt Feeder 2W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-2	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-2	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 2	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 3E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-047
Belt Feeder 3W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-3	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-3	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 3	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 4E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-048
Belt Feeder 4W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-4	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-4	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Ball Mill 4	NA	NA	NA	NA	Pre-8/24/1982	002-048 (cont'd)
Belt Feeder 5E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-049
Belt Feeder 5W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-5	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-5	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 5	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 6E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-050
Belt Feeder 6W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-6	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-6	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 6	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 7E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-051
Belt Feeder 7W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-7	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-7	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 7	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 8E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-052
Belt Feeder 8W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor 6-8	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	002-052 (cont'd)
Conveyor 7-8	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 8	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 9E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-053
Belt Feeder 9W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-9	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-9	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 9	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 10E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-054
Belt Feeder 10W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-10	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-10	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 10	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 11E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-055
Belt Feeder 11W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-11	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-11	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 11	NA	NA	NA	NA	Pre-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Belt Feeder 12E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-056
Belt Feeder 12W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-12	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-12	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 12	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 13E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-057
Belt Feeder 13W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-13	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-13	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 13	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 14E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-058
Belt Feeder 14W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-14	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-14	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 14	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 15E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-059
Belt Feeder 15W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-15	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor 7-15	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	002-059 (cont'd)
Ball Mill 15	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 16E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-060
Belt Feeder 16W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-16	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-16	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 16	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 17E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-061
Belt Feeder 17W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-17	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-17	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 17	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 18E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-062
Belt Feeder 18W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-18	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-18	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 18	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 19E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-063

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Belt Feeder 19W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-063 (cont’d)
Conveyor 6-19	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-19	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 19	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 20E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-064
Belt Feeder 20W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-20	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-20	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 20	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 21E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-065
Belt Feeder 21W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-21	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-21	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	
Ball Mill 21	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 22E	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	002-066
Belt Feeder 22W	60 tph	FMMI	25’L x 60”W	Custom Fabricated	1941	
Conveyor 6-22	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1941	
Conveyor 7-22	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Ball Mill 22	NA	NA	NA	NA	Pre-8/24/1982	002-066 (cont'd)
Belt Feeder 23E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Belt Feeder 23W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-23	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	002-067
Conveyor 7-23	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 23	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 24E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Belt Feeder 24W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-24	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	002-068
Conveyor 7-24	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 24	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 25E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Belt Feeder 25W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-25	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	002-069
Conveyor 7-25	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 25	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 26E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-070
Belt Feeder 26W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor 6-26	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	002-070 (cont'd)
Conveyor 7-26	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 26	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 27E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-071
Belt Feeder 27W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-27	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-27	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 27	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 28	120 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-072
Conveyor 6-28	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-28	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 28	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 29E	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	002-073
Belt Feeder 29W	60 tph	FMMI	25'L x 60"W	Custom Fabricated	1941	
Conveyor 6-29	120 tph	FMMI	55.5'L x 24"W	Custom Fabricated	1941	
Conveyor 7-29	120 tph	FMMI	92'L x 20"W	Custom Fabricated	1941	
Ball Mill 29	NA	NA	NA	NA	Pre-8/24/1982	
Belt Feeder 30	120 tph	FMMI	25'L x 60"W	Custom Fabricated	1988	002-074

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor 6-30	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1988	002-074 (cont’d)
Conveyor 7-30	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1988	
Ball Mill 30	NA	NA	NA	NA	Post-8/24/1982	
Belt Feeder 31	120 tph	FMMI	25’L x 60”W	Custom Fabricated	1990	002-075
Conveyor 6-31	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1990	
Conveyor 7-31	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1990	
Ball Mill 31	NA	NA	NA	NA	Post-8/24/1982	
Belt Feeder 32	120 tph	FMMI	25’L x 60”W	Custom Fabricated	1995	002-076
Conveyor 6-32	120 tph	FMMI	55.5’L x 24”W	Custom Fabricated	1995	
Conveyor 7-32	120 tph	FMMI	92’L x 20”W	Custom Fabricated	1995	
Ball Mill 32	NA	NA	NA	NA	Post-8/24/1982	
Regrind Mill 1	NA	Texas Nuclear Technologies, Inc.	5211	B0128	8/21/2019	002-352
Regrind Mill 2	NA	NA	NA	NA	Pre-8/24/1982	
Regrind Mill 3	NA	NA	NA	NA	Pre-8/24/1982	
Regrind Mill 4	NA	NA	NA	NA	Pre-8/24/1982	
Regrind Mill 5	NA	NA	NA	NA	Pre-8/24/1982	
Regrind Mill 6	NA	NA	NA	NA	Pre-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Morenci Concentrator Bulk Flotation	NA	NA	NA	NA	NA	002-352 (cont'd)
Operation 003: MFL Fine Crushing Plant						
R9/R10 FFDC	3,000 dscfm	FARR	GS6BV	A21007026	2006	003-273
Conveyor Belt R9	6,000 tph	FMMI	1,300'L x 54"W	839020	2006	
Conveyor Belt R10	6,000 tph	NA	54"W	NA	NA	
R10/R3 FFDC	3,000 dscfm	FARR	GS6BV	A21007027	2012	003-330
Conveyor Belt R10	6,000 tph	NA	54"W	NA	NA	
Conveyor Belt R3	6,000 tph	FMMI	1,817'L x 60"W	Custom Fabricated	1988/2000	
R3/R4 Bag Collector 3	3,200 dscfm	MikroPul	49S-8-20-TR-B	200077H3GA	2000	003-079
Conveyor Belt R3	6,000 tph	FMMI	1,817'L x 60"W	Custom Fabricated	1988/2000	
Conveyor Belt R4	6,000 tph	FMMI	6,200'L x 60"W	Custom Fabricated	1988/2000	
R4/R5/R6 Bag Collector 4	8,300 dscfm	MikroPul	121S-8-20-TR-C	200077H9GA	2000	003-080
Conveyor Belt R4	6,000 tph	FMMI	6,200'L x 60"W	Custom Fabricated	1988/2000	
Conveyor Belt R5	6,000 tph	FMMI	403'L x 60"W	Custom Fabricated	1988/2000	
Conveyor Belt R6	6,000 tph	FMMI	351'L x 60"W	Custom Fabricated	1988/2000	
Scrubber 3C	35,400 dscfm	National Hydro-filter	850	13D25003C	1974	003-082
Conveyor Belt R6	6,000 tph	FMMI	351'L x 60"W	Custom Fabricated	1988/2000	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Metcalf Track Hopper Storage Bin (MTHSB)	NA	NA	NA	NA	NA	003-082 (cont'd)
FFDC 3A	38,000 dscfm	FARR	GS96/80	A21007020	2012	003-317
Apron Feeder 2C1	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2C2	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2C3	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2C4	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2B3	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2B4	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2B5	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2B6	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2A3	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2A4	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2A5	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Apron Feeder 2A6	750 tph	Link-Belt	67'L x 48"W	NA	1974	
Conveyor Belt 3C	2,000 tph	FMMI	210'L x 48"W	Custom Fabricated	1995	
Conveyor Belt 3B2	1,500 tph	FMMI	102'L x 48"W	Custom Fabricated	1974	
Conveyor Belt 3B3	1,500 tph	FMMI	102'L x 48"W	Custom Fabricated	1974	
Conveyor Belt 3A2	1,500 tph	FMMI	102'L x 48"W	Custom Fabricated	1974	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 3A3	1,500 tph	FMMI	102'L x 48"W	Custom Fabricated	1974	003-317 (cont'd)
MFL Conveyor Belt 4C	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1995	
MFL Conveyor Belt 4B	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1974	
MFL Conveyor Belt 4A	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1974	
FFDC 6A	31,100 dscfm	FARR	GS 60/50	A21007021	2012	003-301
MFL Conveyor Belt 4A	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1974	
Scalping Screen A	2,000 tph	W.S. Tyler	F1608S-0	NA	1995	
Secondary Crusher A	2,000 tph	Nordberg	7' Extra Heavy Duty	35245962	1974	
Secondary Screen A1	1,000 tph	C.E. Tyler	F-900	NA	1974	
Secondary Screen A2	1,000 tph	C.E. Tyler	F-1406-X	20350	1974	
Conveyor Belt 7	3,000 tph	FMMI	602'L x 60"W	Custom Fabricated	1974	
Conveyor Belt 8	3,000 tph	FMMI	606'L x 60"W	Custom Fabricated	1974	
FFDC 6B	27,500 dscfm	FARR	GS 60/50	A21007022	2012	003-302
MFL Conveyor Belt 4B	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1974	
Scalping Screen B	2,000 tph	W.S. Tyler	F1608S-0	NA	1995	
Secondary Crusher B	2,000 tph	Nordberg	7' Extra Heavy Duty	35245961	1974	
Secondary Screen B1	1,000 tph	C.E. Tyler	F-900	20737	1974	
Secondary Screen B2	1,000 tph	C.E. Tyler	F-1406-X	20353	1974	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 7	3,000 tph	FMMI	602'L x 60"W	Custom Fabricated	1974	003-302 (cont'd)
Conveyor Belt 8	3,000 tph	FMMI	606'L x 60"W	Custom Fabricated	1974	
FFDC 1	27,700 dscfm	FARR	GS 60/50	A21007024	2012	003-304
MFL Conveyor Belt 4C	2,000 tph	FMMI	645'L x 54"W	Custom Fabricated	1995	
Scalping Screen C	2,000 tph	W.S. Tyler	F-1600	NA	1995	
Secondary Crusher C	2,000 tph	Nordberg	7' Extra Heavy Duty	7632	1995	
Secondary Screen C1	1,000 tph	W.S. Tyler	F-900	NA	1995	
Secondary Screen C2	1,000 tph	W.S. Tyler	F-900	NA	1995	
Conveyor Belt 7	3,000 tph	FMMI	602'L x 60"W	Custom Fabricated	1974	
Conveyor Belt 8	3,000 tph	FMMI	606'L x 60"W	Custom Fabricated	1974	
Scrubber 5	41,400 dscfm	Ducon	A-33C, No. 102	C-89-0948-4	1989	003-089
Conveyor Belt 7	3,000 tph	FMMI	602'L x 60"W	Custom Fabricated	1974	
MFL Conveyor Belt 5	6,000 tph	FMMI	660'L x 60"W	Custom Fabricated	1974	
Conveyor Belt 8	3,000 tph	FMMI	606'L x 60"W	Custom Fabricated	1974	
MFL Conveyor Belt 11	3,000 tph	FMMI	89'L x 54"W	Custom Fabricated	1974	
FFDC 8	20,400 dscfm	FARR	GS 48/40	A21007023	2012	003-303
MFL Conveyor Belt 5	6,000 tph	FMMI	660'L x 60"W	Custom Fabricated	1974	
Conveyor Belt 6	6,000 tph	FMMI	1,292'L x 60"W	Custom Fabricated	1974	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Scrubber 4	45,900 dscfm	Ducon	A-33C, No. 114	C-89-0948-3	1989	003-088
Conveyor Belt 6	6,000 tph	FMMI	1,292'L x 60"W	Custom Fabricated	1974	
Tertiary Crushing Surge Bin (TCSB)	NA	NA	NA	NA	1995	
Belt Feeder 12-1	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-2	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-3	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-4	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-5	750 tph	NA	60"W	NA	1995	
Belt Feeder 12-6	750 tph	NA	60"W	NA	1995	
Tertiary Crushing Dust Collector (vented inside)	62,500 cfm	Filter Technology LTD	NA	071-DCD-03432	NA	003-306
Belt Feeder 12-1	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-2	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-3	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-4	750 tph	NA	60"W	NA	Pre-8/24/1982	
Belt Feeder 12-5	750 tph	NA	60"W	NA	1995	
Belt Feeder 12-6	750 tph	NA	60"W	NA	1995	
Tertiary Crusher C1	750 tph	Nordberg	7' Heavy Duty	NA	1974	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Tertiary Crusher C2	750 tph	Nordberg	7’ Heavy Duty	7731	1974	003-306 (cont’d)
Tertiary Crusher C3	750 tph	Nordberg	7’ Heavy Duty	35246337	1974	
Tertiary Crusher C4	750 tph	Nordberg	7’ Heavy Duty	35249618	1974	
Tertiary Crusher C5	750 tph	Nordberg	7’ Heavy Duty	7629	1995	
Tertiary Crusher C6	750 tph	Nordberg	7’ Heavy Duty	7551	1995	
Conveyor Belt 9 Dust Collector (vented inside)	62,500 cfm	Filter Technology LTD	NA	071-DCD-03433	NA	003-307
Conveyor Belt 9	6,000 tph	FMMI	485’L x 60”W	Custom Fabricated	1974	
Conveyor Belt 14	6,000 tph	FMMI	NA x 60”W	Custom Fabricated	1974	
14/15 FFDC	3,500 dscfm	FARR	GS6BV	A21007016	2012	003-320
Conveyor Belt 14	6,000 tph	FMMI	NA x 60”W	Custom Fabricated	1974	
Conveyor Belt 15	6,000 tph	NA	60"W	NA	Post-8/24/1982	
15/16 FFDC	3,100 dscfm	FARR	GS6BV	A21007025	2012	003-331
Conveyor Belt 15	6,000 tph	NA	60"W	NA	Post-8/24/1982	
Conveyor Belt 16	6,000 tph	NA	54"W	NA	Post-8/24/1982	
16/S11 FFDC	3,000 dscfm	FARR	GS8/6	A21007005	2012	003-309
Conveyor Belt 16	6,000 tph	NA	54"W	NA	Post-8/24/1982	
Conveyor Belt S11	6,000 tph	FMMI	54"W	Custom Fabricated	2000	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt S11 (transfer to FOIS)	6,000 tph	FMMI	54"W	Custom Fabricated	2000	003-199
Dust Suppression Fan	400 gpm	NA	NA	NA	NA	003-441
FOIS/A1A Bag Collector 7	11,200 dscfm	MikroPul	49S-8-20-TR-C	200077H10GA	2000	003-201
Belt Feeder SF1	3,750 tph	NA	72"W	NA	NA	
Belt Feeder SF2	3,750 tph	NA	72"W	NA	NA	
Conveyor Belt A1A	6,000 tph	FMMI	54"W	Custom Fabricated	2000	
A1A/A2A Bag Collector 8	3,200 dscfm	MikroPul	49S-8-20-TR-B	200077H5GA	2000	003-202
Conveyor Belt A1A	6,000 tph	FMMI	54"W	Custom Fabricated	2000	
Agglomeration Splitter	NA	NA	NA	NA	NA	
Conveyor Belt A2A	3,000 tph	FMMI	48"W	Custom Fabricated	2000	
A1A/A2C Bag Collector 9	3,200 dscfm	MikroPul	49S-8-20-TR-B	200077H17GA	2000	003-203
Conveyor Belt A1A	6,000 tph	FMMI	54"W	Custom Fabricated	2000	
Agglomeration Splitter	NA	NA	NA	NA	NA	
Conveyor Belt A2C	3,000 tph	FMMI	48"W	Custom Fabricated	2000	
Agglomerating Unit 1	3,000 tph	FMMI	NA	Custom Fabricated	2000	003-204
Agglomerating Unit 2	3,000 tph	FMMI	NA	Custom Fabricated	2000	003-205

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt S12	6,000 tph	FMMI	54"W	Custom Fabricated	2000	003-206
Overland Conveyor S26	6,000 tph	NA	54"W	NA	NA	003-385
Overland Conveyor S27	6,000 tph	NA	54"W	NA	NA	003-386
Overland Conveyor S28	6,000 tph	NA	54"W	NA	NA	003-387
Overland Conveyor S29 with Mobile Tripper	6,000 tph	NA	54"W	NA	NA	003-388
Portable Transfer Conveyor PT1	6,000 tph	NA	NA	NA	NA	003-394
Radial Stacker RS2	6,000 tph	NA	NA	NA	NA	003-396
Mobile Stacker Conveyor MBC	6,000 tph	NA	NA	NA	NA	003-397
Ramp Super Portable Conveyor RP1	6,000 tph	NA	NA	NA	NA	003-398
Ramp Super Portable Conveyor RP2	6,000 tph	NA	NA	NA	NA	003-399
Ramp Super Portable Conveyor RP3	6,000 tph	NA	NA	NA	NA	003-400
Ramp Super Portable Conveyor RP4	6,000 tph	NA	NA	NA	NA	003-401
Ramp Super Portable Conveyor RP5	6,000 tph	NA	NA	NA	NA	003-402
Ramp Super Portable Conveyor RP6	6,000 tph	NA	NA	NA	NA	003-403

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Ramp Super Portable Conveyor RP7	6,000 tph	NA	NA	NA	NA	003-404
Ramp Super Portable Conveyor RP8	6,000 tph	NA	NA	NA	NA	003-405
Ramp Super Portable Conveyor RP9	6,000 tph	NA	NA	NA	NA	003-406
Ramp Super Portable Conveyor RP10	6,000 tph	NA	NA	NA	NA	003-407
Ramp Super Portable Conveyor RP11	6,000 tph	NA	NA	NA	NA	003-408
Ramp Super Portable Conveyor RP12	6,000 tph	NA	NA	NA	NA	003-409
Ramp Super Portable Conveyor RP13	6,000 tph	NA	NA	NA	NA	003-410
Ramp Super Portable Conveyor RP14	6,000 tph	NA	NA	NA	NA	003-449
Ramp Super Portable Conveyor RP15	6,000 tph	NA	NA	NA	NA	003-450
Ramp Super Portable Conveyor RP16	6,000 tph	NA	NA	NA	NA	003-451
Ramp Super Portable Conveyor RP17	6,000 tph	NA	NA	NA	NA	003-452
Ramp Super Portable Conveyor RP18	6,000 tph	NA	NA	NA	NA	003-453

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Ramp Super Portable Conveyor RP19	6,000 tph	NA	NA	NA	NA	003-454
Horizontal Feed Conveyor HFC1	6,000 tph	NA	NA	NA	NA	003-411
Horizontal Conveyor HC1	6,000 tph	NA	NA	NA	NA	003-412
Radial Stacker RS3	6,000 tph	NA	NA	NA	NA	003-413
Horizontal Feed Conveyor HFC2	6,000 tph	NA	NA	NA	NA	003-455
Horizontal Conveyor HC2	6,000 tph	NA	NA	NA	NA	003-456
Radial Stacker RS4	6,000 tph	NA	NA	NA	NA	003-457
Operation 004: Lime Slaking Plants and Lime Transloading						
Lime Silo 1	7,400 ft3	ZMI/Portec	850 QL	NA	NA	004-231
Lime Silo 1 Dust Filter	1,175 cfm	Mac	DF-48	NA	NA	
Lime Transfer Conveyor	NA	NA	NA	NA	NA	
Lime Feeder 1	NA	NA	NA	NA	NA	
Lime Silo 2	7,400 ft3	ZMI/Portec	850 QL	NA	NA	004-232
Lime Silo 2 Dust Filter	1,175 cfm	Mac	DF-48	NA	NA	
Lime Transfer Conveyor	NA	NA	NA	NA	NA	
Lime Feeder 2	NA	NA	NA	NA	NA	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Lime Slaker 1	6.25 tph	ZMI/Portec	M-55	NA	NA	004-233
Lime Slaker 2	6.25 tph	ZMI/Portec	M-55	NA	NA	004-234
Metcalf Lime Silo	300 tons	NA	NA	NA	NA	004-275
Metcalf Lime Silo Bin Vent	NA	NA	NA	NA	NA	
Metcalf Lime Screw Feeder	12.5 tph	NA	NA	NA	NA	
Metcalf Lime Slaker	12.5 tph	NA	NA	NA	NA	004-276
Metcalf Lime Slaker Wet Scrubber	NA	NA	NA	NA	NA	
Metcalf Lime Grit Wet Screen	NA	NA	NA	NA	NA	004-440
Metcalf Lime Grit Screw Conveyor	NA	NA	NA	NA	NA	
Metcalf Lime Grit Collection Bin	NA	NA	NA	NA	NA	
Lime Transloading Conveyor	50 tph	TBD	TBD	TBD	TBD	004-445
Lime Transloading Dust Collector	TBD	TBD	TBD	TBD	TBD	
Lime Transloading Engine	47.6 hp	Yanmar	4TNV88C-DYEM	NA	Post-2014	004-446

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Operation 005: Metcalf Power Plant						
Natural Gas Turbine 1	204.89 MMBtu/hr	General Electric	Frame 5 Model M	214249	1970	005-108
Natural Gas Turbine 2	204.89 MMBtu/hr	General Electric	Frame 5 Model M	214250	1970	005-110
Diesel Black Start Turbine Engine 1	300 hp	Cummins	V8-300	768193	11/1/1970 (rebuilt in 1978)	005-432
Diesel Black Start Turbine Engine 2	300 hp	Cummins	V8-300	768194	11/1/1970	005-433
Operation 006: Copper Concentrate Processing Operations						
Filter Feed Trash Screen	500 tph	NA	NA	NA	Post-8/24/1982	006-391
Copper Filter Discharge Hopper 1	500 tph	NA	NA	NA	Post-8/24/1982	006-392
Copper Filter Discharge Hopper 2	500 tph	NA	NA	NA	Post-8/24/1982	
Copper Cake Discharge Feeder 1	500 tph	NA	NA	NA	Post-8/24/1982	
Copper Cake Discharge Feeder 2	500 tph	NA	NA	NA	Post-8/24/1982	
Final Concentrate Conveyor	500 tph	NA	NA	NA	Post-8/24/1982	
Conveyor Belt 10A South	500 tph	FMMI	NA x 24”W	Custom Fabricated	1941	006-044
Conveyor Belt 11	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 11A	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	006-044 (cont’d)
Conveyor Belt 11B	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	
Conveyor Belt 12	500 tph	FMMI	62’L x 24”W	Custom Fabricated	1941	
Conveyor Belt 13	500 tph	FMMI	134’L x 24”W	Custom Fabricated	1941	
Conveyor Belt BA	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	
Conveyor Belt BB	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	
Conveyor Belt BC	500 tph	FMMI	660’L x 24”W	Custom Fabricated	1941	
Copper Concentrate Storage Building	NA	NA	NA	NA	1941	006-335
~~Operation 009: Solution Extraction/Electrowinning Operations~~						
~~Central SX~~	~~21,175 ft²~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~1987~~	~~009-117~~
Central Backwash Bleed Tank	33,000 gallons	NA	16'D x 22'H	NA	NA	009-462
Central Barren Organic Tank	60,900 gallons	NA	24'D x 18'H	NA	NA	009-463
Central Bead Separator Tank	5,000 gallons	NA	10'D x 10.5'H	NA	NA	009-464
Central High Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-465
Central Low Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-466

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Central Gunk Tank 1	7,600 gallons	NA	10'D x 13'H	NA	NA	009-467
Central Gunk Tank 2	7,600 gallons	NA	10'D x 13'H	NA	NA	009-468
Central Gunk Tank 3	23,800 gallons	NA	13'D x 24'H	NA	NA	009-469
Central Organic Recovery Tank	306,700 gallons	NA	60'D x 15'H	NA	NA	009-470
Central Raffinate Pond	9,905 ft^2	NA	NA	NA	NA	009-471
~~Metcalf SX~~	~~40,585.41 ft^2~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~1987~~	~~009-118~~
Metcalf Barren Organic Tank	82,900 gallons	NA	28'D x 18'H	NA	NA	009-472
Metcalf High A Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-473
Metcalf High B Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-474
Metcalf Low A Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-475
Metcalf Low B Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-476
Metcalf SX-7 Diluent Tank	51,200 gallons	NA	22'D x 18'H	NA	NA	009-477
Metcalf Gunk Tank 1	15,200 gallons	NA	12'D x 18'H	NA	NA	009-478
Metcalf Gunk Tank 2	7,600 gallons	NA	10'D x 13'H	NA	NA	009-479
Metcalf Gunk Tank 3	23,100 gallons	NA	13'D x 24'H	NA	NA	009-480

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Metcalf Holding Tank	122,200 gallons	NA	34'D x 18'H	NA	NA	009-481
Metcalf Organic Recovery A Tank	302,500 gallons	NA	60'D x 15'H	NA	NA	009-482
Metcalf Organic Recovery B Tank	302,500 gallons	NA	60'D x 15'H	NA	NA	009-483
Metcalf Partially Loaded Organic Tank	122,200 gallons	NA	34'D x 18'H	NA	NA	009-484
Metcalf Raffinate Pond	10,236 ft^2	NA	NA	NA	NA	009-485
~~Modoc SX~~	~~88,229.16 ft^2~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~1992~~	~~009-119~~
Modoc Loaded Organic F Tank	81,400 gallons	NA	30'D x 16'H	NA	NA	009-486
Modoc Loaded Organic G Tank	81,400 gallons	NA	30'D x 16'H	NA	NA	009-487
Modoc High A Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-488
Modoc High B Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-489
Modoc Low A Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-490
Modoc Low B Decant Tank	4,700 gallons	NA	10'D x 8'H	NA	NA	009-491
Modoc SX-7 Diluent Tank	49,700 gallons	NA	22'D x 18'H	NA	NA	009-492
Modoc Gunk Tank 1	15,400 gallons	NA	13'D x 16'H	NA	NA	009-493

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Modoc Gunk Tank 2	7,600 gallons	NA	10'D x 13'H	NA	NA	009-494
Modoc Gunk Tank 3	21,700 gallons	NA	13'D x 22.75'H	NA	NA	009-495
Modoc Holding Tank	118,000 gallons	NA	36'D x 16'H	NA	NA	009-496
Modoc Organic Recovery A Tank	302,400 gallons	NA	60'D x 15'H	NA	NA	009-497
Modoc Organic Recovery B Tank	302,400 gallons	NA	60'D x 15'H	NA	NA	009-498
Modoc Raffinate Pond	15,678 ft^2	NA	NA	NA	NA	009-499
~~Stargo SX~~	~~48,846.87 ft^2~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~NA~~	~~009-349~~
Stargo Recovered Solution Tank	5,920 gallons	NA	12'D x 8'H	NA	NA	009-500
Stargo Gunk Tank 1	16,955 gallons	NA	15'D x 18'H	NA	NA	009-501
Stargo Gunk Tank 2	16,955 gallons	NA	15'D x 18'H	NA	NA	009-502
Stargo Gunk Tank 3	16,955 gallons	NA	15'D x 18'H	NA	NA	009-503
Stargo Loaded Organic Tank	98,515 gallons	NA	27'D x 23'H	NA	NA	009-504
Stargo Holding Tank	108,900 gallons	NA	29'D x 22'H	NA	NA	009-505
Stargo Stormwater Tank	772,190 gallons	NA	74'D x 24'H	NA	NA	009-506
Stargo Tricanter Feed Tank	250 gallons	NA	4'L x 4'W	NA	NA	009-507

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Stargo Slurry Tank	500 gallons	NA	5'D	NA	NA	009-508
~~Central EW~~	~~548 cells~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~1987~~	~~009-121~~
~~Southside EW~~	~~220 cells~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~1995~~	~~009-122~~
~~Stargo EW~~	~~324 cells~~	~~FMMI~~	~~Custom Fabricated~~	~~Custom Fabricated~~	~~2000~~	~~009-221~~
~~Small Industrial Natural Gas Boiler 1~~	~~17.56 MMBtu/hr~~	~~Cleaver Brooks~~	~~CB-700-500-125~~	~~94148~~	~~1995~~	~~009-123~~
~~Small Industrial Natural Gas Boiler 2~~	~~17.56 MMBtu/hr~~	~~Cleaver Brooks~~	~~CB-700-500-125~~	~~OLO97318~~	~~1998~~	~~009-184~~
~~Small Industrial Natural Gas Boiler 3~~	~~17.56 MMBtu/hr~~	~~Cleaver Brooks~~	~~CB-700-500-125~~	~~OLO97317~~	~~1998~~	~~009-185~~
~~Small Industrial Natural Gas Boiler 4~~	~~17.56 MMBtu/hr~~	~~NA~~	~~NA~~	~~NA~~	~~2000~~	~~009-222~~
~~Small Industrial Natural Gas Boiler 5~~	~~17.56 MMBtu/hr~~	~~NA~~	~~NA~~	~~NA~~	~~2000~~	~~009-223~~
~~Diesel Hot Water Pressure Cleaner 1~~	~~0.55 MMBtu/hr~~	~~North Star~~	~~157598~~	~~4K1BP1626 BF000501~~	~~2011~~	~~009-274~~
~~Diesel Hot Water Pressure Cleaner 2~~	~~0.55 MMBtu/hr~~	~~North Star~~	~~157598~~	~~4K1BP1626 BF000502~~	~~2011~~	~~009-347~~
~~Modoc Test Facility SX~~	~~1,418.72 ft²~~	~~CTI~~	~~NA~~	~~NA~~	~~1995~~	~~009-422~~
~~Modoc Test Facility EW~~	~~771.20 ft²~~	~~CTI~~	~~NA~~	~~NA~~	~~1995~~	~~009-423~~
~~A-Organic Tank (Modoc Test Facility)~~	~~3,333.38 gallons~~	~~IPP~~	~~8.18'D x 8.5'H~~	~~NA~~	~~1995~~	~~009-424~~
~~B-Organic Tank (Modoc Test Facility)~~	~~3,006.58 gallons~~	~~Southwest Fiberglass~~	~~8.18'D x 7.67'H~~	~~NA~~	~~2007~~	~~009-425~~

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
~~Diluent Tank (Modoc Test Facility)~~	~~1,266 gallons~~	~~IPP~~	~~6.0'D x 6.5'H~~	~~NA~~	~~1995~~	~~009-426~~
Operation 010: Concrete Batch Plant						
Feed Hopper	NA	Ross Company	12 Yard Boss VP-S/N	Boss-23	1994	010-144
Aggregate Conveyor Belt	NA	Ross Company	37’L x 30”W	NA	1994	010-145
Fly Ash Silo	52 tons	Ross Company	NA	NA	1994	010-146
Fly Ash Silo Bin Vent	900 scfm	Ross Company	3 CP 250 Vent	NA	1994	
Fly Ash Screw Conveyor	NA	Ross Company	9.83’L x 9”W	NA	1994	
Cement Silo	52 tons	Ross Company	NA	NA	1994	010-147
Cement Silo Bin Vent	900 scfm	Ross Company	3 CP 250 Vent	NA	1994	
Cement Screw Conveyor	NA	Ross Company	NA	NA	1994	
CBP Aggregate Conveyor Belt	NA	Ross Company	37’L x 30”W	NA	1994	010-148
Fly Ash Silo Screw Conveyor	NA	Ross Company	9.83’L x 9”W	NA	1994	
Cement Silo Screw Conveyor	NA	Ross Company	NA	NA	1994	
Weigh Hopper	100 yd3/hr	Ross Company	NA	NA	1994	
Propane Hot Water Heater 1	1.01 MMBtu/hr	Sioux Corp.	M-1	08-3126, 0809036	2008	010-270

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Propane Hot Water Heater 2	1.01 MMBtu/hr	Sioux Corp.	M-1	08-3136, 0802015	2008	010-271
Propane Hot Water Heater 3	1.01 MMBtu/hr	Sioux Corp.	M-1	13-3703	2013	010-310
Operation 011: Storage Tanks						
Diesel Tank D1	177,850 gallons	FMMI	31.25'D x 31'H	Custom Fabricated	Prior to 1984	011-150
Diesel Tank D2	200,434 gallons	FMMI	42.4'D x 31'H	Custom Fabricated	Prior to 1984	011-151
Diesel Tank D5	47,255 gallons	FMMI	20'D x 32'H	Custom Fabricated	Prior to 1984	011-154
Diesel Tank Pit 95	101,690 gallons	FMMI	27'D x 30'H	Custom Fabricated	Prior to 1984	011-161
Gasoline Tank G1	12,000 gallons	FMMI	9.00’D x 25’L	Custom Fabricated	Prior to 1984	011-155
Gasoline Tank G2	12,000 gallons	FMMI	9.00’D x 25’L	Custom Fabricated	Prior to 1984	011-156
Gasoline Tank G3	12,000 gallons	FMMI	9.00’D x 25’L	Custom Fabricated	Prior to 1984	011-157
Operation 013: Grizzly Operations						
Concentrate Grizzly	60 tph	FMMI	Custom Fabricated	Custom Fabricated	Prior to 1970	013-195
Construction Grizzly 1	500 tph	NA	NA	NA	NA	013-337
Construction Grizzly 2	500 tph	NA	NA	NA	NA	013-338
Construction Grizzly 3	500 tph	NA	NA	NA	NA	013-339
Stockpile Grizzly 1	500 tph	FMMI	Custom Fabricated	Custom Fabricated	2012	013-380
Stockpile Grizzly 2	500 tph	FMMI	Custom Fabricated	Custom Fabricated	2012	013-381

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Operation 014: Concentrate Leach Plant						
Natural Gas Startup Boiler	17.64 MMBtu/hr	NA	NA	NA	Post-06/09/1989	014-242
Pressure Leach Vessel 1	29.1 tph	NA	NA	NA	NA	014-239
Pressure Leach Vessel 2		NA	NA	NA	NA	
PLV 2-Stage Scrubber	NA	MikroPul Scrubber	Multi-Venturi	NA	2005	
PLV Cooling Tower	600,000 gph	NA	NA	NA	NA	014-240
Oxygen Plant Cooling Tower 1	309,000 gph	NA	NA	NA	NA	014-241
Flocculant Bin	0.5 tph	NA	NA	NA	NA	014-348
Flocculant Bin Vent	500 acfm	NA	NA	NA	NA	
Flocculant Feeder	0.5 tph	NA	NA	NA	NA	
Lime Silo	0.20 tph	Steel Structure, Inc.	NA	72493	2007	014-254
Lime Silo Bin Vent	NA	Modu-Kleen	Series 343-A	8000107	NA	
Super Sack Unloader	0.04 tph	NA	NA	NA	NA	014-253
Super Sack Unloader Bin Vent	NA	Modu-Kleen	Series 250	1098219	NA	
Operation 015: Diesel Emergency Engines						
GO ~~Diesel Emergency Generator GNO37A~~	~~809 hp engine~~	~~AB Volvo Penta~~	~~TAD1641GE~~	~~D16035683C3A~~	~~2008~~	~~015-262~~

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
~~Metcalf Concentrator Diesel Emergency Generator GNO38A~~	~~810 hp engine~~	~~AB Volvo Penta~~	~~21426900~~	~~D16077365C3A~~	~~01/2014~~	~~015-414~~
~~ETPS Diesel Emergency Generator GNO36A~~	~~324 hp engine~~	~~Cummins~~	~~QSB7-G5 NR3~~	~~73808100~~	~~2015~~	~~015-415~~
~~NTPS Diesel Emergency Generator GNO46A~~	~~220 hp engine~~	~~John Deere 6.8 PowerTech~~	~~6068HF275L~~	~~NA~~	~~2005~~	~~015-419~~
~~Central SX Diesel Emergency Generator GNO95A~~	~~66 hp engine~~	~~MQ Power (Engine ISUZU)~~	~~Engine BP-4LE2X~~	~~4LE2-828540~~	~~11/2019~~	~~015-421~~
~~Stargo MFL Emergency Diesel Pump Engine LS-234~~	~~225 hp~~	~~Caterpillar~~	~~CAT C7~~	~~JTF 16993~~	~~2013~~	~~015-429~~
~~Metcalf Diesel Fire Pump Engine~~	~~350 hp~~	~~John Deere~~	~~6090HFC47~~	~~RG6090 L119729~~	~~4/24/2014~~	~~015-434~~
~~Emergency Diesel Generator WWTP GNO61A~~	~~1,141 hp engine~~	~~Caterpillar~~	~~CAT C27~~	~~MJE04611~~	~~03/2017~~	~~015-439~~
~~Metcalf Clean Room Diesel Emergency Generator~~	~~69 hp engine~~	~~Cummins~~	~~C30 D5 (Engine 4BT3.3-G5)~~	~~B180316270~~	~~NA (Model Year 2017 engine)~~	~~015-442~~
~~Metcalf Mill Diesel Emergency Generator~~	~~539 hp engine~~	~~Caterpillar~~	~~CAT C13~~	~~NA~~	~~2023~~	~~015-461~~
Operation 017: Metcalf Concentrator						
Secondary Screen Feed Bin FFDC	6,800 dscfm	FARR	GS10BV	A21007006	2012	017-318

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt R11	5,538 tph	NA	501'L x 60"W	NA	NA	017-318 (cont'd)
B2 Secondary Crusher Discharge Conveyor	4,200 tph	NA	832'L x 60"W	NA	Post-8/24/1982	
Secondary Screen Feed Bin	1,000 tons	NA	NA	NA	Post-8/24/1982	
Secondary Screening FFDC 1	26,200 dscfm	FARR	GS72/60	A21007009A	2012	017-280
Secondary Screen Belt Feeder 1	4,160 tph	NA	NA	NA	Post-8/24/1982	
Secondary Screen 1	4,160 tph	Metso	Ellipti-Flow 4285	NA	Post-8/24/1982	
B1 Secondary Crusher Feed Conveyor	4,200 tph	NA	830'L x 60"W	NA	Post-8/24/1982	
B3 Crushed Ore A Conveyor	4,800 tph	NA	919'L x 54"W	NA	Post-8/24/1982	
Secondary Screening FFDC 2	25,900 dscfm	FARR	GS72/60	A21007009B	2012	017-281
Secondary Screen Belt Feeder 2	4,160 tph	NA	NA	NA	Post-8/24/1982	
Secondary Screen 2	4,160 tph	Metso	Ellipti-Flow 4285	NA	Post-8/24/1982	
B1 Secondary Crusher Feed Conveyor	4,200 tph	NA	830'L x 60"W	NA	Post-8/24/1982	
B3 Crushed Ore A Conveyor	4,800 tph	NA	919'L x 54"W	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Secondary Crusher Feed Bin FFDC	3,700 dscfm	FARR	GS6BV	A21007007	2012	017-319
B1 Secondary Crusher Feed Conveyor	4,200 tph	NA	830'L x 60"W	NA	Post-8/24/1982	
Secondary Crusher Feed Bin	1,000 tons	NA	NA	NA	Post-8/24/1982	
Secondary Crushing FFDC 1	8,800 dscfm	FARR	GS24/20	A21007008A	2012	017-283
Secondary Crusher Belt Feeder 1	1,829 tph	NA	NA	NA	Post-8/24/1982	
Metcalf Secondary Crusher 1	1,829 tph	Metso	MP-1250	NA	Post-8/24/1982	
B2 Secondary Crusher Discharge Conveyor	4,200 tph	NA	832'L x 60"W	NA	Post-8/24/1982	
Secondary Crushing FFDC 2	11,200 dscfm	FARR	GS24/20	A21007008B	2012	017-284
Secondary Crusher Belt Feeder 2	1,829 tph	NA	NA	NA	Post-8/24/1982	
Metcalf Secondary Crusher 2	1,829 tph	Metso	MP-1250	NA	Post-8/24/1982	
B2 Secondary Crusher Discharge Conveyor	4,200 tph	NA	832'L x 60"W	NA	Post-8/24/1982	
Crushed Ore A/B Conveyor Transfer Point FFDC	4,100 dscfm	FARR	NA	NA	NA	017-285

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
B3 Crushed Ore A Conveyor	4,800 tph	NA	919'L x 54"W	NA	Post-8/24/1982	017-285 (cont'd)
B4 Crushed Ore B Conveyor	4,800 tph	NA	2,346'L x 54"W	NA	Post-8/24/1982	
Crushed Ore B/Tripper Conveyor Transfer Point FFDC	20,400 dscfm	FARR	NA	NA	NA	017-286
B4 Crushed Ore B Conveyor	4,800 tph	NA	2,346'L x 54"W	NA	Post-8/24/1982	
B5 Crushed Ore Bin Tripper Conveyor	4,800 tph	NA	686'L x 54"W	NA	Post-8/24/1982	
Crushed Ore Bin FFDC 1	22,900 dscfm	FARR	GS48/40	A21007001	NA	017-287
B5 Crushed Ore Bin Tripper Conveyor	4,800 tph	NA	686'L x 54"W	NA	Post-8/24/1982	
Crushed Ore Bin A	NA	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 1	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 2	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 3	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 4	3,646 tph	NA	NA	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Crushed Ore Belt Feeder 5	3,646 tph	NA	NA	NA	Post-8/24/1982	017-287 (cont'd)
Crushed Ore Belt Feeder 6	3,646 tph	NA	NA	NA	Post-8/24/1982	
B6 Crushed Ore Feed Conveyor	7,800 tph	NA	715'L x 72"W	NA	Post-8/24/1982	
B7 Crushed Ore Feed Transfer Conveyor	7,800 tph	NA	276'L x 72"W	NA	Post-8/24/1982	
Crushed Ore Bin FFDC 2	20,000 dscfm	FARR	GS48/40	A21007002A	NA	017-288
B5 Crushed Ore Bin Tripper Conveyor	4,800 tph	NA	686'L x 54"W	NA	Post-8/24/1982	
Crushed Ore Bin B	NA	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 7	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 8	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 9	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 10	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 11	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 12	3,646 tph	NA	NA	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
B6 Crushed Ore Feed Conveyor	7,800 tph	NA	715'L x 72"W	NA	Post-8/24/1982	017-288 (cont'd)
Crushed Ore Bin FFDC 3	20,000 dscfm	FARR	GS48/40	A21007002B	NA	017-289
B5 Crushed Ore Bin Tripper Conveyor	4,800 tph	NA	686'L x 54"W	NA	Post-8/24/1982	
Crushed Ore Bin B	NA	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 13	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 14	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 15	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 16	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 17	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 18	3,646 tph	NA	NA	NA	Post-8/24/1982	
B6 Crushed Ore Feed Conveyor	7,800 tph	NA	715'L x 72"W	NA	Post-8/24/1982	
Crushed Ore Bin FFDC 4	20,000 dscfm	FARR	GS48/40	A21007002C	NA	017-290
B5 Crushed Ore Bin Tripper Conveyor	4,800 tph	NA	686'L x 54"W	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Crushed Ore Bin C	NA	NA	NA	NA	Post-8/24/1982	017-290 (cont'd)
Crushed Ore Belt Feeder 19	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 20	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 21	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 22	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 23	3,646 tph	NA	NA	NA	Post-8/24/1982	
Crushed Ore Belt Feeder 24	3,646 tph	NA	NA	NA	Post-8/24/1982	
B6 Crushed Ore Feed Conveyor	7,800 tph	NA	715'L x 72"W	NA	Post-8/24/1982	
Crushed Ore Transfers FFDC	10,200 dscfm	FARR	GS24/20	A21007012	NA	017-291
B7 Crushed Ore Feed Transfer Conveyor	7,800 tph	NA	276'L x 72"W	NA	Post-8/24/1982	
Crusher Surge Bin	NA	NA	NA	NA	Post-8/24/1982	
B8-A Crusher Belt Feeder	3,395 tph	NA	NA	NA	Post-8/24/1982	
B8-B Crusher Belt Feeder	3,395 tph	NA	NA	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
B9 Crusher Feed Conveyor	7,800 tph	NA	197'L x 96"W	NA	Post-8/24/1982	017-291 (cont'd)
Crusher Feed Hopper	NA	NA	NA	NA	Post-8/24/1982	
HRC/HPGR Crusher FFDC	10,000 dscfm	FARR	GS24/20	A21007013	NA	017-292
HRC/HPGR Crusher	7,300 tph	NA	NA	NA	Post-8/24/1982	
B10 Crusher Discharge Conveyor	7,800 tph	NA	751'L x 72"W	NA	Post-8/24/1982	
Wet Screen Feed FFDC	3,500 dscfm	FARR	GS6BV	A21007015	NA	017-294
B10 Crusher Discharge Conveyor	7,800 tph	NA	751'L x 72"W	NA	Post-8/24/1982	
Wet Screen Feed Bin	1,000 tons	NA	NA	NA	Post-8/24/1982	
B11-A Wet Screen Belt Feeder 1	3,395 tph	NA	NA	NA	Post-8/24/1982	017-327
B11-B Wet Screen Belt Feeder 2	3,395 tph	NA	NA	NA	Post-8/24/1982	
Wet Screen 1	3,395 tph	Metso	4285	NA	Post-8/24/1982	
Wet Screen 2	3,395 tph	Metso	4285	NA	Post-8/24/1982	
B12 Wet Screen Oversize Conveyor	3,900 tph	NA	820'L x 54"W	NA	Post-8/24/1982	
B13 Wet Screen Oversize Transfer Conveyor	3,900 tph	NA	227'L x 54"W	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
B14 Wet Screen Oversize Shuttle Conveyor	3,900 tph	NA	94'L x 54"W	NA	Post-8/24/1982	017-327 (cont'd)
Wet Screen Oversize Bin	NA	NA	NA	NA	Post-8/24/1982	
Wet Screen Oversize Belt Feeder 1	2,205 tph	NA	NA	NA	Post-8/24/1982	
Wet Screen Oversize Belt Feeder 2	2,205 tph	NA	NA	NA	Post-8/24/1982	
Wet Screen Oversize Belt Feeder 3	2,205 tph	NA	NA	NA	Post-8/24/1982	
Wet Screen Oversize Belt Feeder 4	2,205 tph	NA	NA	NA	Post-8/24/1982	
Wet Screen Oversize Belt Feeder 5	2,205 tph	NA	NA	NA	Post-8/24/1982	
Metcalf Ball Mill 1	3,420 tph	Metso	NA	NA	Post-8/24/1982	
Metcalf Ball Mill 2	3,420 tph	Metso	NA	NA	Post-8/24/1982	
Metcalf Regrind Mill 1	191 tph	Metso	VT-1000	NA	Post-8/24/1982	
Metcalf Regrind Mill 2	191 tph	Metso	VT-1000	NA	Post-8/24/1982	
Metcalf Concentrator Bulk Flotation	NA	NA	NA	NA	NA	
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations						
Trash Screen	375 tph	NA	NA	NA	Post-8/24/1982	018-333

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Molybdenum Filter Discharge Hopper	6.93 tph	NA	NA	NA	Post-8/24/1982	018-334
Molybdenum Filter Screw Conveyor	6.93 tph	NA	NA	NA	Post-8/24/1982	
Molybdenum Packaging	6.93 tph	NA	NA	NA	Post-8/24/1982	
Combined Molybdenum Flotation	NA	NA	NA	NA	NA	018-336
NaHS Storage Tank 1	NA	NA	NA	NA	NA	
NaHS Storage Tank 2	NA	NA	NA	NA	NA	
H_2S Scrubber System	18,000 acfm	NA	NA	NA	NA	
Operation 021: Propane and Natural Gas Emergency Engines						
~~Western King Site 1 Propane Emergency Generator GNO21A~~	~~12.65 hp engine~~	~~Generac~~	~~0052510 (GH-410)~~	~~4950968~~	~~2008, but pre-7/1/2008~~	~~021-367~~
~~Western King Site 2 Propane Emergency Generator GNO20A~~	~~97.70 hp engine~~	~~Cummins – Ford 6.8L V8~~	~~GGHE-1207588~~	~~F-120356169~~	~~6/22/2012~~	~~021-368~~
~~Engineering Yard Propane Emergency Generator GNO19A~~	~~97.70 hp engine~~	~~Cummins – Ford 6.8L V8~~	~~GGHE-1207560~~	~~F-120353966~~	~~6/21/2012~~	~~021-369~~
~~Hoopes Hill Site 2 Propane Emergency Generator GNO18A~~	~~97.70 hp engine~~	~~Cummins – Ford 6.8L V8~~	~~GGHE-1207560~~	~~F-120353965~~	~~6/21/2012~~	~~021-371~~

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
~~Silver Basin Site 2 Propane Emergency Generator GNO17A~~	~~97.70 hp engine~~	~~Cummins – Ford 6.8L V8~~	~~GGHE-1207560~~	~~F-120353964~~	~~6/21/2012~~	~~021-372~~
~~Flagpole Propane Emergency Generator GNO22A~~	~~36.14 hp engine~~	~~Generac~~	~~0062500 (GT-999)~~	~~8603892~~	~~12/1/2013~~	~~021-373~~
~~Hoopes Hill Site 1 Propane Emergency Generator GNO47A~~	~~12.65 hp engine~~	~~Generac~~	~~0052510 (GH-410)~~	~~4939161~~	~~1/1/2008~~	~~021-374~~
~~Garfield Connex Propane Emergency Generator GNO48A~~	~~12.65 hp engine~~	~~Generac~~	~~0052510 (GH-410)~~	~~4939206~~	~~12/15/2007~~	~~021-377~~
~~Mine Gate Guard Shack Propane Emergency Generator GNO26A~~	~~12.65 hp engine~~	~~Generac~~	~~0058821 (GH-410)~~	~~7093352~~	~~3/1/2012~~	~~021-417~~
~~GSC Propane Emergency Generator GNO23A~~	~~37 hp engine~~	~~Kohler~~	~~20RESAL~~	~~SGM323T69~~	~~11/29/2012~~	~~021-435~~
~~Metcalf Mine Office Propane Emergency Generator GNO24A~~	~~37 hp engine~~	~~Kohler~~	~~20RESAL~~	~~SGM323T7J~~	~~12/12/2012~~	~~021-436~~
~~Sunridge Propane Emergency Generator GNO85A~~	~~147 hp engine~~	~~CAT- Power Solutions International~~	~~5.7LNA~~	~~57L0012786~~	~~4/29/2019~~	~~021-447~~
~~GSC Natural Gas Emergency Generator~~	~~460 hp engine~~	~~Generac - CAT~~	~~DG300GC~~	~~CATDG300-CKJ200268~~	~~6/6/2022~~	~~021-509~~
~~Metcalf Mine Office Propane Emergency Generator GNO24B~~	~~147 hp engine~~	~~CAT- Power Solutions International~~	~~5.7LNA~~	~~57L0019475~~	~~6/29/2022~~	~~021-510~~

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Operation 022: Prill Bins						
Prill Bin 1	90 tons	Unknown	Unknown	Unknown	1972	022-393
Prill Bin 2	90 tons	Unknown	Unknown	Unknown	1972	
Prill Bin 3	90 tons	Unknown	Unknown	Unknown	1972	
Prill Bin 4	100 tons	Unknown	Bradley Metals	Unknown	2010	
Prill Bin 5	100 tons	Unknown	Bradley Metals	Unknown	2010	
Prill Bin 6	100 tons	Unknown	Bradley Metals	Unknown	2010	
Prill Bin 7	100 tons	Unknown	Bradley Metals	Unknown	2010	
Operation 024: Miscellaneous Fuel Burning Equipment						
Light Vehicle Propane Pressure Washer	0.318 MMBtu/hr	Landa	VNG4-3000C	11095719-100115	NA	024-420
Locomotive Area Machine Shop Natural Gas Parts Washer	0.504 MMBtu/hr	Landa	VNG4-4000	P0103-45523	NA	024-437
Natural Gas Small Space Heaters	20.25 MMBtu/hr	varies	varies	varies	varies	024-443
Natural Gas Small Boilers	5.95 MMBtu/hr	varies	varies	varies	varies	
Propane Small Space Heaters	4.21 MMBtu/hr	varies	varies	varies	varies	024-444
Propane Small Boilers	0.469 MMBtu/hr	varies	varies	varies	varies	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Operation 025: Diesel Non-Emergency Engines						
West Rail Cut Non-Emergency Diesel Pump Engine LS-233	173.8 hp	Caterpillar	CAT C6.6	6661 7909	4/21/2011	025-431
Non-Emergency Diesel S12/A1A Sump Pump Engine	74 hp	Deutz	TD-2.9L4	01223552	6/20/2022	025-448
AOS1: Morenci Concentrator Quaternary Crushing Operations						
Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	15,000 cfm	FARR	GS48	212573	2006	002-033 (AOS1)
Conveyor Belt 3 (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	12,000 cfm	FARR	NA	NA	2006	002-034 (AOS1)
Conveyor Belt 3 (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
Fine Crushing Line C to 3B to 3 FFDC (AOS1)	13,900 dscfm	FARR	GS24	212577	2006	002-035 (AOS1)
Conveyor Belt 3B (AOS1)	1,300 tph	FMMI	96'L x 54"W	Custom Fabricated	1941	
Conveyor Belt 3 (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
Fine Crushing Line C to 3B to 3A FFDC (AOS1)	16,500 dscfm	FARR	GS-24	212578	2006	002-036 (AOS1)
Conveyor Belt 3B (AOS1)	1,300 tph	FMMI	96'L x 54"W	Custom Fabricated	1941	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 3A (AOS1)	2,600 tph	FMMI	NA x 54”W	Custom Fabricated	1941	002-036 (AOS1) (cont’d)
Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	13,000 tph	FARR	GS24	212574	2006	002-326 (AOS1)
Conveyor Belt 3A (AOS1)	2,600 tph	FMMI	NA x 54”W	Custom Fabricated	1941	
West Transfer Points FFDC (AOS1)	16,900 dscfm	FARR	NA	NA	NA	002-311 (AOS1)
Conveyor Belt 3 (AOS1)	2,600 tph	FMMI	NA x 54”W	Custom Fabricated	1941	
West Proportioning Gate 1 (AOS1)	1,750 tph	NA	NA	NA	NA	
West RC Feed Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
West RC Product Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
West Proportioning Gate 2 (AOS1)	2,300 tph	NA	NA	NA	NA	
West Transfer Conveyor (AOS1)	1,750 tph	NA	NA	NA	Post-8/24/1982	
Conveyor Belt 4 (AOS1)	2,600 tph	FMMI	147’L x 54”W	Custom Fabricated	1941	
West Surge Bin FFDC (AOS1)	3,000 dscfm	FARR	NA	NA	NA	002-312 (AOS1)
West RC Feed Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
West Surge Bin (AOS1)	300 tph	NA	NA	NA	Post-8/24/1982	002-312 (AOS1) (cont'd)
West RC FFDC (AOS1)	9,300 dscfm	FARR	NA	NA	NA	002-313 (AOS1)
West RC Feeder (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
West Flop Gate (AOS1)	2,300 tph	NA	NA	NA	NA	
West RC Feed Bin (AOS1)	NA	NA	NA	NA	Post-8/24/1982	
West RC (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
West RC Product Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East Transfer Points FFDC (AOS1)	16,900 dscfm	FARR	NA	NA	NA	002-314 (AOS1)
Conveyor Belt 3A (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
East Proportioning Gate 1 (AOS1)	1,750 tph	NA	NA	NA	NA	
East RC Feed Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East RC Product Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East Proportioning Gate 2 (AOS1)	2,300 tph	NA	NA	NA	NA	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
East Transfer Conveyor (AOS1)	550 tph	NA	NA	NA	Post-8/24/1982	002-314 (AOS1) (cont'd)
Conveyor Belt 4A (AOS1)	1,750 tph	NA	NA	NA	Post-8/24/1982	
East Surge Bin FFDC (AOS1)	3,000 dscfm	FARR	NA	NA	NA	002-315 (AOS1)
East RC Feed Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East Surge Bin (AOS1)	300 tons	NA	NA	NA	Post-8/24/1982	
East RC FFDC (AOS1)	9,300 dscfm	FARR	NA	NA	NA	002-316 (AOS1)
East RC Feeder (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East Flop Gate (AOS1)	2,300 tph	NA	NA	NA	NA	
East RC Feed Bin (AOS1)	NA	NA	NA	NA	Post-8/24/1982	
East RC (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
East RC Product Conveyor (AOS1)	2,300 tph	NA	NA	NA	Post-8/24/1982	
3/4/5 FFDC (AOS1) (vented inside)	19,500 cfm	FARR	GS 36	212579	2006	002-038 (AOS1)
Conveyor Belt 3 (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
West Proportioning Gate 1 (AOS1)	1,750 tph	NA	NA	NA	NA	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
Conveyor Belt 4 (AOS1)	2,600 tph	FMMI	147'L x 54"W	Custom Fabricated	1941	002-038 (AOS1) (cont'd)
Conveyor Belt 5 (AOS1)	2,600 tph	FMMI	1,086'L x 54"W	Custom Fabricated	1941	
3A/4A/5A FFDC (AOS1) (vented inside)	19,500 cfm	FARR	GS 36	212580	2006	002-039 (AOS1)
Conveyor Belt 3A (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
East Proportioning Gate 1 (AOS1)	1,750 tph	NA	NA	NA	NA	
Conveyor Belt 4A (AOS1)	1,750 tph	NA	NA	NA	Post-8/24/1982	
Conveyor Belt 5A (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
5A/FOSB FFDC 1 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-10	2006	002-040 (AOS1)
5A/FOSB FFDC 2 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-11	2006	
5A/FOSB FFDC 3 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-12	2006	
5A/FOSB FFDC 4 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-13	2006	
5A/FOSB FFDC 5 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-14	2006	
5A/FOSB FFDC 6 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-15	2006	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
5A/FOSB FFDC 7 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-16	2006	002-040 (AOS1) (cont'd)
5A/FOSB FFDC 8 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-17	2006	
5A/FOSB FFDC 9 (AOS1) (vented inside)	3,500 cfm	FARR	GS6BV	212581-18	2006	
Conveyor Belt 5A (AOS1)	2,600 tph	FMMI	NA x 54"W	Custom Fabricated	1941	
Fine Ore Storage Bin (FOSB) (AOS1)	NA	NA	NA	NA	Pre-8/24/1982	
AOS2: Concentrate Leach Plant Upgrades						
Pressure Leach Vessel 1 (AOS2)	20 tph	NA	NA	NA	NA	014-458 (AOS2)
Vent Gas Cyclone 1 (AOS2)	NA	NA	NA	NA	NA	
Spray Condenser 1 (AOS2)	NA	NA	NA	NA	NA	
PLV Scrubber 1 (AOS2)	NA	NA	NA	NA	NA	
Pressure Leach Vessel 2 (AOS2)	20 tph	NA	NA	NA	NA	014-459 (AOS2)
Vent Gas Cyclone 2 (AOS2)	NA	NA	NA	NA	NA	
Spray Condenser 2 (AOS2)	NA	NA	NA	NA	NA	

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment/Process ID Number
PLV Scrubber 2 (AOS2)	NA	NA	NA	NA	NA	014-459 (AOS2) (cont'd)
Oxygen Plant Cooling Tower 2 (AOS2)	3,600 gpm	NA	NA	NA	NA	014-460 (AOS2)
AOS3: Primary Crushing and Overland Conveying Operations						
Crushers (AOS3)	NA	NA	NA	NA	NA	001-256 (AOS3)
Pollution Control Device for Crushers (AOS3)	NA	NA	NA	NA	NA	
Conveyor Belts (AOS3)	NA	NA	NA	NA	NA	
Pollution Control Device for Conveyor Belts (AOS3)	NA	NA	NA	NA	NA	

* Only includes equipment subject to permitting.

APPENDIX C EMISSION SOURCE FORM

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	**Name**	**Regulated Air Pollutant Name**	**lb/hr**	**tpy**	**Zone**	**East (Meters)**	**North (Meters)**	**Height Above Ground (feet)**	**Height Above Structure (feet)**	**Dia. (ft)**	**Vel. (fps)**	**Temp. (°F)**	**Length (ft)**	**Width (ft)**
Operation 001: Mining Operations														
001-004	Drilling	PM (w/ CPM)	455.00	137.26	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	455.00	137.26										
		PM_{10}	273.00	82.36										
		$PM_{2.5}$	50.56	15.25										
		Lead	1.80E-02	5.42E-03										
		Total HAPs [b]	1.03E-01	3.12E-02										
001-003	Blasting	PM (w/ CPM)	1,444.65	182.48	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1,444.65	182.48										
		PM_{10}	751.22	94.89										
		$PM_{2.5}$	43.34	5.47										
		CO	8,812.17	2,658.43										
		NO_X	390.26	117.73										
		SO_2	3.14	0.95										
		CO_2	88,184.47	26,603.24										
		CH_4	3.42	1.03										
		N_2O	0.67	0.20										
		CO_2e	88,470.76	26,689.61										
		Lead	5.43E-02	7.71E-03										
		Total HAPs [b]	5.68E-01	1.21E-01										
001-001a	Vehicle Travel on Unpaved Roads	PM (w/ CPM)	4,496.99	16,334.97	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	4,496.99	16,334.97										
		PM_{10}	1,155.51	4,197.31										
		$PM_{2.5}$	115.55	419.73										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-001a (cont'd)	Vehicle Travel on Unpaved Roads (cont'd)	Lead	7.60E-02	2.76E-01	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Total HAPs [b]	4.38E-01	1.59E+00										
001-001b	Dozer Operation	PM (w/ CPM)	338.24	1,481.48	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	338.24	1,481.48										
		PM_{10}	60.05	263.02										
		$PM_{2.5}$	35.51	155.56										
		Lead	3.95E-03	1.73E-02										
		Total HAPs [b]	2.28E-02	9.97E-02										
001-001c	Road Grader Operation	PM (w/ CPM)	61.44	269.11	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	61.44	269.11										
		PM_{10}	23.50	102.93										
		$PM_{2.5}$	1.90	8.34										
		Lead	1.55E-03	6.77E-03										
		Total HAPs [b]	8.91E-03	3.90E-02										
001-002a	Loading Ore into Haul Trucks	PM (w/ CPM)	102.23	373.14	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	102.23	373.14										
		PM_{10}	48.35	176.49										
		$PM_{2.5}$	7.32	26.73										
		Lead	3.18E-03	1.16E-02										
		Total HAPs [b]	1.83E-02	6.69E-02										
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	PM (w/ CPM)	2.65	11.60	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	2.65	11.60										
		PM_{10}	1.25	5.49										
		$PM_{2.5}$	0.19	0.83										
		Lead	9.52E-05	4.17E-04										
		Total HAPs [b]	1.86E-04	8.16E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Exit Data Dia. (ft)	Exit Data Vel. (fps)	Exit Data Temp. (°F)	Length (ft)	Width (ft)
001-002c	Haul Truck Unloading to Leaching/Storage Areas	PM (w/ CPM)	75.74	257.13	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	75.74	257.13										
		PM_{10}	35.82	121.61										
		$PM_{2.5}$	5.42	18.42										
		Lead	2.19E-03	7.43E-03										
		Total HAPs [b]	1.73E-02	5.87E-02										
001-187	Apron Feeder AF2 to In-Pit Crusher 2	PM (w/ CPM)	1.39	6.11	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.39	6.11										
		PM_{10}	0.66	2.89										
		$PM_{2.5}$	0.10	0.44										
		Lead	5.01E-05	2.19E-04										
		Total HAPs [b]	9.80E-05	4.29E-04										
001-249	Apron Feeder AF3 to In-Pit Crusher 3	PM (w/ CPM)	1.25	5.50	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.25	5.50										
		PM_{10}	0.59	2.60										
		$PM_{2.5}$	0.09	0.39										
		Lead	4.51E-05	1.98E-04										
		Total HAPs [b]	8.82E-05	3.86E-04										
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	PM (w/ CPM)	0.31	1.34	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.31	1.34										
		PM_{10}	0.15	0.67										
		$PM_{2.5}$	0.15	0.67										
		Lead	1.17E-05	5.11E-05										
		Total HAPs [b]	2.28E-05	9.99E-05										
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	PM (w/ CPM)	0.21	0.90	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.21	0.90										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-250 (cont'd)	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside) (cont'd)	PM_{10}	0.21	0.90	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.21	0.90										
		Lead	1.56E-05	6.85E-05										
		Total HAPs [b]	3.06E-05	1.34E-04										
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	PM (w/ CPM)	0.52	2.30	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.52	2.30										
		PM_{10}	0.52	2.30										
		$PM_{2.5}$	0.52	2.30										
		Lead	3.99E-05	1.75E-04										
		Total HAPs [b]	7.80E-05	3.42E-04										
001-344	Conveyor Belt P12 to Conveyor Belt P10	PM (w/ CPM)	0.15	0.65	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.15	0.65										
		PM_{10}	0.07	0.31										
		$PM_{2.5}$	0.01	0.05										
		Lead	5.36E-06	2.35E-05										
		Total HAPs [b]	1.05E-05	4.59E-05										
001-015	Processes Controlled by P5/P6 FFDC	PM (w/ CPM)	0.44	1.92	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.44	1.92										
		PM_{10}	0.44	1.92										
		$PM_{2.5}$	0.44	1.92										
		Lead	3.34E-05	1.46E-04										
		Total HAPs [b]	6.52E-05	2.86E-04										
001-016	Conveyor Belt P6 (transfer to Mill IOS)	PM (w/ CPM)	1.69	7.41	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.69	7.41										
		PM_{10}	0.80	3.50										
		$PM_{2.5}$	0.12	0.53										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-016 (cont'd)	Conveyor Belt P6 (transfer to Mill IOS) (cont'd)	Lead	6.08E-05	2.66E-04	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Total HAPs [b]	1.19E-04	5.21E-04										
001-017	Wind Erosion of Mill IOS	PM (w/ CPM)	1.46	6.40	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.46	6.40										
		PM_{10}	0.73	3.20										
		$PM_{2.5}$	0.11	0.48										
		Lead	5.55E-05	2.43E-04										
		Total HAPs [b]	1.09E-04	4.76E-04										
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	PM (w/ CPM)	0.32	1.38	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.32	1.38										
		PM_{10}	0.16	0.69										
		$PM_{2.5}$	0.16	0.69										
		Lead	1.20E-05	5.25E-05										
		Total HAPs [b]	2.34E-05	1.03E-04										
001-226	Conveyor Belt P10 (transfer to MFL IOS)	PM (w/ CPM)	1.30	5.70	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.30	5.70										
		PM_{10}	0.62	2.70										
		$PM_{2.5}$	0.09	0.41										
		Lead	4.68E-05	2.05E-04										
		Total HAPs [b]	9.15E-05	4.01E-04										
001-227	Wind Erosion of MFL IOS	PM (w/ CPM)	1.64	7.20	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.64	7.20										
		PM_{10}	0.82	3.60										
		$PM_{2.5}$	0.12	0.54										
		Lead	6.25E-05	2.74E-04										
		Total HAPs [b]	1.22E-04	5.35E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-325	Processes Controlled by DC2/P5 FFDC	PM (w/ CPM)	0.13	0.55	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.13	0.55										
		PM_{10}	0.06	0.27										
		$PM_{2.5}$	0.06	0.27										
		Lead	4.76E-06	2.08E-05										
		Total HAPs [b]	9.30E-06	4.07E-05										
001-299	Processes Controlled by Mill IOS/R1A FFDC	PM (w/ CPM)	0.43	1.88	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.43	1.88										
		PM_{10}	0.43	1.88										
		$PM_{2.5}$	0.43	1.88										
		Lead	3.26E-05	1.43E-04										
		Total HAPs [b]	6.37E-05	2.79E-04										
001-300	Processes Controlled by Mill IOS/R1B FFDC	PM (w/ CPM)	0.34	1.50	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.34	1.50										
		PM_{10}	0.34	1.50										
		$PM_{2.5}$	0.34	1.50										
		Lead	2.61E-05	1.14E-04										
		Total HAPs [b]	5.10E-05	2.23E-04										
001-272	Processes Controlled by R1A and R1B/R7 FFDC	PM (w/ CPM)	0.10	0.45	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.10	0.45										
		PM_{10}	0.10	0.45										
		$PM_{2.5}$	0.10	0.45										
		Lead	7.82E-06	3.42E-05										
		Total HAPs [b]	1.37E-05	5.98E-05										
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	PM (w/ CPM)	0.19	0.81	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.19	0.81										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-277 (cont'd)	Processes Controlled by R1A and R1B/R2 Bag Collector 1 (cont'd)	PM_{10}	0.19	0.81	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.19	0.81										
		Lead	1.41E-05	6.19E-05										
		Total HAPs [b]	3.06E-05	1.34E-04										
001-278	Processes Controlled by R2/R11 FFDC	PM (w/ CPM)	0.16	0.69	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.16	0.69										
		PM_{10}	0.16	0.69										
		$PM_{2.5}$	0.16	0.69										
		Lead	1.20E-05	5.25E-05										
		Total HAPs [b]	2.60E-05	1.14E-04										
001-228	Processes Controlled by MFL IOS/R8 FFDC	PM (w/ CPM)	0.22	0.96	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.22	0.96										
		PM_{10}	0.11	0.48										
		$PM_{2.5}$	0.11	0.48										
		Lead	8.34E-06	3.65E-05										
		Total HAPs [b]	1.63E-05	7.14E-05										
001-229	Processes Controlled by R8/R9 FFDC	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										
		$PM_{2.5}$	0.09	0.40										
		Lead	6.91E-06	3.02E-05										
		Total HAPs [b]	1.35E-05	5.91E-05										
001-323a	Loading to the Portable Cleanup Conveyor	PM (w/ CPM)	0.09	0.41	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.09	0.41										
		PM_{10}	0.04	0.19										
		$PM_{2.5}$	0.007	0.03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
001-323a (cont'd)	Loading to the Portable Cleanup Conveyor (cont'd)	Lead	3.34E-06	1.46E-05	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Total HAPs [b]	6.53E-06	2.86E-05										
001-323b	Unloading from the Portable Cleanup Conveyor	PM (w/ CPM)	0.09	0.41	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.09	0.41										
		PM_{10}	0.04	0.19										
		$PM_{2.5}$	0.007	0.03										
		Lead	3.34E-06	1.46E-05										
		Total HAPs [b]	6.53E-06	2.86E-05										
Operation 002: Morenci Concentrator														
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	PM (w/ CPM)	0.41	1.78	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.41	1.78										
		PM_{10}	0.20	0.89										
		$PM_{2.5}$	0.20	0.89										
		Lead	1.54E-05	6.76E-05										
		Total HAPs [b]	2.70E-05	1.18E-04										
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	PM (w/ CPM)	0.43	1.88	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.43	1.88										
		PM_{10}	0.22	0.94										
		$PM_{2.5}$	0.22	0.94										
		Lead	1.64E-05	7.16E-05										
		Total HAPs [b]	2.86E-05	1.25E-04										
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	PM (w/ CPM)	0.24	1.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.24	1.04										
		PM_{10}	0.12	0.52										
		$PM_{2.5}$	0.12	0.52										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
002-035 (cont'd)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (cont'd)	Lead	9.05E-06	3.97E-05	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	1.58E-05	6.93E-05										
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	PM (w/ CPM)	0.28	1.24	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.28	1.24										
		PM_{10}	0.14	0.62										
		$PM_{2.5}$	0.14	0.62										
		Lead	1.07E-05	4.71E-05										
		Total HAPs [b]	1.88E-05	8.22E-05										
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	PM (w/ CPM)	0.41	1.78	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.41	1.78										
		PM_{10}	0.20	0.89										
		$PM_{2.5}$	0.20	0.89										
		Lead	1.54E-05	6.76E-05										
		Total HAPs [b]	2.70E-05	1.18E-04										
002-352	Morenci Concentrator Bulk Flotation	VOC	0.15	0.64	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	8.68E-03	3.80E-02										
		Total HAPs [b]	1.28E-02	5.61E-02										
Operation 003: MFL Fine Crushing Plant														
003-273	Processes Controlled by R9/R10 FFDC	PM (w/ CPM)	0.05	0.23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.05	0.23										
		PM_{10}	0.03	0.11										
		$PM_{2.5}$	0.03	0.11										
		Lead	1.95E-06	8.56E-06										
		Total HAPs [b]	3.82E-06	1.67E-05										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
003-330	Processes Controlled by R10/R3 FFDC	PM (w/ CPM)	0.10	0.45	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.10	0.45										
		PM_{10}	0.10	0.45										
		$PM_{2.5}$	0.10	0.45										
		Lead	7.82E-06	3.42E-05										
		Total HAPs [b]	1.53E-05	6.70E-05										
003-079	Processes Controlled by R3/R4 Bag Collector 3	PM (w/ CPM)	0.19	0.84	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.19	0.84										
		PM_{10}	0.19	0.84										
		$PM_{2.5}$	0.19	0.84										
		Lead	1.46E-05	6.39E-05										
		Total HAPs [b]	2.85E-05	1.25E-04										
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	PM (w/ CPM)	0.50	2.18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.50	2.18										
		PM_{10}	0.50	2.18										
		$PM_{2.5}$	0.50	2.18										
		Lead	3.78E-05	1.66E-04										
		Total HAPs [b]	7.40E-05	3.24E-04										
003-082	Processes Controlled by Scrubber 3C	PM (w/ CPM)	3.03	13.29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	3.03	13.29										
		PM_{10}	3.03	13.29										
		$PM_{2.5}$	3.03	13.29										
		Lead	2.31E-04	1.01E-03										
		Total HAPs [b]	4.51E-04	1.98E-03										
003-317	Processes Controlled by FFDC 3A	PM (w/ CPM)	1.30	5.71	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.30	5.71										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
003-317 (cont'd)	Processes Controlled by FFDC 3A (cont'd)	PM_{10}	1.30	5.71	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	1.30	5.71										
		Lead	9.90E-05	4.34E-04										
		Total HAPs [b]	1.94E-04	8.48E-04										
003-301	Processes Controlled by FFDC 6A	PM (w/ CPM)	1.33	5.84	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.33	5.84										
		PM_{10}	1.33	5.84										
		$PM_{2.5}$	1.33	5.84										
		Lead	1.01E-04	4.44E-04										
		Total HAPs [b]	1.98E-04	8.68E-04										
003-302	Processes Controlled by FFDC 6B	PM (w/ CPM)	1.18	5.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.18	5.16										
		PM_{10}	1.18	5.16										
		$PM_{2.5}$	1.18	5.16										
		Lead	8.96E-05	3.92E-04										
		Total HAPs [b]	1.75E-04	7.67E-04										
003-304	Processes Controlled by FFDC 1	PM (w/ CPM)	1.19	5.20	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.19	5.20										
		PM_{10}	1.19	5.20										
		$PM_{2.5}$	1.19	5.20										
		Lead	9.02E-05	3.95E-04										
		Total HAPs [b]	1.76E-04	7.73E-04										
003-089	Processes Controlled by Scrubber 5	PM (w/ CPM)	3.55	15.54	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	3.55	15.54										
		PM_{10}	3.55	15.54										
		$PM_{2.5}$	3.55	15.54										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
003-089 (cont'd)	Processes Controlled by Scrubber 5 (cont'd)	Lead	2.70E-04	1.18E-03	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	5.27E-04	2.31E-03										
003-303	Processes Controlled by FFDC 8	PM (w/ CPM)	0.87	3.83	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.87	3.83										
		PM_{10}	0.87	3.83										
		$PM_{2.5}$	0.87	3.83										
		Lead	6.64E-05	2.91E-04										
		Total HAPs [b]	1.30E-04	5.69E-04										
003-088	Processes Controlled by Scrubber 4	PM (w/ CPM)	3.93	17.23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	3.93	17.23										
		PM_{10}	3.93	17.23										
		$PM_{2.5}$	3.93	17.23										
		Lead	2.99E-04	1.31E-03										
		Total HAPs [b]	5.85E-04	2.56E-03										
003-320	Processes Controlled by 14/15 FFDC	PM (w/ CPM)	0.12	0.53	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.12	0.53										
		PM_{10}	0.12	0.53										
		$PM_{2.5}$	0.12	0.53										
		Lead	9.12E-06	3.99E-05										
		Total HAPs [b]	1.78E-05	7.81E-05										
003-331	Processes Controlled by 15/16 FFDC	PM (w/ CPM)	0.11	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.11	0.47										
		PM_{10}	0.11	0.47										
		$PM_{2.5}$	0.11	0.47										
		Lead	8.08E-06	3.54E-05										
		Total HAPs [b]	1.58E-05	6.92E-05										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
003-309	Processes Controlled by 16/S11 FFDC	PM (w/ CPM)	0.10	0.45	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.10	0.45										
		PM_{10}	0.10	0.45										
		$PM_{2.5}$	0.10	0.45										
		Lead	7.82E-06	3.42E-05										
		Total HAPs [b]	1.53E-05	6.70E-05										
003-199	Conveyor Belt S11 (transfer to FOIS)	PM (w/ CPM)	1.12	4.88	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.12	4.88										
		PM_{10}	0.53	2.31										
		$PM_{2.5}$	0.08	0.35										
		Lead	4.01E-05	1.76E-04										
		Total HAPs [b]	7.84E-05	3.43E-04										
003-200	Wind Erosion of the FOIS	PM (w/ CPM)	0.74	3.24	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.74	3.24										
		PM_{10}	0.37	1.62										
		$PM_{2.5}$	0.06	0.24										
		Lead	2.81E-05	1.23E-04										
		Total HAPs [b]	5.50E-05	2.41E-04										
003-441	Dust Suppression Fan	PM (w/ CPM)	0.04	0.19	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.04	0.19										
		PM_{10}	0.04	0.19										
		$PM_{2.5}$	0.04	0.19										
		Total HAPs [b]	2.03E-09	8.89E-09										
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	PM (w/ CPM)	0.67	2.94	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.67	2.94										
		PM_{10}	0.67	2.94										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
003-201 (cont'd)	Processes Controlled by FOIS/A1A Bag Collector 7 (cont'd)	$PM_{2.5}$	0.67	2.94	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Lead	5.11E-05	2.24E-04										
		Total HAPs [b]	9.99E-05	4.37E-04										
003-202	Processes Controlled by A1A/A2A Bag Collector 8	PM (w/ CPM)	0.19	0.84	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.19	0.84										
		PM_{10}	0.19	0.84										
		$PM_{2.5}$	0.19	0.84										
		Lead	1.46E-05	6.39E-05										
		Total HAPs [b]	2.85E-05	1.25E-04										
003-203	Processes Controlled by A1A/A2C Bag Collector 9	PM (w/ CPM)	0.19	0.84	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.19	0.84										
		PM_{10}	0.19	0.84										
		$PM_{2.5}$	0.19	0.84										
		Lead	1.46E-05	6.39E-05										
		Total HAPs [b]	2.85E-05	1.25E-04										
003-204	Agglomerating Unit 1	CO	0.0002	0.0004	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		NO_X	0.03	0.05										
		SO_2	0.26	0.41										
		CO_2	58.22	94.81										
003-205	Agglomerating Unit 2	CO	0.0002	0.0004	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		NO_X	0.03	0.05										
		SO_2	0.26	0.41										
		CO_2	58.22	94.81										
Operation 004: Lime Slaking Plants and Lime Transloading														
004-231	Transfer of Quicklime to the Lime Silo 1	PM (w/ CPM)	1.53	1.67	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.53	1.67										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
004-231 (cont'd)	Transfer of Quicklime to the Lime Silo 1 (cont'd)	PM_{10}	0.53	0.58	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.08	0.09										
004-232	Transfer of Quicklime to the Lime Silo 2	PM (w/ CPM)	1.53	1.67	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.53	1.67										
		PM_{10}	0.53	0.58										
		$PM_{2.5}$	0.08	0.09										
004-233	Lime Slaker 1	PM (w/ CPM)	0.43	1.86	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.36	1.56										
		PM_{10}	0.43	1.86										
		$PM_{2.5}$	0.43	1.86										
004-234	Lime Slaker 2	PM (w/ CPM)	0.43	1.86	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.36	1.56										
		PM_{10}	0.43	1.86										
		$PM_{2.5}$	0.43	1.86										
004-275	Transfer of Quicklime to Metcalf Lime Silo	PM (w/ CPM)	0.02	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.02	0.03										
		PM_{10}	0.005	0.01										
		$PM_{2.5}$	0.0008	0.002										
004-276	Metcalf Lime Slaker	PM (w/ CPM)	0.02	0.07	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.06										
		PM_{10}	0.02	0.07										
		$PM_{2.5}$	0.02	0.07										
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	PM (w/ CPM)	0.31	0.67	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.31	0.67										
		PM_{10}	0.11	0.24										
		$PM_{2.5}$	0.02	0.04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	PM (w/ CPM)	0.31	0.67	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.31	0.67										
		PM_{10}	0.11	0.24										
		$PM_{2.5}$	0.02	0.04										
004-446	Lime Transloading Engine (47.6 hp engine)	PM (w/ CPM)	0.002	0.01	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.002	0.009										
		PM_{10}	0.002	0.01										
		$PM_{2.5}$	0.002	0.01										
		CO	0.43	1.89										
		NO_X	0.35	1.52										
		SO_2	0.0005	0.002										
		VOC	0.02	0.09										
		CO_2	54.33	237.96										
		CH_4	0.002	0.01										
		N_2O	0.0004	0.002										
		CO_2e	54.52	238.78										
		Greatest Single HAP (Xylenes)	9.50E-05	4.16E-04										
		Total HAPs [b]	1.29E-03	5.65E-03										
Operation 005: Metcalf Power Plant														
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	PM (w/ CPM)	1.35	0.89	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.39	0.26										
		PM_{10}	1.35	0.89										
		$PM_{2.5}$	1.35	0.89										
		CO	16.80	11.01										
		NO_X	120.89	79.23										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
005-108 (cont'd)	Natural Gas Turbine 1 (204.89 MMBtu/hr) (cont'd)	SO_2	0.15	0.10	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		VOC	0.43	0.28										
		CO_2	23,967.47	15,708.29										
		CH_4	0.45	0.30										
		N_2O	0.05	0.03										
		CO_2e	23,992.23	15,724.52										
		Greatest Single HAP (Xylenes)	1.31E-02	8.59E-03										
		Total HAPs [b]	2.10E-01	1.38E-01										
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	PM (w/ CPM)	1.35	0.89	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.39	0.26										
		PM_{10}	1.35	0.89										
		$PM_{2.5}$	1.35	0.89										
		CO	16.80	11.01										
		NO_X	120.89	79.23										
		SO_2	0.15	0.10										
		VOC	0.43	0.28										
		CO_2	23,967.47	15,708.29										
		CH_4	0.45	0.30										
		N_2O	0.05	0.03										
		CO_2e	23,992.23	15,724.52										
		Greatest Single HAP (Xylenes)	1.31E-02	8.59E-03										
		Total HAPs [b]	2.10E-01	1.38E-01										
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	PM (w/ CPM)	0.66	0.17	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.59	0.15										
		PM_{10}	0.66	0.17										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
005-432 (cont'd)	Diesel Black Start Turbine Engine 1 (300 hp engine) (cont'd)	$PM_{2.5}$	0.66	0.17	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO	2.00	0.50										
		NO_X	9.30	2.33										
		SO_2	0.003	0.0008										
		VOC	0.75	0.19										
		CO_2	342.41	85.60										
		CH_4	0.01	0.003										
		N_2O	0.003	0.0007										
		CO_2e	343.59	85.90										
		Greatest Single HAP (Xylenes)	5.99E-04	1.50E-04										
		Total HAPs [b]	8.13E-03	2.03E-03										
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	PM (w/ CPM)	0.66	0.17	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.59	0.15										
		PM_{10}	0.66	0.17										
		$PM_{2.5}$	0.66	0.17										
		CO	2.00	0.50										
		NO_X	9.30	2.33										
		SO_2	0.003	0.0008										
		VOC	0.75	0.19										
		CO_2	342.41	85.60										
		CH_4	0.01	0.003										
		N_2O	0.003	0.0007										
		CO_2e	343.59	85.90										
		Greatest Single HAP (Xylenes)	5.99E-04	1.50E-04										
		Total HAPs [b]	8.13E-03	2.03E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
Operation 006: Copper Concentrate Processing Operations														
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.00	0.01										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-044d	Conveyor Belt BA to Conveyor Belt BB	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-044e	Conveyor Belt BB to Conveyor Belt BC	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
006-044e (cont'd)	Conveyor Belt BB to Conveyor Belt BC (cont'd)	PM_{10}	0.01	0.05	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	PM (w/ CPM)	0.02	0.10	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.02	0.10										
		PM_{10}	0.01	0.05										
		$PM_{2.5}$	0.002	0.007										
		Lead	2.16E-06	9.47E-06										
		Total HAPs [b]	7.80E-06	3.42E-05										
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	PM (w/ CPM)	0.30	1.30	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.30	1.30										
		PM_{10}	0.15	0.65										
		$PM_{2.5}$	0.02	0.10										
		Lead	2.92E-05	1.28E-04										
		Total HAPs [b]	1.05E-04	4.61E-04										
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	PM (w/ CPM)	0.20	0.89	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.20	0.89										
		PM_{10}	0.10	0.42										
		$PM_{2.5}$	0.01	0.06										
		Lead	1.89E-05	8.27E-05										
		Total HAPs [b]	6.81E-05	2.98E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
Operation 009: Solution Extraction/Electrowinning Operations														
009-117	Central SX (21,175 ft2)	VOC	0.92	4.01	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	1.20E-01	5.24E-01										
		Total HAPs [b]	2.31E-01	1.01E+00										
009-462	Central Backwash Bleed Tank (33,000 gallons)	VOC	0.02	0.10	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.10E-03	1.36E-02										
		Total HAPs [b]	5.99E-03	2.62E-02										
009-463	Central Barren Organic Tank (60,900 gallons)	VOC	0.02	0.08	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.32E-03	1.02E-02										
		Total HAPs [b]	4.49E-03	1.97E-02										
009-464	Central Bead Separator Tank (5,000 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.21E-03	5.30E-03										
		Total HAPs [b]	2.34E-03	1.02E-02										
009-465	Central High Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.21E-03	5.30E-03										
		Total HAPs [b]	2.34E-03	1.02E-02										
009-466	Central Low Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.21E-03	5.30E-03										
		Total HAPs [b]	2.34E-03	1.02E-02										
009-467	Central Gunk Tank 1 (7,600 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.21E-03	5.30E-03										
		Total HAPs [b]	2.34E-03	1.02E-02										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-468	Central Gunk Tank 2 (7,600 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.21E-03	5.30E-03										
		Total HAPs [b]	2.34E-03	1.02E-02										
009-469	Central Gunk Tank 3 (23,800 gallons)	VOC	0.02	0.07	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.04E-03	8.95E-03										
		Total HAPs [b]	3.95E-03	1.73E-02										
009-470	Central Organic Recovery Tank (306,700 gallons)	VOC	0.33	1.46	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.35E-02	1.91E-01										
		Total HAPs [b]	8.42E-02	3.69E-01										
009-471	Central Raffinate Pond (9,905 ft2)	VOC	1.17	5.12	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	1.53E-01	6.68E-01										
		Total HAPs [b]	2.95E-01	1.29E+00										
009-118	Metcalf SX (40,585.41 ft2)	VOC	1.77	7.75	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	2.36E-01	1.03E+00										
		Total HAPs [b]	4.56E-01	2.00E+00										
009-472	Metcalf Barren Organic Tank (82,900 gallons)	VOC	0.02	0.11	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.25E-03	1.43E-02										
		Total HAPs [b]	6.29E-03	2.75E-02										
009-473	Metcalf High A Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.25E-03	5.45E-03										
		Total HAPs [b]	2.41E-03	1.05E-02										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-474	Metcalf High B Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.25E-03	5.45E-03										
		Total HAPs [b]	2.41E-03	1.05E-02										
009-475	Metcalf Low A Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.25E-03	5.45E-03										
		Total HAPs [b]	2.41E-03	1.05E-02										
009-476	Metcalf Low B Decant Tank (4,700 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.25E-03	5.45E-03										
		Total HAPs [b]	2.41E-03	1.05E-02										
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	VOC	0.02	0.07	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.01E-03	8.80E-03										
		Total HAPs [b]	3.88E-03	1.70E-02										
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	VOC	0.01	0.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.79E-03	7.85E-03										
		Total HAPs [b]	3.47E-03	1.52E-02										
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.25E-03	5.45E-03										
		Total HAPs [b]	2.41E-03	1.05E-02										
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	VOC	0.02	0.07	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.10E-03	9.22E-03										
		Total HAPs [b]	4.07E-03	1.78E-02										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-481	Metcalf Holding Tank (122,200 gallons)	VOC	0.04	0.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.80E-03	2.10E-02										
		Total HAPs [b]	9.27E-03	4.06E-02										
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	VOC	0.34	1.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.48E-02	1.96E-01										
		Total HAPs [b]	8.66E-02	3.79E-01										
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	VOC	0.34	1.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.48E-02	1.96E-01										
		Total HAPs [b]	8.66E-02	3.79E-01										
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	VOC	0.04	0.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.80E-03	2.10E-02										
		Total HAPs [b]	9.27E-03	4.06E-02										
009-485	Metcalf Raffinate Pond (10,236 ft2)	VOC	1.22	5.33	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	1.62E-01	7.11E-01										
		Total HAPs [b]	3.14E-01	1.37E+00										
009-119	Modoc SX (88,229.16 ft2)	VOC	3.03	13.27	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	4.50E-02	1.97E-01										
		Total HAPs [b]	1.59E-01	6.94E-01										
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	VOC	0.02	0.10	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.28E-04	1.43E-03										
		Total HAPs [b]	1.15E-03	5.06E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	VOC	0.02	0.10	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.28E-04	1.43E-03										
		Total HAPs [b]	1.15E-03	5.06E-03										
009-488	Modoc High A Decant Tank (4,700 gallons)	VOC	0.007	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.09E-04	4.78E-04										
		Total HAPs [b]	3.85E-04	1.69E-03										
009-489	Modoc High B Decant Tank (4,700 gallons)	VOC	0.007	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.09E-04	4.78E-04										
		Total HAPs [b]	3.85E-04	1.69E-03										
009-490	Modoc Low A Decant Tank (4,700 gallons)	VOC	0.007	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.09E-04	4.78E-04										
		Total HAPs [b]	3.85E-04	1.69E-03										
009-491	Modoc Low B Decant Tank (4,700 gallons)	VOC	0.007	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.09E-04	4.78E-04										
		Total HAPs [b]	3.85E-04	1.69E-03										
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	VOC	0.01	0.05	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.76E-04	7.72E-04										
		Total HAPs [b]	6.21E-04	2.72E-03										
009-493	Modoc Gunk Tank 1 (15,400 gallons)	VOC	0.01	0.05	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.85E-04	8.08E-04										
		Total HAPs [b]	6.51E-04	2.85E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-494	Modoc Gunk Tank 2 (7,600 gallons)	VOC	0.007	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.09E-04	4.78E-04										
		Total HAPs [b]	3.85E-04	1.69E-03										
009-495	Modoc Gunk Tank 3 (21,700 gallons)	VOC	0.01	0.05	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.85E-04	8.08E-04										
		Total HAPs [b]	6.51E-04	2.85E-03										
009-496	Modoc Holding Tank (118,000 gallons)	VOC	0.03	0.14	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	4.72E-04	2.07E-03										
		Total HAPs [b]	1.66E-03	7.28E-03										
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	VOC	0.26	1.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.93E-03	1.72E-02										
		Total HAPs [b]	1.39E-02	6.07E-02										
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	VOC	0.26	1.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.93E-03	1.72E-02										
		Total HAPs [b]	1.39E-02	6.07E-02										
009-499	Modoc Raffinate Pond (15,678 ft2)	VOC	1.47	6.45	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	2.18E-02	9.55E-02										
		Total HAPs [b]	7.68E-02	3.37E-01										
009-349	Stargo SX (48,846.87 ft2)	VOC	2.12	9.29	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	2.79E-01	1.22E+00										
		Total HAPs [b]	5.40E-01	2.36E+00										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-500	Stargo Recovered Solution Tank (5,920 gallons)	VOC	0.01	0.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.76E-03	7.73E-03										
		Total HAPs [b]	3.41E-03	1.49E-02										
009-501	Stargo Gunk Tank 1 (16,955 gallons)	VOC	0.02	0.09	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.76E-03	1.21E-02										
		Total HAPs [b]	5.33E-03	2.33E-02										
009-502	Stargo Gunk Tank 2 (16,955 gallons)	VOC	0.02	0.09	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.76E-03	1.21E-02										
		Total HAPs [b]	5.33E-03	2.33E-02										
009-503	Stargo Gunk Tank 3 (16,955 gallons)	VOC	0.02	0.09	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.76E-03	1.21E-02										
		Total HAPs [b]	5.33E-03	2.33E-02										
009-504	Stargo Loaded Organic Tank (98,515 gallons)	VOC	0.02	0.10	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.98E-03	1.30E-02										
		Total HAPs [b]	5.75E-03	2.52E-02										
009-505	Stargo Holding Tank (108,900 gallons)	VOC	0.03	0.11	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.43E-03	1.50E-02										
		Total HAPs [b]	6.64E-03	2.91E-02										
009-506	Stargo Stormwater Tank (772,190 gallons)	VOC	0.51	2.23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	6.71E-02	2.94E-01										
		Total HAPs [b]	1.30E-01	5.68E-01										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-507	Stargo Tricanter Feed Tank (250 gallons)	VOC	0.002	0.008	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.50E-04	1.09E-03										
		Total HAPs [b]	4.82E-04	2.11E-03										
009-508	Stargo Slurry Tank (500 gallons)	VOC	0.001	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.64E-04	7.20E-04										
		Total HAPs [b]	3.18E-04	1.39E-03										
009-121	Central EW (548 cells)	PM (w/ CPM)	4.75	20.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	4.75	20.82										
		PM_{10}	4.75	20.82										
		$PM_{2.5}$	4.75	20.82										
		H_2SO_4	4.75	20.82										
		Total HAPs [b]	7.13E-04	3.12E-03										
009-122	Southside EW (220 cells)	PM (w/ CPM)	1.67	7.30	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.67	7.30										
		PM_{10}	1.67	7.30										
		$PM_{2.5}$	1.67	7.30										
		H_2SO_4	1.67	7.30										
		Total HAPs [b]	2.50E-04	1.10E-03										
009-221	Stargo EW (324 cells)	PM (w/ CPM)	2.96	12.98	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	2.96	12.98										
		PM_{10}	2.96	12.98										
		$PM_{2.5}$	2.96	12.98										
		H_2SO_4	2.96	12.98										
		Total HAPs [b]	4.44E-04	1.95E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	PM (w/ CPM)	0.13	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.12										
		PM_{10}	0.13	0.47										
		$PM_{2.5}$	0.13	0.47										
		CO	1.45	5.15										
		NO_X	1.72	6.13										
		SO_2	0.01	0.04										
		VOC	0.09	0.34										
		CO_2	2,054.12	7,311.08										
		CH_4	0.04	0.14										
		N_2O	0.004	0.01										
		CO_2e	2,056.24	7,318.63										
		Lead	8.61E-06	3.06E-05										
		Total HAPs [b]	3.25E-02	1.16E-01										
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	PM (w/ CPM)	0.13	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.12										
		PM_{10}	0.13	0.47										
		$PM_{2.5}$	0.13	0.47										
		CO	1.45	5.15										
		NO_X	1.72	6.13										
		SO_2	0.01	0.04										
		VOC	0.09	0.34										
		CO_2	2,054.12	7,311.08										
		CH_4	0.04	0.14										
		N_2O	0.004	0.01										
		CO_2e	2,056.24	7,318.63										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-184 (cont'd)	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr) (cont'd)	Lead	8.61E-06	3.06E-05	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	3.25E-02	1.16E-01										
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	PM (w/ CPM)	0.13	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.12										
		PM_{10}	0.13	0.47										
		$PM_{2.5}$	0.13	0.47										
		CO	1.45	5.15										
		NO_X	1.72	6.13										
		SO_2	0.01	0.04										
		VOC	0.09	0.34										
		CO_2	2,054.12	7,311.08										
		CH_4	0.04	0.14										
		N_2O	0.004	0.01										
		CO_2e	2,056.24	7,318.63										
		Lead	8.61E-06	3.06E-05										
		Total HAPs [b]	3.25E-02	1.16E-01										
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	PM (w/ CPM)	0.13	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.12										
		PM_{10}	0.13	0.47										
		$PM_{2.5}$	0.13	0.47										
		CO	1.45	5.15										
		NO_X	1.72	6.13										
		SO_2	0.01	0.04										
		VOC	0.09	0.34										
		CO_2	2,054.12	7,311.08										
		CH_4	0.04	0.14										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point		
										Exit Data			Sources		
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-222 (cont'd)	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr) (cont'd)	N_2O	0.004	0.01	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO_2e	2,056.24	7,318.63										
		Lead	8.61E-06	3.06E-05										
		Total HAPs [b]	3.25E-02	1.16E-01										
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	PM (w/ CPM)	0.13	0.47	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.12										
		PM_{10}	0.13	0.47										
		$PM_{2.5}$	0.13	0.47										
		CO	1.45	5.15										
		NO_X	1.72	6.13										
		SO_2	0.01	0.04										
		VOC	0.09	0.34										
		CO_2	2,054.12	7,311.08										
		CH_4	0.04	0.14										
		N_2O	0.004	0.01										
		CO_2e	2,056.24	7,318.63										
		Lead	8.61E-06	3.06E-05										
		Total HAPs [b]	3.25E-02	1.16E-01										
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	PM (w/ CPM)	0.01	0.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.008	0.04										
		PM_{10}	0.009	0.04										
		$PM_{2.5}$	0.006	0.03										
		CO	0.02	0.09										
		NO_X	0.08	0.35										
		SO_2	0.0009	0.004										
		VOC	0.0008	0.004										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-274 (cont'd)	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr) (cont'd)	CO_2	89.68	392.80	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CH_4	0.004	0.02										
		N_2O	0.0007	0.003										
		CO_2e	89.99	394.14										
		Lead	4.95E-06	2.17E-05										
		Total HAPs [b]	2.85E-04	1.25E-03										
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	PM (w/ CPM)	0.01	0.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.008	0.04										
		PM_{10}	0.009	0.04										
		$PM_{2.5}$	0.006	0.03										
		CO	0.02	0.09										
		NO_X	0.08	0.35										
		SO_2	0.0009	0.004										
		VOC	0.0008	0.004										
		CO_2	89.68	392.80										
		CH_4	0.004	0.02										
		N_2O	0.0007	0.003										
		CO_2e	89.99	394.14										
		Lead	4.95E-06	2.17E-05										
		Total HAPs [b]	2.85E-04	1.25E-03										
009-422	Modoc Test Facility SX (1,418.72 ft2)	VOC	0.11	0.46	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	1.57E-03	6.88E-03										
		Total HAPs [b]	5.54E-03	2.43E-02										
009-423	Modoc Test Facility EW (771.2 ft2)	PM (w/ CPM)	0.12	0.53	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.12	0.53										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
009-423 (cont'd)	Modoc Test Facility EW (771.2 ft2) (cont'd)	PM_{10}	0.12	0.53	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		$PM_{2.5}$	0.12	0.53										
		H_2SO_4	0.12	0.53										
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	VOC	0.005	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	7.31E-05	3.20E-04										
		Total HAPs [b]	2.58E-04	1.13E-03										
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	VOC	0.005	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	7.31E-05	3.20E-04										
		Total HAPs [b]	2.58E-04	1.13E-03										
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	VOC	0.003	0.01	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	3.93E-05	1.72E-04										
		Total HAPs [b]	1.39E-04	6.07E-04										
Operation 010: Concrete Batch Plant														
010-144a	Unloading Aggregate to the Aggregate Stockpiles	PM (w/ CPM)	0.61	0.20	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.61	0.20										
		PM_{10}	0.29	0.10										
		$PM_{2.5}$	0.04	0.01										
		Lead	3.97E-06	1.32E-06										
		Total HAPs [b]	4.48E-04	1.49E-04										
010-144b	Wind Erosion of the Aggregate Stockpiles	PM (w/ CPM)	0.13	0.56	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.13	0.56										
		PM_{10}	0.06	0.28										
		$PM_{2.5}$	0.01	0.04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
010-144b (cont'd)	Wind Erosion of the Aggregate Stockpiles (cont'd)	Lead	8.81E-07	3.86E-06	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Total HAPs [b]	9.94E-05	4.36E-04										
010-144c	Loading Aggregate to the Feed Hopper	PM (w/ CPM)	0.61	0.20	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.61	0.20										
		PM_{10}	0.29	0.10										
		$PM_{2.5}$	0.04	0.01										
		Lead	3.97E-06	1.32E-06										
		Total HAPs [b]	4.48E-04	1.49E-04										
010-145	Feed Hopper to Aggregate Conveyor Belt	PM (w/ CPM)	0.61	0.20	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.61	0.20										
		PM_{10}	0.29	0.10										
		$PM_{2.5}$	0.04	0.01										
		Lead	3.97E-06	1.32E-06										
		Total HAPs [b]	4.48E-04	1.49E-04										
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	PM (w/ CPM)	1.66	0.55	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.66	0.55										
		PM_{10}	0.58	0.19										
		$PM_{2.5}$	0.09	0.03										
		Lead	1.37E-05	4.57E-06										
		Total HAPs [b]	1.44E-04	4.78E-05										
010-147	Pneumatic Transfer of Cement to the Cement Silo	PM (w/ CPM)	1.93	0.64	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	1.93	0.64										
		PM_{10}	1.24	0.41										
		$PM_{2.5}$	0.10	0.03										
		Lead	1.95E-06	6.48E-07										
		Total HAPs [b]	5.89E-04	1.96E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	PM (w/ CPM)	16.60	5.52	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	16.60	5.52										
		PM_{10}	5.82	1.93										
		$PM_{2.5}$	0.88	0.29										
		Lead	1.37E-04	4.57E-05										
		Total HAPs [b]	1.44E-03	4.78E-04										
010-148b	Cement Screw Conveyor to Weigh Hopper	PM (w/ CPM)	19.33	6.43	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	19.33	6.43										
		PM_{10}	12.45	4.14										
		$PM_{2.5}$	1.02	0.34										
		Lead	1.95E-05	6.48E-06										
		Total HAPs [b]	5.89E-03	1.96E-03										
010-148c	Aggregate Conveyor Belt to Weigh Hopper	PM (w/ CPM)	0.61	0.20	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.61	0.20										
		PM_{10}	0.29	0.10										
		$PM_{2.5}$	0.04	0.01										
		Lead	3.97E-06	1.32E-06										
		Total HAPs [b]	4.48E-04	1.49E-04										
010-148d	Weigh Hopper to Concrete Mixing Truck	PM (w/ CPM)	35.52	11.81	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	35.52	11.81										
		PM_{10}	9.85	3.27										
		$PM_{2.5}$	1.59	0.53										
		Lead	1.15E-04	3.82E-05										
		Total HAPs [b]	3.28E-03	1.09E-03										
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PM (w/ CPM)	0.008	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.002	0.01										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
010-270 (cont'd)	Propane Hot Water Heater 1 (1.01 MMBtu/hr) (cont'd)	PM_{10}	0.008	0.03	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.008	0.03										
		CO	0.08	0.36										
		NO_X	0.14	0.63										
		SO_2	0.02	0.07										
		VOC	0.005	0.02										
		CO_2	139.99	613.16										
		CH_4	0.007	0.03										
		N_2O	0.001	0.006										
		CO_2e	140.56	615.63										
		Lead	4.95E-07	2.17E-06										
		Total HAPs [b]	1.87E-03	8.19E-03										
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PM (w/ CPM)	0.008	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.002	0.01										
		PM_{10}	0.008	0.03										
		$PM_{2.5}$	0.008	0.03										
		CO	0.08	0.36										
		NO_X	0.14	0.63										
		SO_2	0.02	0.07										
		VOC	0.005	0.02										
		CO_2	139.99	613.16										
		CH_4	0.007	0.03										
		N_2O	0.001	0.006										
		CO_2e	140.56	615.63										
		Lead	4.95E-07	2.17E-06										
		Total HAPs [b]	1.87E-03	8.19E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PM (w/ CPM)	0.008	0.03	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.002	0.01										
		PM_{10}	0.008	0.03										
		$PM_{2.5}$	0.008	0.03										
		CO	0.08	0.36										
		NO_X	0.14	0.63										
		SO_2	0.02	0.07										
		VOC	0.005	0.02										
		CO_2	139.99	613.16										
		CH_4	0.007	0.03										
		N_2O	0.001	0.006										
		CO_2e	140.56	615.63										
		Lead	4.95E-07	2.17E-06										
		Total HAPs [b]	1.87E-03	8.19E-03										
Operation 011: Storage Tanks														
011-150	Diesel Tank D1 (177,850 gallons)	VOC	0.02	0.09	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.19E-03	5.19E-03										
		Total HAPs [b]	1.75E-03	7.66E-03										
011-151	Diesel Tank D2 (200,434 gallons)	VOC	0.03	0.11	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.56E-03	6.82E-03										
		Total HAPs [b]	2.30E-03	1.01E-02										
011-154	Diesel Tank D5 (47,255 gallons)	VOC	0.009	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	5.08E-04	2.23E-03										
		Total HAPs [b]	7.50E-04	3.29E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
011-161	Diesel Tank Pit 95 (101,690 gallons)	VOC	0.04	0.16	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	2.22E-03	9.74E-03										
		Total HAPs [b]	3.28E-03	1.44E-02										
011-155	Gasoline Tank G1 (12,000 gallons)	VOC	0.98	4.28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.95E-03	8.56E-03										
		Total HAPs [b]	3.81E-02	1.67E-01										
011-156	Gasoline Tank G2 (12,000 gallons)	VOC	0.98	4.28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.95E-03	8.56E-03										
		Total HAPs [b]	3.81E-02	1.67E-01										
011-157	Gasoline Tank G3 (12,000 gallons)	VOC	0.58	2.55	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		Greatest Single HAP (Xylenes)	1.16E-03	5.10E-03										
		Total HAPs [b]	2.27E-02	9.93E-02										
Operation 013: Grizzly Operations														
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	PM (w/ CPM)	0.13	0.58	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.13	0.58										
		PM_{10}	0.04	0.19										
		$PM_{2.5}$	0.003	0.01										
		Lead	8.64E-06	3.78E-05										
		Total HAPs [b]	3.17E-05	1.39E-04										
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.11	0.49	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.11	0.49										
		PM_{10}	0.05	0.23										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
013-195b (cont'd)	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles (cont'd)	$PM_{2.5}$	0.008	0.03	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Lead	1.03E-05	4.50E-05										
		Total HAPs [b]	3.76E-05	1.65E-04										
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										
		$PM_{2.5}$	0.01	0.06										
		Lead	1.78E-05	7.78E-05										
		Total HAPs [b]	6.51E-05	2.85E-04										
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	PM (w/ CPM)	1.10	4.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.10	4.82										
		PM_{10}	0.37	1.62										
		$PM_{2.5}$	0.03	0.11										
		Lead	5.08E-06	2.22E-05										
		Total HAPs [b]	5.73E-04	2.51E-03										
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.93	4.07	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.93	4.07										
		PM_{10}	0.44	1.93										
		$PM_{2.5}$	0.07	0.29										
		Lead	6.03E-06	2.64E-05										
		Total HAPs [b]	6.81E-04	2.98E-03										
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
013-337c (cont'd)	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (cont'd)	$PM_{2.5}$	0.01	0.06	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Lead	1.25E-06	5.49E-06										
		Total HAPs [b]	1.42E-04	6.20E-04										
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	PM (w/ CPM)	1.10	4.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.10	4.82										
		PM_{10}	0.37	1.62										
		$PM_{2.5}$	0.03	0.11										
		Lead	5.08E-06	2.22E-05										
		Total HAPs [b]	5.73E-04	2.51E-03										
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.93	4.07	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.93	4.07										
		PM_{10}	0.44	1.93										
		$PM_{2.5}$	0.07	0.29										
		Lead	6.03E-06	2.64E-05										
		Total HAPs [b]	6.81E-04	2.98E-03										
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										
		$PM_{2.5}$	0.01	0.06										
		Lead	1.25E-06	5.49E-06										
		Total HAPs [b]	1.42E-04	6.20E-04										
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	PM (w/ CPM)	1.10	4.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.10	4.82										
		PM_{10}	0.37	1.62										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
013-339a (cont'd)	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening (cont'd)	$PM_{2.5}$	0.03	0.11	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Lead	5.08E-06	2.22E-05										
		Total HAPs [b]	5.73E-04	2.51E-03										
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.93	4.07	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.93	4.07										
		PM_{10}	0.44	1.93										
		$PM_{2.5}$	0.07	0.29										
		Lead	6.03E-06	2.64E-05										
		Total HAPs [b]	6.81E-04	2.98E-03										
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										
		$PM_{2.5}$	0.01	0.06										
		Lead	1.25E-06	5.49E-06										
		Total HAPs [b]	1.42E-04	6.20E-04										
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	PM (w/ CPM)	1.10	4.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.10	4.82										
		PM_{10}	0.37	1.62										
		$PM_{2.5}$	0.03	0.11										
		Lead	2.81E-05	1.23E-04										
		Total HAPs [b]	5.50E-05	2.41E-04										
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.93	4.07	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.93	4.07										
		PM_{10}	0.44	1.93										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
013-380b (cont'd)	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles (cont'd)	$PM_{2.5}$	0.07	0.29	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Lead	3.34E-05	1.46E-04										
		Total HAPs [b]	6.53E-05	2.86E-04										
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										
		$PM_{2.5}$	0.01	0.06										
		Lead	6.94E-06	3.04E-05										
		Total HAPs [b]	1.36E-05	5.95E-05										
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	PM (w/ CPM)	1.10	4.82	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	1.10	4.82										
		PM_{10}	0.37	1.62										
		$PM_{2.5}$	0.03	0.11										
		Lead	2.81E-05	1.23E-04										
		Total HAPs [b]	5.50E-05	2.41E-04										
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	PM (w/ CPM)	0.93	4.07	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.93	4.07										
		PM_{10}	0.44	1.93										
		$PM_{2.5}$	0.07	0.29										
		Lead	3.34E-05	1.46E-04										
		Total HAPs [b]	6.53E-05	2.86E-04										
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	PM (w/ CPM)	0.18	0.80	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.18	0.80										
		PM_{10}	0.09	0.40										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
013-381c (cont'd)	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (cont'd)	$PM_{2.5}$	0.01	0.06	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	N/A (cont'd)	TBD (cont'd)	TBD (cont'd)
		Lead	6.94E-06	3.04E-05										
		Total HAPs [b]	1.36E-05	5.95E-05										
Operation 014: Concentrate Leach Plant														
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	PM (w/ CPM)	0.13	0.23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.06										
		PM_{10}	0.13	0.23										
		$PM_{2.5}$	0.13	0.23										
		CO	1.45	2.52										
		NO_X	0.88	1.53										
		SO_2	0.01	0.02										
		VOC	0.10	0.17										
		CO_2	2,063.48	3,586.52										
		CH_4	0.04	0.07										
		N_2O	0.004	0.007										
		CO_2e	2,065.61	3,590.23										
		Lead	8.65E-06	1.50E-05										
		Total HAPs [b]	3.27E-02	5.68E-02										
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PM (w/ CPM)	0.75	3.29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.75	3.29										
		PM_{10}	0.75	3.29										
		$PM_{2.5}$	0.75	3.29										
		VOC	5.82	25.49										
		H_2SO_4	0.75	3.29										
		Lead	1.48E-04	6.47E-04										
		Total HAPs [b]	5.33E-04	2.34E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
014-240	PLV Cooling Tower	PM (w/ CPM)	0.30	1.32	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.30	1.32										
		PM_{10}	0.22	0.95										
		$PM_{2.5}$	0.0007	0.003										
		Lead	2.18E-09	9.55E-09										
		Total HAPs [b]	1.11E-07	4.86E-07										
014-241	Oxygen Plant Cooling Tower 1	PM (w/ CPM)	0.08	0.34	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.08	0.34										
		PM_{10}	0.06	0.25										
		$PM_{2.5}$	0.0002	0.0007										
		Lead	5.61E-10	2.46E-09										
		Total HAPs [b]	2.86E-08	1.25E-07										
014-348	Transfer of Flocculant to the Flocculant Bin	PM (w/ CPM)	0.76	0.07	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.76	0.07										
		PM_{10}	0.27	0.02										
		$PM_{2.5}$	0.04	0.004										
014-254	Transfer of Lime to the Lime Silo	PM (w/ CPM)	0.02	0.0005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.02	0.0005										
		PM_{10}	0.005	0.0002										
		$PM_{2.5}$	0.0008	0.00003										
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	PM (w/ CPM)	0.02	0.0001	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.02	0.0001										
		PM_{10}	0.005	0.00004										
		$PM_{2.5}$	0.0008	0.000006										

Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
Regulated Air Pollutant Data: Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		Emission Point Discharge Parameters: UTM Coordinates of Emission Point			Stack Sources		Exit Data			Non-Point Sources	
Operation 015: Diesel Emergency Engines														
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	PM (w/ CPM)	0.14	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.13	0.02										
		PM_{10}	0.14	0.02										
		$PM_{2.5}$	0.14	0.02										
		CO	0.93	0.14										
		NO_X	7.31	1.10										
		SO_2	0.009	0.001										
		VOC	0.49	0.07										
		CO_2	923.37	138.51										
		CH_4	0.04	0.006										
		N_2O	0.007	0.001										
		CO_2e	926.54	138.98										
		Greatest Single HAP (Xylenes)	1.09E-03	1.64E-04										
		Total HAPs [b]	8.91E-03	1.34E-03										
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	PM (w/ CPM)	0.14	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.13	0.03										
		PM_{10}	0.14	0.04										
		$PM_{2.5}$	0.14	0.04										
		CO	0.93	0.23										
		NO_X	7.32	1.83										
		SO_2	0.009	0.002										
		VOC	0.49	0.12										
		CO_2	924.52	231.13										
		CH_4	0.04	0.009										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
015-414 (cont'd)	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine) (cont'd)	N_2O	0.008	0.002	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO_2e	927.69	231.92										
		Greatest Single HAP (Xylenes)	1.09E-03	2.74E-04										
		Total HAPs [b]	8.92E-03	2.23E-03										
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	PM (w/ CPM)	0.06	0.01	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.05	0.01										
		PM_{10}	0.06	0.01										
		$PM_{2.5}$	0.06	0.01										
		CO	0.53	0.13										
		NO_X	2.06	0.51										
		SO_2	0.004	0.0009										
		VOC	0.08	0.02										
		CO_2	386.17	96.54										
		CH_4	0.02	0.004										
		N_2O	0.003	0.0008										
		CO_2e	387.44	96.86										
		Greatest Single HAP (Xylenes)	6.46E-04	1.62E-04										
		Total HAPs [b]	8.79E-03	2.20E-03										
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	PM (w/ CPM)	0.07	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.06	0.01										
		PM_{10}	0.07	0.02										
		$PM_{2.5}$	0.07	0.02										
		CO	0.22	0.06										
		NO_X	1.98	0.49										
		SO_2	0.002	0.0006										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
015-419 (cont'd)	NTPS Diesel Emergency Generator GNO46A (220 hp engine) (cont'd)	VOC	0.18	0.04	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO_2	251.10	62.78										
		CH_4	0.01	0.003										
		N_2O	0.002	0.0005										
		CO_2e	251.96	62.99										
		Greatest Single HAP (Xylenes)	4.39E-04	1.10E-04										
		Total HAPs [b]	5.97E-03	1.49E-03										
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	PM (w/ CPM)	0.002	0.0005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.002	0.0005										
		PM_{10}	0.002	0.0005										
		$PM_{2.5}$	0.002	0.0005										
		CO	0.001	0.0003										
		NO_X	0.35	0.09										
		SO_2	0.0007	0.0002										
		VOC	0.001	0.0003										
		CO_2	78.66	19.67										
		CH_4	0.003	0.0008										
		N_2O	0.0006	0.0002										
		CO_2e	78.92	19.73										
		Greatest Single HAP (Xylenes)	7.98E-05	2.00E-05										
		Total HAPs [b]	1.09E-03	2.71E-04										
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	PM (w/ CPM)	0.07	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.07	0.02										
		PM_{10}	0.07	0.02										
		$PM_{2.5}$	0.07	0.02										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
015-429 (cont'd)	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine) (cont'd)	CO	1.29	0.32	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		NO_X	1.38	0.35										
		SO_2	0.002	0.0006										
		VOC	0.10	0.02										
		CO_2	256.81	64.20										
		CH_4	0.01	0.003										
		N_2O	0.002	0.0005										
		CO_2e	257.69	64.42										
		Greatest Single HAP (Xylenes)	4.49E-04	1.12E-04										
		Total HAPs [b]	6.10E-03	1.53E-03										
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	PM (w/ CPM)	0.08	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.07	0.02										
		PM_{10}	0.08	0.02										
		$PM_{2.5}$	0.08	0.02										
		CO	0.52	0.13										
		NO_X	2.19	0.55										
		SO_2	0.004	0.001										
		VOC	0.05	0.01										
		CO_2	410.14	102.53										
		CH_4	0.02	0.004										
		N_2O	0.003	0.0008										
		CO_2e	411.51	102.88										
		Greatest Single HAP (Xylenes)	6.98E-04	1.75E-04										
		Total HAPs [b]	9.49E-03	2.37E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	PM (w/ CPM)	0.24	0.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.22	0.05										
		PM_{10}	0.24	0.06										
		$PM_{2.5}$	0.24	0.06										
		CO	2.44	0.61										
		NO_X	9.92	2.48										
		SO_2	0.01	0.003										
		VOC	0.19	0.05										
		CO_2	1,306.75	326.69										
		CH_4	0.05	0.01										
		N_2O	0.01	0.003										
		CO_2e	1,311.22	327.80										
		Greatest Single HAP (Xylenes)	1.54E-03	3.85E-04										
		Total HAPs [b]	1.26E-02	3.14E-03										
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	PM (w/ CPM)	0.03	0.008	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.03	0.007										
		PM_{10}	0.03	0.008										
		$PM_{2.5}$	0.03	0.008										
		CO	0.23	0.06										
		NO_X	0.42	0.11										
		SO_2	0.0008	0.0002										
		VOC	0.08	0.02										
		CO_2	92.34	23.08										
		CH_4	0.003	0.0008										
		N_2O	0.0006	0.0002										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
015-442 (cont'd)	Metcalf Clean Room Diesel Emergency Generator (69 hp engine) (cont'd)	CO_2e	92.61	23.15	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Greatest Single HAP (Xylenes)	1.38E-04	3.44E-05										
		Total HAPs [b]	1.87E-03	4.68E-04										
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	PM (w/ CPM)	0.18	0.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.16	0.04										
		PM_{10}	0.18	0.04										
		$PM_{2.5}$	0.18	0.04										
		CO	3.10	0.78										
		NO_X	3.31	0.83										
		SO_2	0.006	0.001										
		VOC	0.24	0.06										
		CO_2	615.20	153.80										
		CH_4	0.02	0.006										
		N_2O	0.005	0.001										
		CO_2e	617.31	154.33										
		Greatest Single HAP (Xylenes)	1.08E-03	2.69E-04										
		Total HAPs [b]	1.46E-02	3.65E-03										
Operation 017: Metcalf Concentrator														
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	PM (w/ CPM)	0.23	1.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.23	1.02										
		PM_{10}	0.23	1.02										
		$PM_{2.5}$	0.23	1.02										
		Lead	1.77E-05	7.76E-05										
		Total HAPs [b]	3.84E-05	1.68E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
017-280	Processes Controlled by Secondary Screening FFDC 1	PM (w/ CPM)	0.90	3.93	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.90	3.93										
		PM_{10}	0.90	3.93										
		$PM_{2.5}$	0.90	3.93										
		Lead	6.83E-05	2.99E-04										
		Total HAPs [b]	1.48E-04	6.47E-04										
017-281	Processes Controlled by Secondary Screening FFDC 2	PM (w/ CPM)	0.89	3.89	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.89	3.89										
		PM_{10}	0.89	3.89										
		$PM_{2.5}$	0.89	3.89										
		Lead	6.75E-05	2.96E-04										
		Total HAPs [b]	1.46E-04	6.40E-04										
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	PM (w/ CPM)	0.13	0.56	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.13	0.56										
		PM_{10}	0.13	0.56										
		$PM_{2.5}$	0.13	0.56										
		Lead	9.64E-06	4.22E-05										
		Total HAPs [b]	2.09E-05	9.14E-05										
017-283	Processes Controlled by Secondary Crushing FFDC 1	PM (w/ CPM)	0.30	1.32	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.30	1.32										
		PM_{10}	0.30	1.32										
		$PM_{2.5}$	0.30	1.32										
		Lead	2.29E-05	1.00E-04										
		Total HAPs [b]	4.96E-05	2.17E-04										
017-284	Processes Controlled by Secondary Crushing FFDC 2	PM (w/ CPM)	0.38	1.68	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.38	1.68										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
017-284 (cont'd)	Processes Controlled by Secondary Crushing FFDC 2 (cont'd)	PM_{10}	0.38	1.68	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.38	1.68										
		Lead	2.92E-05	1.28E-04										
		Total HAPs [b]	6.32E-05	2.77E-04										
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	PM (w/ CPM)	0.14	0.62	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.14	0.62										
		PM_{10}	0.14	0.62										
		$PM_{2.5}$	0.14	0.62										
		Lead	1.07E-05	4.68E-05										
		Total HAPs [b]	2.31E-05	1.01E-04										
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	PM (w/ CPM)	0.70	3.06	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.70	3.06										
		PM_{10}	0.70	3.06										
		$PM_{2.5}$	0.70	3.06										
		Lead	5.32E-05	2.33E-04										
		Total HAPs [b]	1.15E-04	5.04E-04										
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	PM (w/ CPM)	0.79	3.44	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.79	3.44										
		PM_{10}	0.79	3.44										
		$PM_{2.5}$	0.79	3.44										
		Lead	5.97E-05	2.61E-04										
		Total HAPs [b]	1.29E-04	5.66E-04										
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	PM (w/ CPM)	0.69	3.00	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.69	3.00										
		PM_{10}	0.69	3.00										
		$PM_{2.5}$	0.69	3.00										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
017-288 (cont'd)	Processes Controlled by Crushed Ore Bin FFDC 2 (cont'd)	Lead	5.21E-05	2.28E-04	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	1.13E-04	4.94E-04										
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	PM (w/ CPM)	0.69	3.00	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.69	3.00										
		PM_{10}	0.69	3.00										
		$PM_{2.5}$	0.69	3.00										
		Lead	5.21E-05	2.28E-04										
		Total HAPs [b]	1.13E-04	4.94E-04										
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	PM (w/ CPM)	0.69	3.00	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.69	3.00										
		PM_{10}	0.69	3.00										
		$PM_{2.5}$	0.69	3.00										
		Lead	5.21E-05	2.28E-04										
		Total HAPs [b]	1.13E-04	4.94E-04										
017-291	Processes Controlled by Crushed Ore Transfers FFDC	PM (w/ CPM)	0.35	1.53	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.35	1.53										
		PM_{10}	0.35	1.53										
		$PM_{2.5}$	0.35	1.53										
		Lead	2.66E-05	1.16E-04										
		Total HAPs [b]	5.75E-05	2.52E-04										
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	PM (w/ CPM)	0.34	1.50	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.34	1.50										
		PM_{10}	0.34	1.50										
		$PM_{2.5}$	0.34	1.50										
		Lead	2.61E-05	1.14E-04										
		Total HAPs [b]	5.64E-05	2.47E-04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
017-294	Processes Controlled by Wet Screen Feed FFDC	PM (w/ CPM)	0.12	0.53	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.12	0.53										
		PM_{10}	0.12	0.53										
		$PM_{2.5}$	0.12	0.53										
		Lead	9.12E-06	3.99E-05										
		Total HAPs [b]	1.97E-05	8.65E-05										
017-327	Metcalf Concentrator Bulk Flotation	VOC	0.15	0.64	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		Greatest Single HAP (Xylenes)	8.68E-03	3.80E-02										
		Total HAPs [b]	1.28E-02	5.61E-02										
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations														
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	PM (w/ CPM)	0.0004	0.002	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.0004	0.002										
		PM_{10}	0.0002	0.0008										
		$PM_{2.5}$	0.00003	0.0001										
		Lead	3.38E-09	1.48E-08										
		Total HAPs [b]	1.54E-07	6.73E-07										
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	PM (w/ CPM)	0.0004	0.002	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	0.0004	0.002										
		PM_{10}	0.0002	0.0008										
		$PM_{2.5}$	0.00003	0.0001										
		Lead	3.38E-09	1.48E-08										
		Total HAPs [b]	1.54E-07	6.73E-07										
018-336	Processes Controlled by H2S Scrubber System	PM (w/ CPM)	0.43	1.90	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.43	1.90										
		PM_{10}	0.43	1.90										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
018-336 (cont'd)	Processes Controlled by H2S Scrubber System (cont'd)	$PM_{2.5}$	0.43	1.90	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		H_2S	0.47	2.06										
		Lead	8.26E-06	3.62E-05										
		Total HAPs [b]	3.76E-04	1.65E-03										
Operation 021: Propane and Natural Gas Emergency Engines														
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	PM (w/ CPM)	0.003	0.0006	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.0003										
		PM_{10}	0.003	0.0006										
		$PM_{2.5}$	0.003	0.0006										
		CO	6.16	1.54										
		NO_X	0.22	0.06										
		SO_2	0.002	0.0006										
		VOC	0.03	0.006										
		CO_2	18.41	4.60										
		CH_4	0.0009	0.0002										
		N_2O	0.0002	0.00004										
		CO_2e	18.48	4.62										
		Greatest Single HAP (Xylenes)	2.59E-05	6.48E-06										
		Total HAPs [b]	4.31E-03	1.08E-03										
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	PM (w/ CPM)	0.02	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.002										
		PM_{10}	0.02	0.005										
		$PM_{2.5}$	0.02	0.005										
		CO	16.07	4.02										
		NO_X	1.16	0.29										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-368 (cont'd)	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine) (cont'd)	SO_2	0.02	0.004	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		VOC	0.22	0.05										
		CO_2	142.19	35.55										
		CH_4	0.007	0.002										
		N_2O	0.001	0.0003										
		CO_2e	142.76	35.69										
		Greatest Single HAP (Xylenes)	2.00E-04	5.00E-05										
		Total HAPs [b]	3.33E-02	8.32E-03										
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	PM (w/ CPM)	0.02	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.002										
		PM_{10}	0.02	0.005										
		$PM_{2.5}$	0.02	0.005										
		CO	13.42	3.36										
		NO_X	1.20	0.30										
		SO_2	0.02	0.004										
		VOC	0.29	0.07										
		CO_2	142.19	35.55										
		CH_4	0.007	0.002										
		N_2O	0.001	0.0003										
		CO_2e	142.76	35.69										
		Greatest Single HAP (Xylenes)	2.00E-04	5.00E-05										
		Total HAPs [b]	3.33E-02	8.32E-03										
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	PM (w/ CPM)	0.02	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.002										
		PM_{10}	0.02	0.005										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-371 (cont'd)	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine) (cont'd)	$PM_{2.5}$	0.02	0.005	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO	16.07	4.02										
		NO_X	1.16	0.29										
		SO_2	0.02	0.004										
		VOC	0.22	0.05										
		CO_2	142.19	35.55										
		CH_4	0.007	0.002										
		N_2O	0.001	0.0003										
		CO_2e	142.76	35.69										
		Greatest Single HAP (Xylenes)	2.00E-04	5.00E-05										
		Total HAPs [b]	3.33E-02	8.32E-03										
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	PM (w/ CPM)	0.02	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.002										
		PM_{10}	0.02	0.005										
		$PM_{2.5}$	0.02	0.005										
		CO	13.42	3.36										
		NO_X	1.20	0.30										
		SO_2	0.02	0.004										
		VOC	0.29	0.07										
		CO_2	142.19	35.55										
		CH_4	0.007	0.002										
		N_2O	0.001	0.0003										
		CO_2e	142.76	35.69										
		Greatest Single HAP (Xylenes)	2.00E-04	5.00E-05										
		Total HAPs [b]	3.33E-02	8.32E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	PM (w/ CPM)	0.007	0.002	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.004	0.0009										
		PM_{10}	0.007	0.002										
		$PM_{2.5}$	0.007	0.002										
		CO	30.84	7.71										
		NO_X	0.71	0.18										
		SO_2	0.006	0.002										
		VOC	0.08	0.02										
		CO_2	52.60	13.15										
		CH_4	0.003	0.0006										
		N_2O	0.001	0.0001										
		CO_2e	52.81	13.20										
		Greatest Single HAP (Xylenes)	7.40E-05	1.85E-05										
		Total HAPs [b]	1.23E-02	3.08E-03										
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	PM (w/ CPM)	0.003	0.0006	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.0003										
		PM_{10}	0.003	0.0006										
		$PM_{2.5}$	0.003	0.0006										
		CO	6.16	1.54										
		NO_X	0.22	0.06										
		SO_2	0.002	0.0006										
		VOC	0.03	0.006										
		CO_2	18.41	4.60										
		CH_4	0.0009	0.0002										
		N_2O	0.0002	0.00004										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-374 (cont'd)	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine) (cont'd)	CO_2e	18.48	4.62	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Greatest Single HAP (Xylenes)	2.59E-05	6.48E-06										
		Total HAPs [b]	4.31E-03	1.08E-03										
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	PM (w/ CPM)	0.003	0.0006	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.0003										
		PM_{10}	0.003	0.0006										
		$PM_{2.5}$	0.003	0.0006										
		CO	2.27	0.57										
		NO_X	0.20	0.05										
		SO_2	0.002	0.0006										
		VOC	0.02	0.006										
		CO_2	18.41	4.60										
		CH_4	0.0009	0.0002										
		N_2O	0.0002	0.00004										
		CO_2e	18.48	4.62										
		Greatest Single HAP (Xylenes)	2.59E-05	6.48E-06										
		Total HAPs [b]	4.31E-03	1.08E-03										
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	PM (w/ CPM)	0.003	0.0006	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.0003										
		PM_{10}	0.003	0.0006										
		$PM_{2.5}$	0.003	0.0006										
		CO	4.70	1.17										
		NO_X	0.09	0.02										
		SO_2	0.002	0.0006										
		VOC	0.01	0.003										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Exit Data: Dia. (ft)	Exit Data: Vel. (fps)	Exit Data: Temp. (°F)	Sources: Length (ft)	Sources: Width (ft)
021-417 (cont'd)	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine) (cont'd)	CO_2	20.17	5.04	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CH_4	0.0009	0.0002										
		N_2O	0.0002	0.00004										
		CO_2e	20.25	5.06										
		Greatest Single HAP (Xylenes)	2.59E-05	6.48E-06										
		Total HAPs [b]	4.31E-03	1.08E-03										
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	PM (w/ CPM)	0.008	0.002	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.004	0.0009										
		PM_{10}	0.008	0.002										
		$PM_{2.5}$	0.008	0.002										
		CO	31.57	7.89										
		NO_X	0.73	0.18										
		SO_2	0.007	0.002										
		VOC	0.09	0.02										
		CO_2	53.85	13.46										
		CH_4	0.003	0.0006										
		N_2O	0.0005	0.0001										
		CO_2e	54.07	13.52										
		Greatest Single HAP (Xylenes)	7.58E-05	1.89E-05										
		Total HAPs [b]	1.26E-02	3.15E-03										
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	PM (w/ CPM)	0.008	0.002	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.004	0.0009										
		PM_{10}	0.008	0.002										
		$PM_{2.5}$	0.008	0.002										
		CO	31.57	7.89										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-436 (cont'd)	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine) (cont'd)	NO_X	0.73	0.18	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		SO_2	0.007	0.002										
		VOC	0.09	0.02										
		CO_2	53.85	13.46										
		CH_4	0.003	0.0006										
		N_2O	0.0005	0.0001										
		CO_2e	54.07	13.52										
		Greatest Single HAP (Xylenes)	7.58E-05	1.89E-05										
		Total HAPs [b]	1.26E-02	3.15E-03										
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	PM (w/ CPM)	0.03	0.007	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.004										
		PM_{10}	0.03	0.007										
		$PM_{2.5}$	0.03	0.007										
		CO	9.59	2.40										
		NO_X	2.04	0.51										
		SO_2	0.03	0.007										
		VOC	0.40	0.10										
		CO_2	221.31	55.33										
		CH_4	0.01	0.003										
		N_2O	0.002	0.0005										
		CO_2e	222.17	55.54										
		Greatest Single HAP (Xylenes)	3.01E-04	7.52E-05										
		Total HAPs [b]	5.01E-02	1.25E-02										
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	PM (w/ CPM)	0.09	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.05	0.01										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-509 (cont'd)	GSC Natural Gas Emergency Generator (460 hp engine) (cont'd)	PM_{10}	0.09	0.02	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.09	0.02										
		CO	0.79	0.20										
		NO_X	0.10	0.03										
		SO_2	0.003	0.0007										
		VOC	0.008	0.002										
		CO_2	413.66	103.42										
		CH_4	0.10	0.02										
		N_2O	0.04	0.009										
		CO_2e	427.39	106.85										
		Greatest Single HAP (Xylenes)	4.54E-05	1.14E-05										
		Total HAPs [b]	7.56E-03	1.89E-03										
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	PM (w/ CPM)	0.03	0.007	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.004										
		PM_{10}	0.03	0.007										
		$PM_{2.5}$	0.03	0.007										
		CO	9.59	2.40										
		NO_X	2.04	0.51										
		SO_2	0.03	0.007										
		VOC	0.40	0.10										
		CO_2	221.31	55.33										
		CH_4	0.01	0.003										
		N_2O	0.002	0.0005										
		CO_2e	222.17	55.54										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
021-510 (cont'd)	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine) (cont'd)	Greatest Single HAP (Xylenes)	3.01E-04	7.52E-05	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	5.01E-02	1.25E-02										
Operation 022: Prill Bins														
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	PM (w/ CPM)	2.58	0.81	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	2.58	0.81										
		PM_{10}	0.90	0.28										
		$PM_{2.5}$	0.14	0.04										
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	PM (w/ CPM)	3.50	0.81	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	3.50	0.81										
		PM_{10}	1.23	0.28										
		$PM_{2.5}$	0.19	0.04										
Operation 023: Tailings Operations														
023-418	Wind Erosion of Tailings	PM (w/ CPM)	103.99	455.49	TBD	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	TBD
		PM (w/o CPM)	103.99	455.49										
		PM_{10}	52.00	227.75										
		$PM_{2.5}$	7.80	34.16										
		Lead	6.39E-04	2.80E-03										
		Total HAPs [b]	1.12E-02	4.91E-02										
Operation 024: Miscellaneous Fuel Burning Equipment														
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PM (w/ CPM)	0.002	0.01	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.0007	0.003										
		PM_{10}	0.002	0.01										
		$PM_{2.5}$	0.002	0.01										
		CO	0.03	0.11										
		NO_X	0.05	0.20										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
024-420 (cont'd)	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr) (cont'd)	SO_2	0.005	0.02	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		VOC	0.002	0.008										
		CO_2	44.08	193.05										
		CH_4	0.002	0.009										
		N_2O	0.0004	0.002										
		CO_2e	44.25	193.83										
		Lead	1.56E-07	6.83E-07										
		Total HAPs [b]	5.89E-04	2.58E-03										
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	PM (w/ CPM)	0.004	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.0009	0.004										
		PM_{10}	0.004	0.02										
		$PM_{2.5}$	0.004	0.02										
		CO	0.04	0.18										
		NO_X	0.05	0.22										
		SO_2	0.0003	0.001										
		VOC	0.003	0.012										
		CO_2	58.96	258.23										
		CH_4	0.001	0.005										
		N_2O	0.0001	0.0005										
		CO_2e	59.02	258.50										
		Lead	2.47E-07	1.08E-06										
		Total HAPs [b]	9.33E-04	4.09E-03										
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	PM (w/ CPM)	0.15	0.66	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.04	0.17										
		PM_{10}	0.15	0.66										
		$PM_{2.5}$	0.15	0.66										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
024-443a (cont'd)	Natural Gas Small Space Heaters (20.25 MMBtu/hr) (cont'd)	CO	1.67	7.30	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		NO_X	1.98	8.69										
		SO_2	0.01	0.05										
		VOC	0.11	0.48										
		CO_2	2,368.32	10,373.25										
		CH_4	0.04	0.20										
		N_2O	0.004	0.02										
		CO_2e	2,370.77	10,383.96										
		Lead	9.92E-06	4.35E-05										
		Total HAPs [b]	3.75E-02	1.64E-01										
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	PM (w/ CPM)	0.04	0.19	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.01	0.05										
		PM_{10}	0.04	0.19										
		$PM_{2.5}$	0.04	0.19										
		CO	0.49	2.14										
		NO_X	0.58	2.55										
		SO_2	0.003	0.02										
		VOC	0.03	0.14										
		CO_2	695.60	3,046.74										
		CH_4	0.01	0.06										
		N_2O	0.001	0.006										
		CO_2e	696.32	3,049.89										
		Lead	2.91E-06	1.28E-05										
		Total HAPs [b]	1.10E-02	4.82E-02										
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PM (w/ CPM)	0.03	0.14	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.009	0.04										

Regulated Air Pollutant Data					Emission Point Discharge Parameters										
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
024-444a (cont'd)	Propane Small Space Heaters (4.21 MMBtu/hr) (cont'd)	PM_{10}	0.03	0.14	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.03	0.14										
		CO	0.35	1.51										
		NO_X	0.60	2.62										
		SO_2	0.07	0.30										
		VOC	0.02	0.10										
		CO_2	583.80	2,557.06										
		CH_4	0.03	0.12										
		N_2O	0.006	0.02										
		CO_2e	586.16	2,567.38										
		Lead	2.06E-06	9.04E-06										
		Total HAPs [b]	7.80E-03	3.42E-02										
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PM (w/ CPM)	0.004	0.02	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.004										
		PM_{10}	0.004	0.02										
		$PM_{2.5}$	0.004	0.02										
		CO	0.04	0.17										
		NO_X	0.07	0.29										
		SO_2	0.008	0.03										
		VOC	0.003	0.01										
		CO_2	65.01	284.72										
		CH_4	0.003	0.01										
		N_2O	0.0006	0.003										
		CO_2e	65.27	285.87										
		Lead	2.30E-07	1.01E-06										
		Total HAPs [b]	8.68E-04	3.80E-03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
Operation 025: Diesel Non-Emergency Engines														
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	PM (w/ CPM)	0.09	0.38	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.08	0.33										
		PM_{10}	0.09	0.38										
		$PM_{2.5}$	0.09	0.38										
		CO	1.43	6.26										
		NO_X	1.07	4.67										
		SO_2	0.002	0.008										
		VOC	0.08	0.33										
		CO_2	198.37	868.87										
		CH_4	0.008	0.04										
		N_2O	0.002	0.007										
		CO_2e	199.05	871.85										
		Greatest Single HAP (Xylenes)	3.47E-04	1.52E-03										
		Total HAPs [b]	4.71E-03	2.06E-02										
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	PM (w/ CPM)	0.001	0.005	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.001	0.005										
		PM_{10}	0.001	0.005										
		$PM_{2.5}$	0.001	0.005										
		CO	0.001	0.005										
		NO_X	0.47	2.08										
		SO_2	0.0008	0.004										
		VOC	0.001	0.005										
		CO_2	94.65	414.56										
		CH_4	0.006	0.03										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
025-448 (cont'd)	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine) (cont'd)	N_2O	0.0007	0.003	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		CO_2e	95.00	416.12										
		Greatest Single HAP (Xylenes)	8.95E-05	3.92E-04										
		Total HAPs [b]	1.22E-03	5.33E-03										
AOS1: Morenci Concentrator Quaternary Crushing Operations														
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	PM (w/ CPM)	0.24	1.04	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.24	1.04										
		PM_{10}	0.12	0.52										
		$PM_{2.5}$	0.12	0.52										
		Lead	9.05E-06	3.97E-05										
		Total HAPs [b]	1.58E-05	6.93E-05										
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	PM (w/ CPM)	0.28	1.24	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.28	1.24										
		PM_{10}	0.14	0.62										
		$PM_{2.5}$	0.14	0.62										
		Lead	1.07E-05	4.71E-05										
		Total HAPs [b]	1.88E-05	8.22E-05										
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	PM (w/ CPM)	0.58	2.54	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.58	2.54										
		PM_{10}	0.58	2.54										
		$PM_{2.5}$	0.58	2.54										
		Lead	4.40E-05	1.93E-04										
		Total HAPs [b]	7.69E-05	3.37E-04										
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	PM (w/ CPM)	0.10	0.45	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.10	0.45										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
002-312 (AOS1) (cont'd)	Processes Controlled by West Surge Bin FFDC (AOS1) (cont'd)	PM_{10}	0.10	0.45	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		$PM_{2.5}$	0.10	0.45										
		Lead	7.82E-06	3.42E-05										
		Total HAPs [b]	1.37E-05	5.98E-05										
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	PM (w/ CPM)	0.32	1.40	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.32	1.40										
		PM_{10}	0.32	1.40										
		$PM_{2.5}$	0.32	1.40										
		Lead	2.42E-05	1.06E-04										
		Total HAPs [b]	4.23E-05	1.85E-04										
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	PM (w/ CPM)	0.58	2.54	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.58	2.54										
		PM_{10}	0.58	2.54										
		$PM_{2.5}$	0.58	2.54										
		Lead	4.40E-05	1.93E-04										
		Total HAPs [b]	7.69E-05	3.37E-04										
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	PM (w/ CPM)	0.10	0.45	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.10	0.45										
		PM_{10}	0.10	0.45										
		$PM_{2.5}$	0.10	0.45										
		Lead	7.82E-06	3.42E-05										
		Total HAPs [b]	1.37E-05	5.98E-05										
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	PM (w/ CPM)	0.32	1.40	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.32	1.40										
		PM_{10}	0.32	1.40										
		$PM_{2.5}$	0.32	1.40										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
002-316 (AOS1) (cont'd)	Processes Controlled by East RC FFDC (AOS1) (cont'd)	Lead	2.42E-05	1.06E-04	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	TBD (cont'd)	N/A (cont'd)	N/A (cont'd)
		Total HAPs [b]	4.23E-05	1.85E-04										
AOS2: Concentrate Leach Plant Upgrades														
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PM (w/ CPM)	0.53	2.30	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.53	2.30										
		PM_{10}	0.53	2.30										
		$PM_{2.5}$	0.53	2.30										
		VOC	4.07	17.84										
		H_2SO_4	0.53	2.30										
		Lead	1.03E-04	4.53E-04										
		Total HAPs [b]	3.73E-04	1.63E-03										
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PM (w/ CPM)	0.53	2.30	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.53	2.30										
		PM_{10}	0.53	2.30										
		$PM_{2.5}$	0.53	2.30										
		VOC	4.07	17.84										
		H_2SO_4	0.53	2.30										
		Lead	1.03E-04	4.53E-04										
		Total HAPs [b]	3.73E-04	1.63E-03										
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	PM (w/ CPM)	0.27	1.18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A
		PM (w/o CPM)	0.27	1.18										
		PM_{10}	0.20	0.86										
		$PM_{2.5}$	0.0006	0.003										
		Lead	1.96E-09	8.59E-09										
		Total HAPs [b]	9.98E-08	4.37E-07										

Regulated Air Pollutant Data					Emission Point Discharge Parameters									
Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Non-Point	
										Exit Data			Sources	
Number	Name	Regulated Air Pollutant Name	lb/hr	tpy	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Dia. (ft)	Vel. (fps)	Temp. (°F)	Length (ft)	Width (ft)
AOS3: Primary Crushing and Overland Conveying Operations														
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	PM (w/ CPM)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.											
		PM (w/o CPM)												
		PM_{10}												
		$PM_{2.5}$												
		Lead												
		Total HAPs [b]												
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	PM (w/ CPM)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.											
		PM (w/o CPM)												
		PM_{10}												
		$PM_{2.5}$												
		Lead												
		Total HAPs [b]												

Ground Elevation of Facility above Mean Sea Level: Minimum of 4,000 feet
ADEQ Standard Condtions are 239 K and 101.3 kilopascals (A.A.C. R18-2-101)

[a] CO_2e emissions are calculated by summing the individual greenhouse gas emissions multiplied by their GWP. GWP of CO_2 = 1, GWP of CH_4 = 25, GWP of N_2O = 298.
[b] See Appendix F for individual HAPs.

APPENDIX D PROCESS FLOW DIAGRAMS

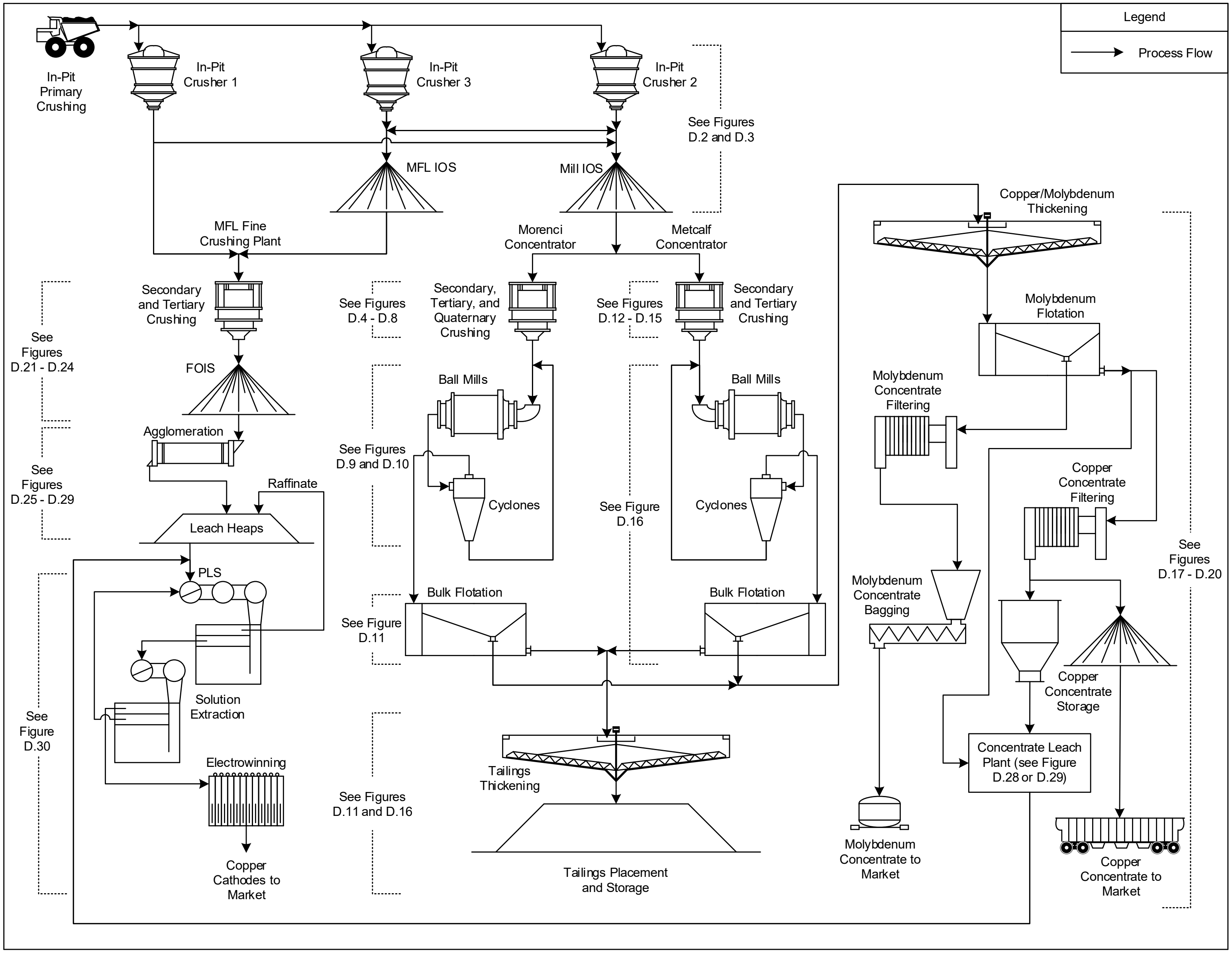

Figure D.1Overview of the FMMI Facility-Wide Operations

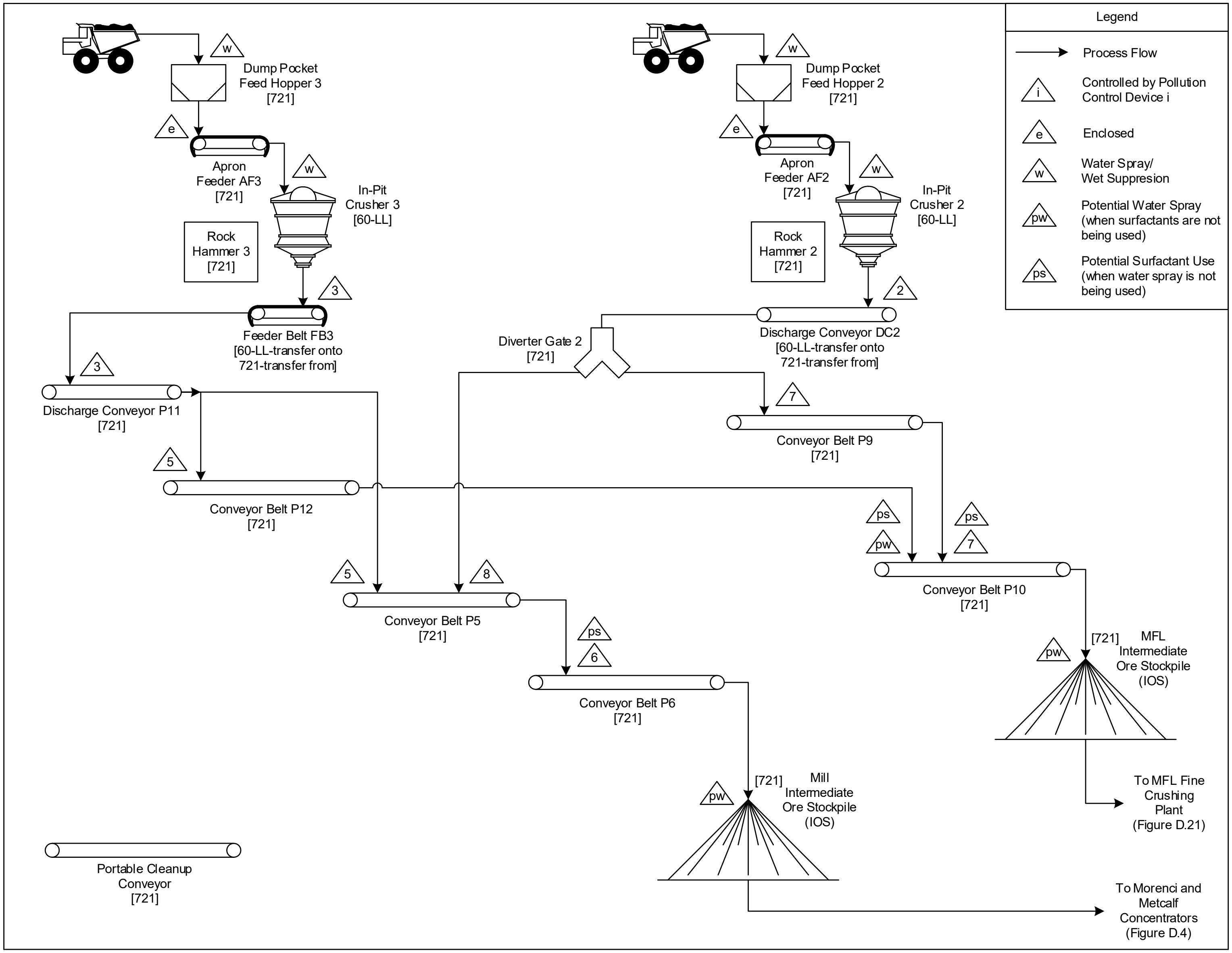

Figure D.2In-Pit Crushing and Conveying

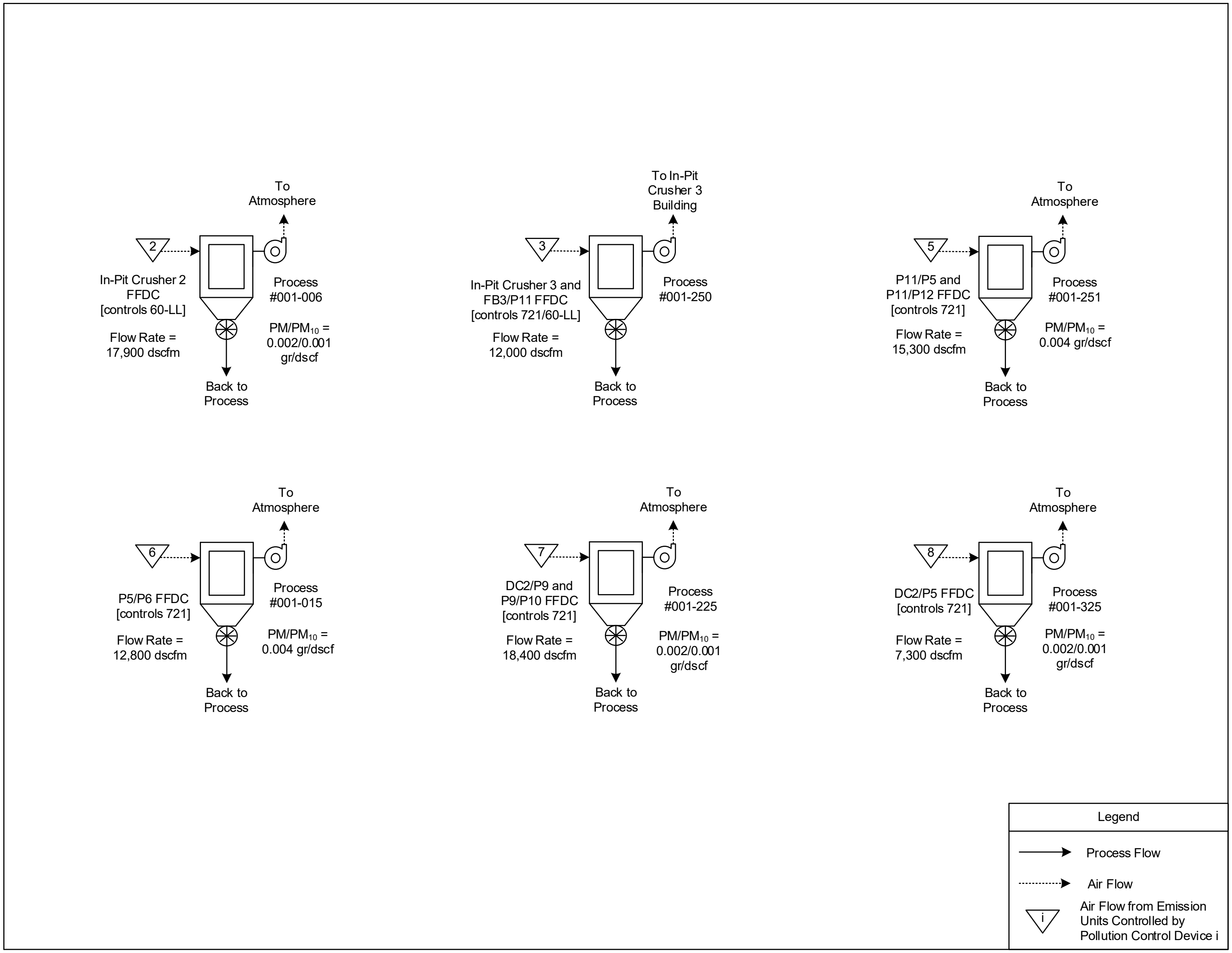

Figure D.3Pollution Control Equipment for In-Pit Crushing and Conveying

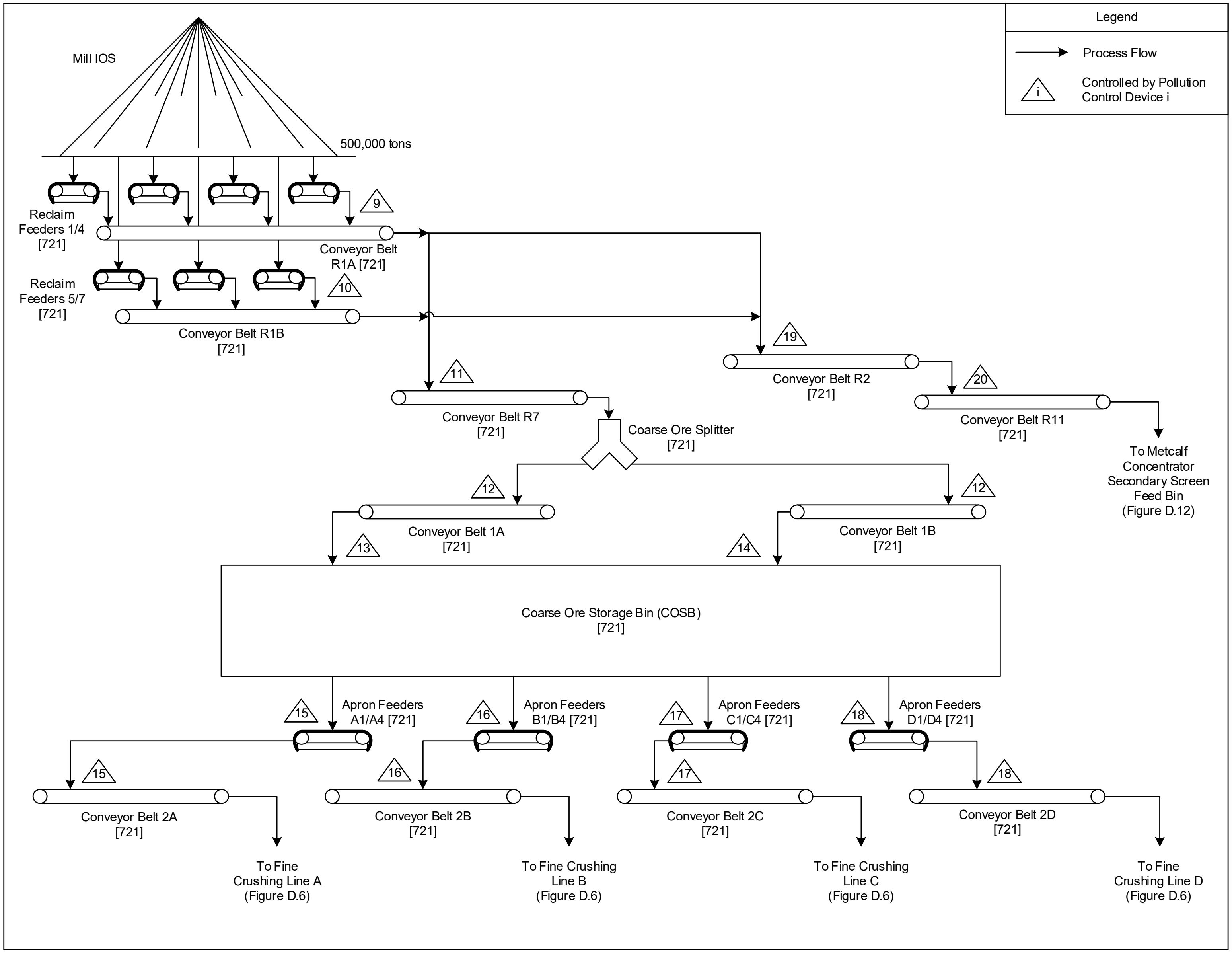

Figure D.4Mill IOS Reclaim and Morenci Concentrator Storage and Conveying

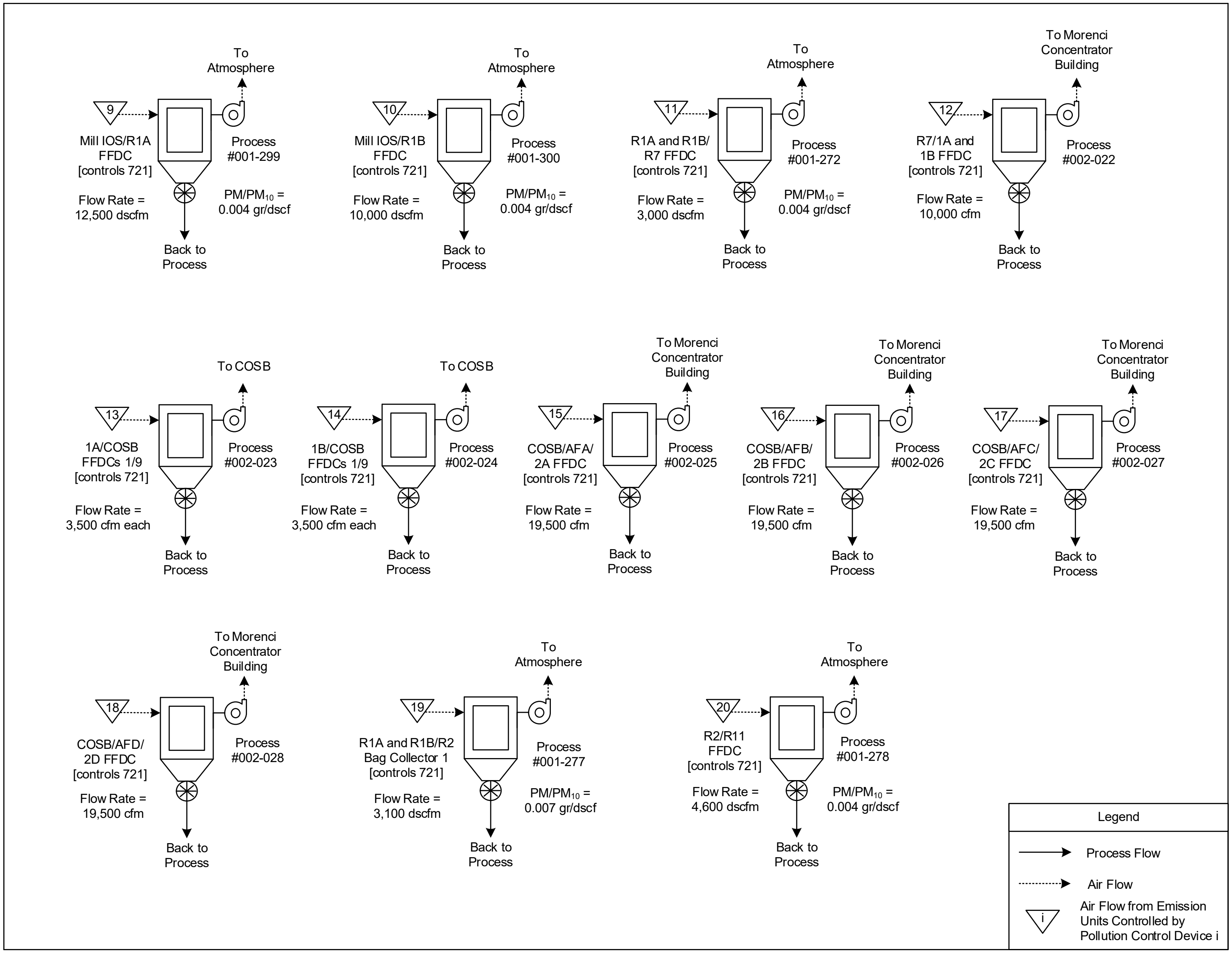

Figure D.5Pollution Control Equipment for Mill IOS Reclaim and Morenci Concentrator Storage and Conveying

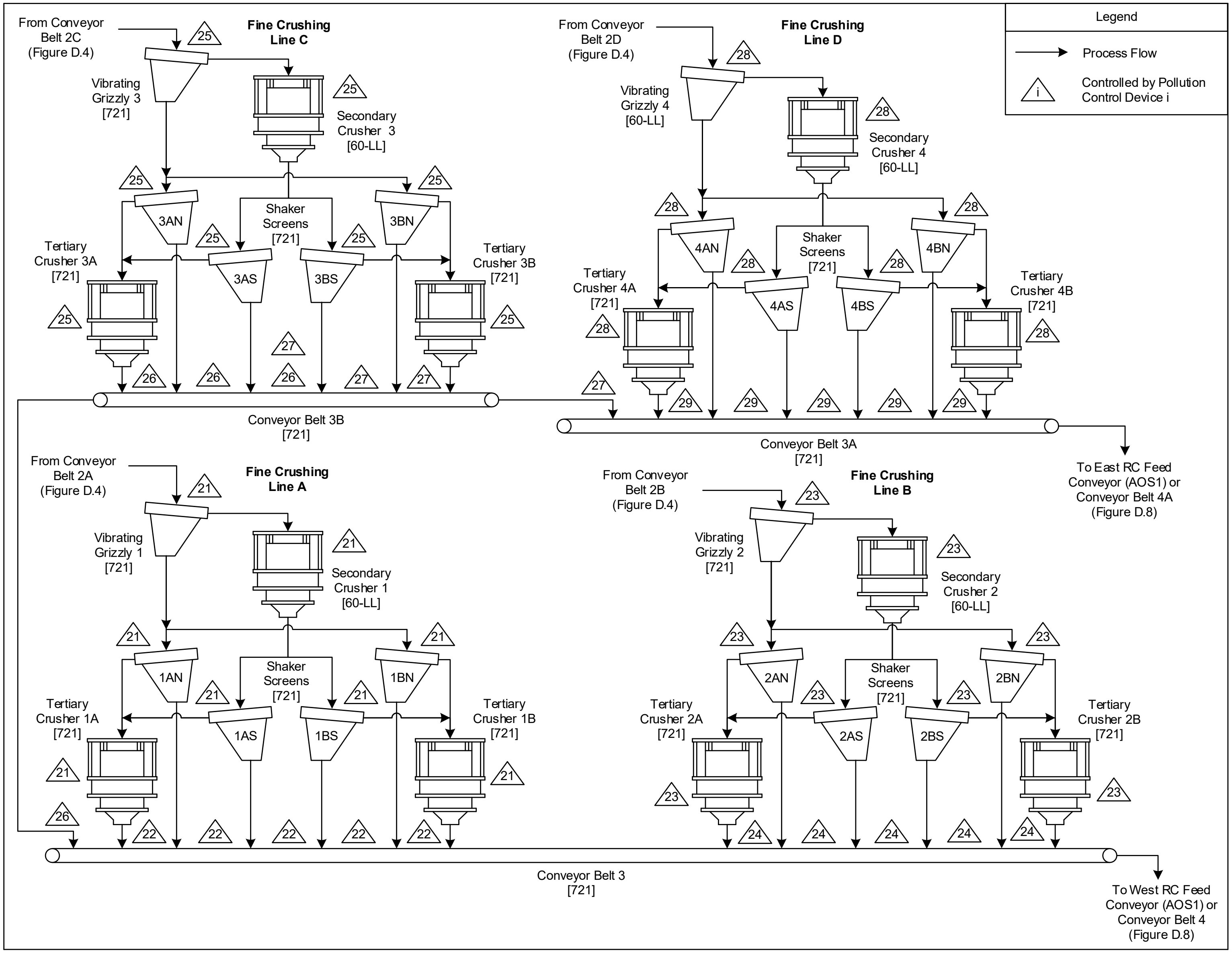

Figure D.6Morenci Concentrator Fine Crushing Lines A, B, C, and D

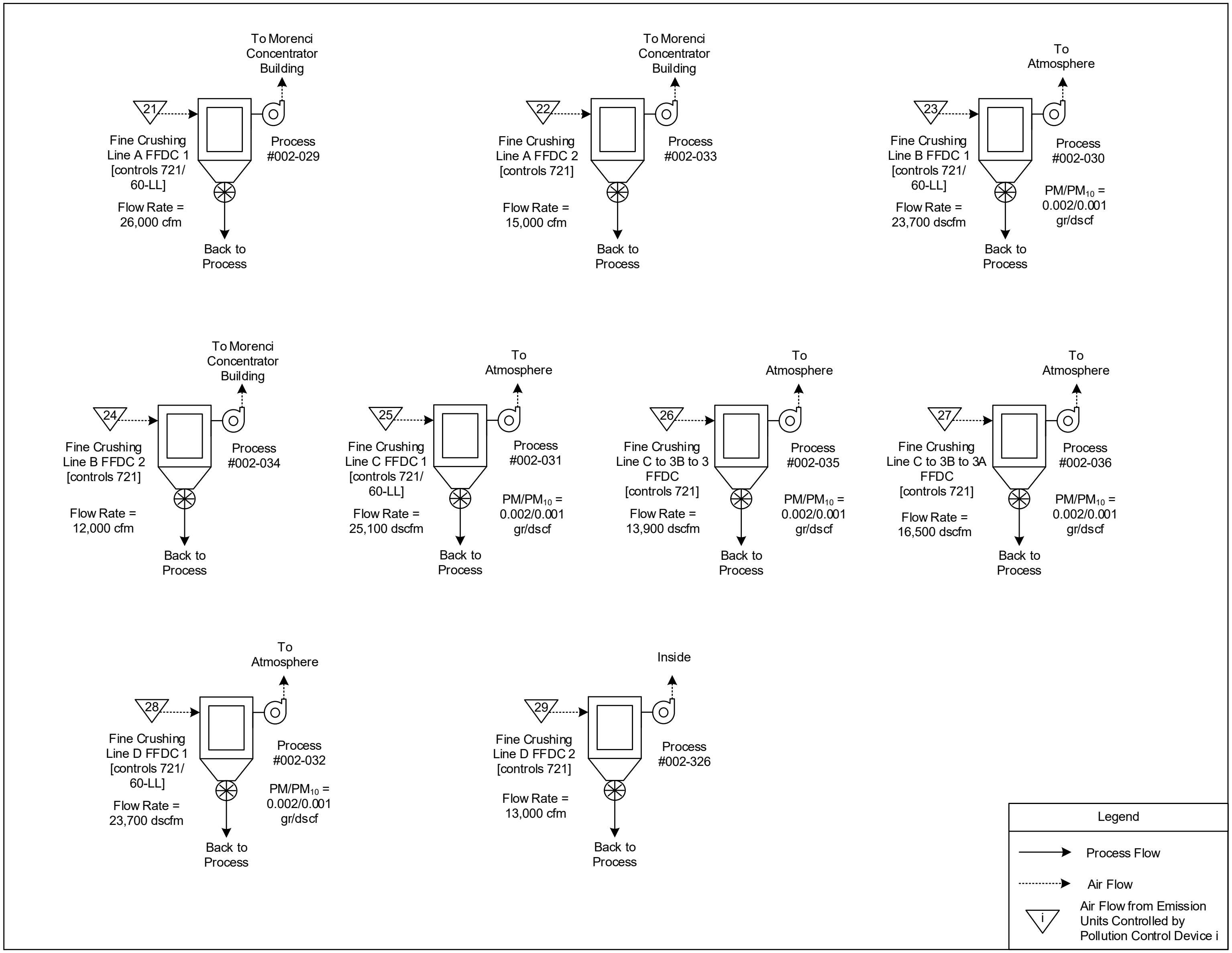

Figure D.7Pollution Control Equipment for the Morenci Concentrator Fine Crushing Lines A, B, C, and D

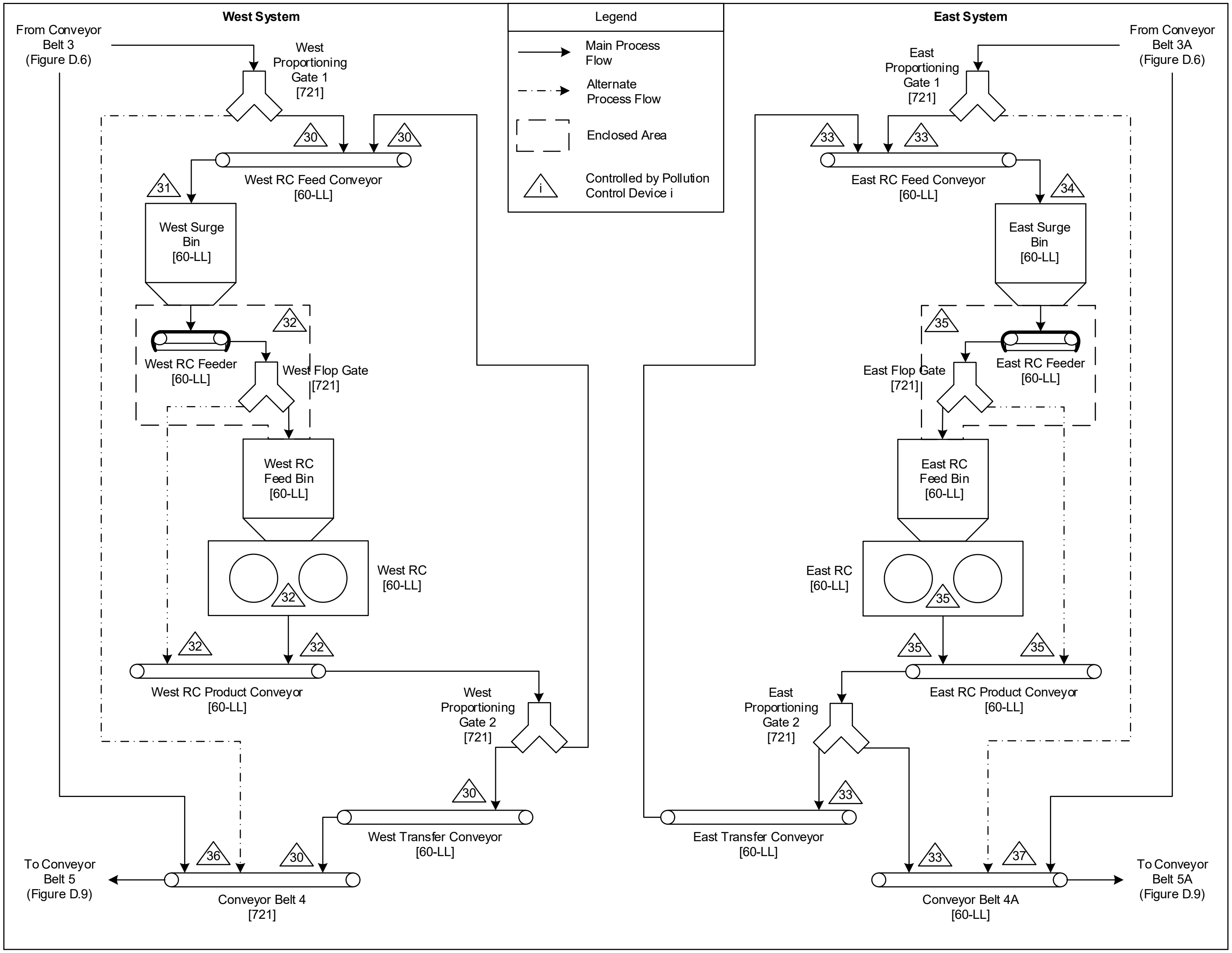

Figure D.8Morenci Concentrator Quaternary Crushing (AOS1)

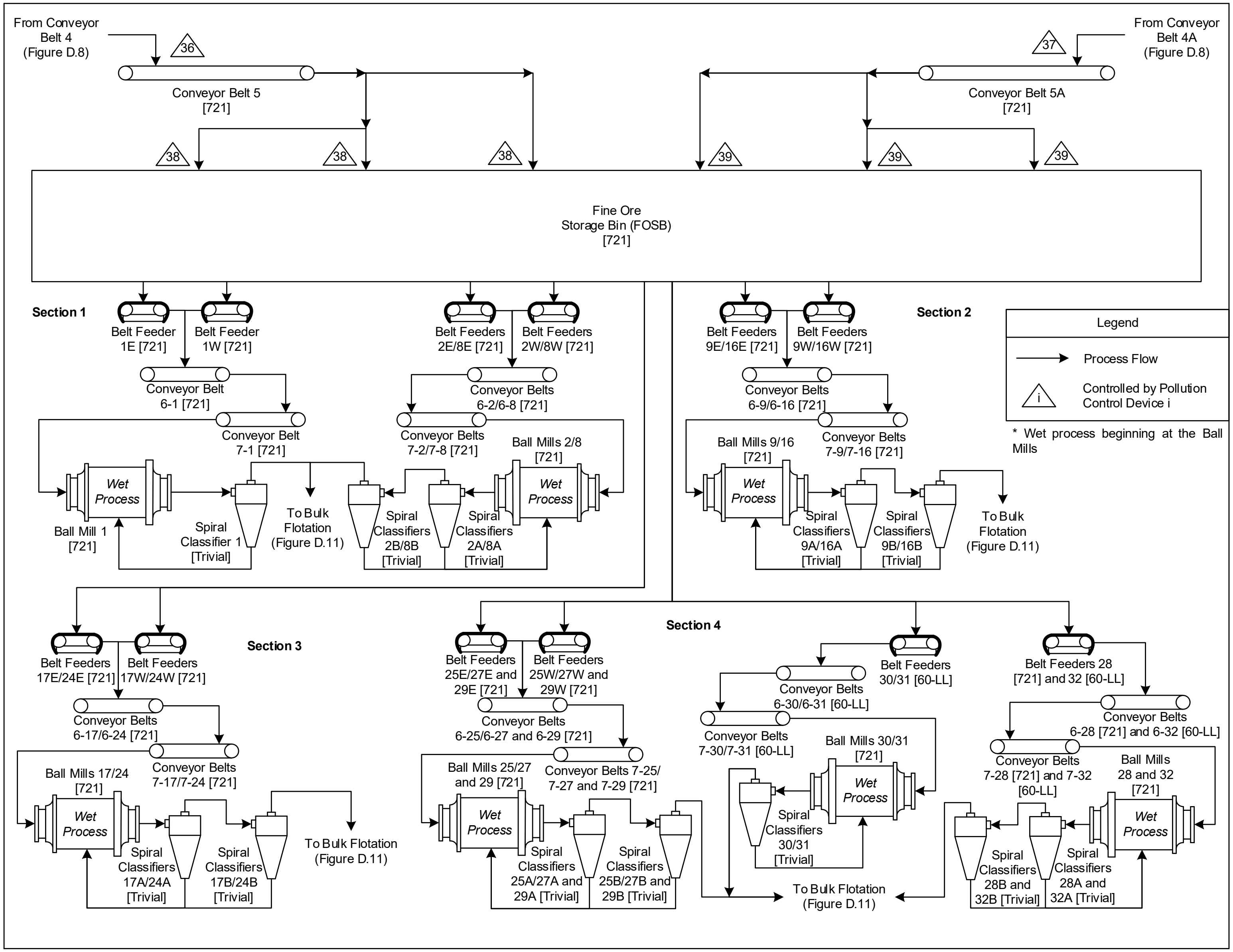

Figure D.9Morenci Concentrator Fine Ore Storage and Ball Milling

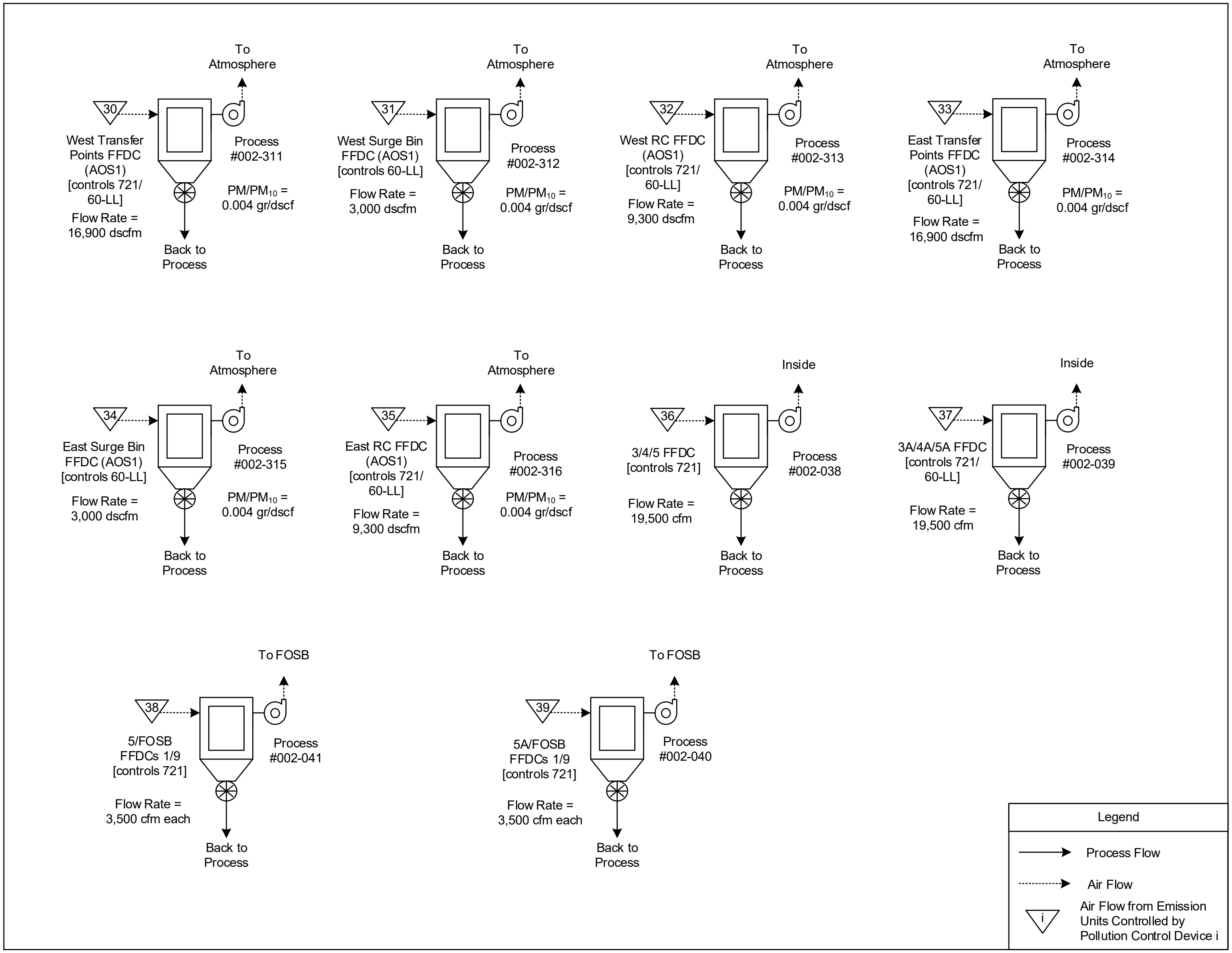

Figure D.10 Pollution Control Equipment for Morenci Concentrator Quaternary Crushing and Fine Ore Storage

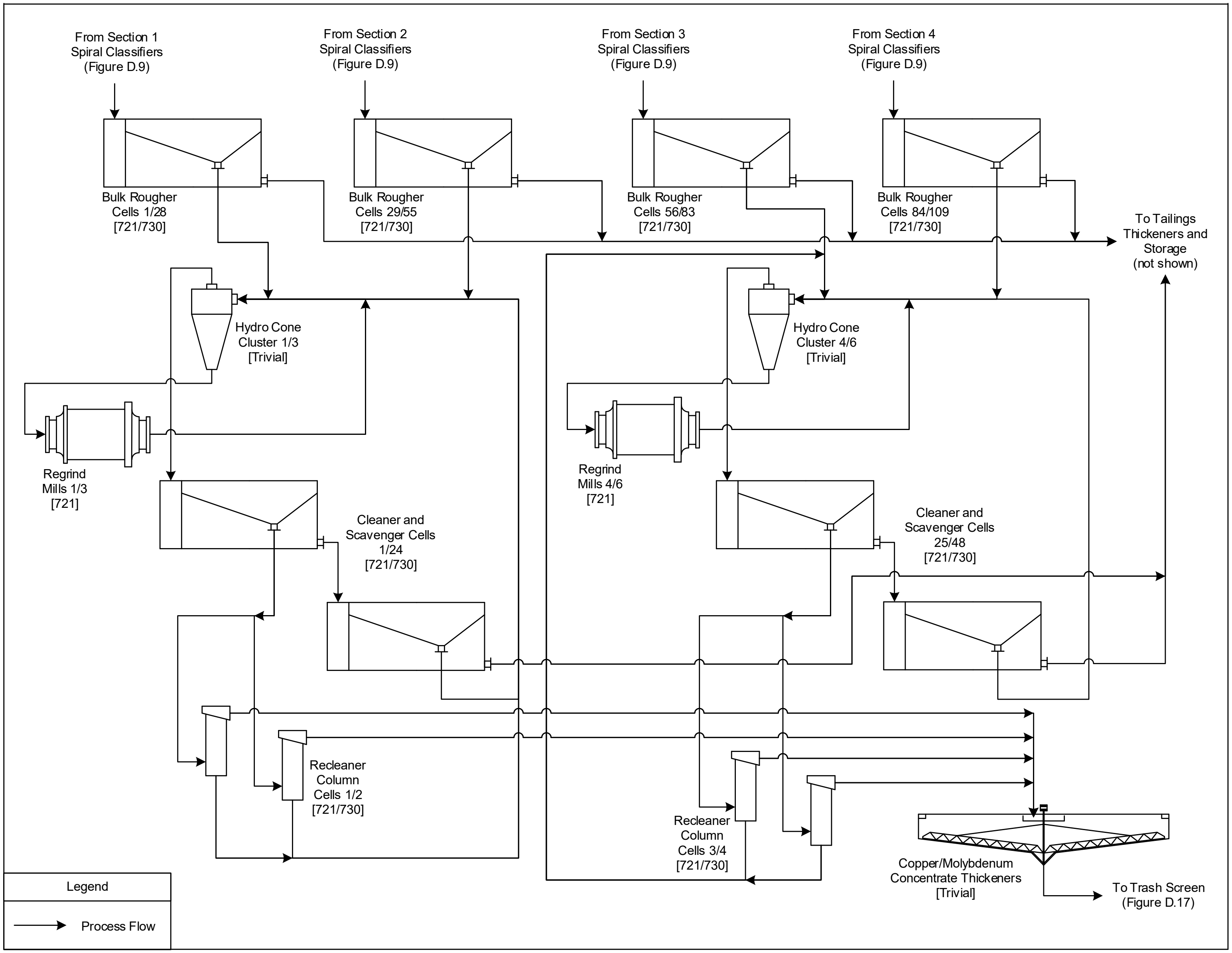

Figure D.11 Morenci Concentrator Bulk Flotation

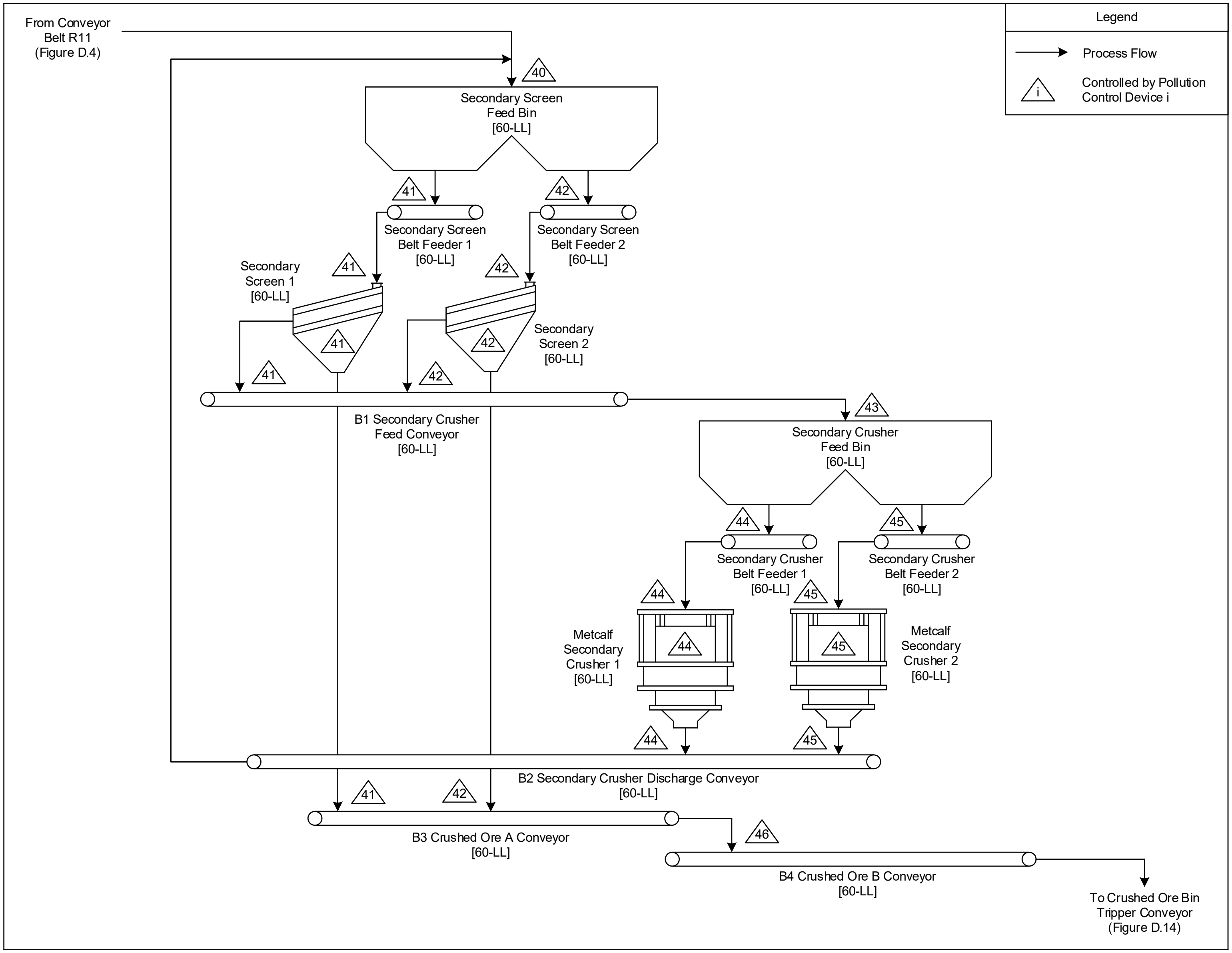

Figure D.12 Metcalf Concentrator Secondary Crushing and Screening

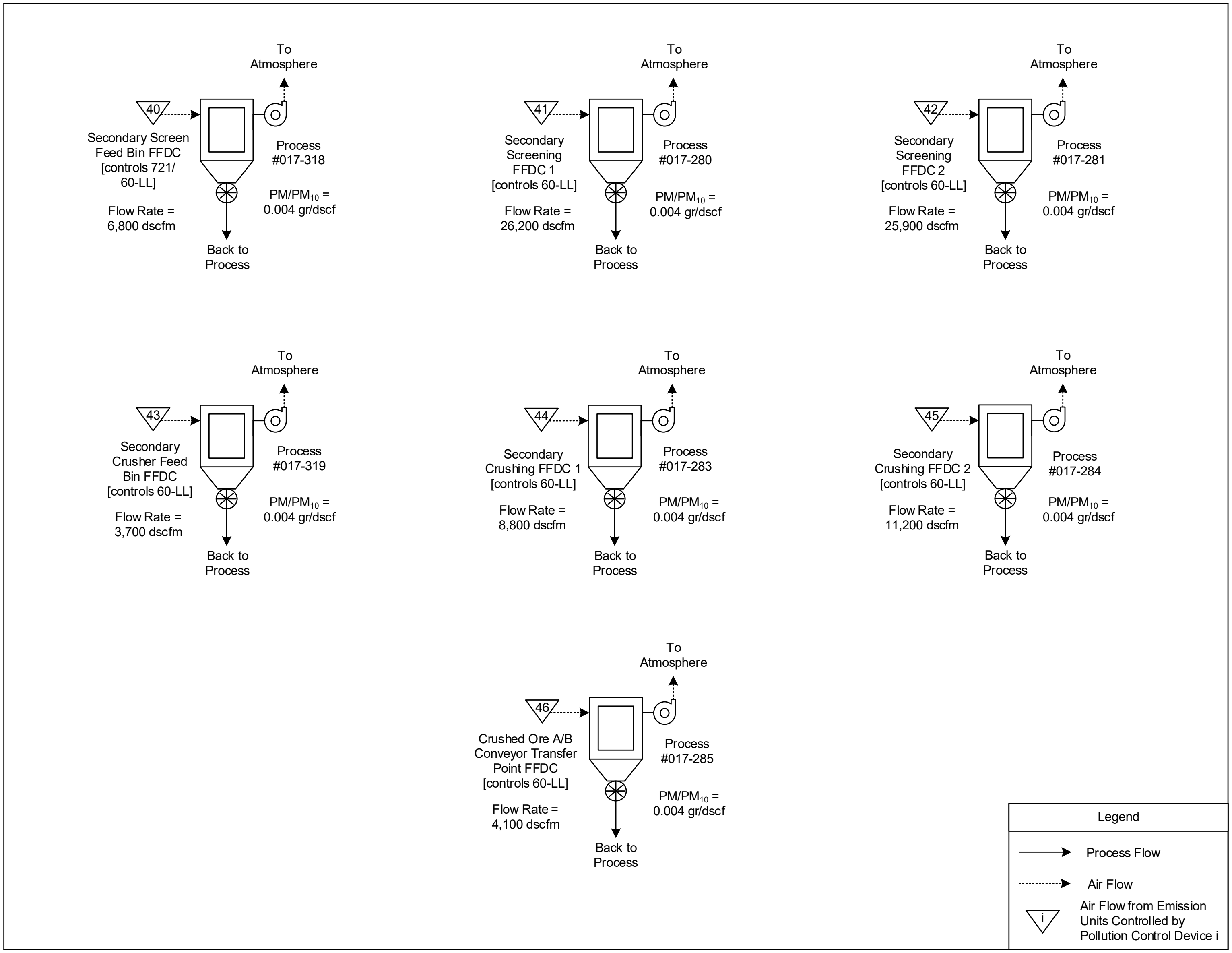

Figure D.13 Pollution Control Equipment for the Metcalf Concentrator Secondary Crushing and Screening

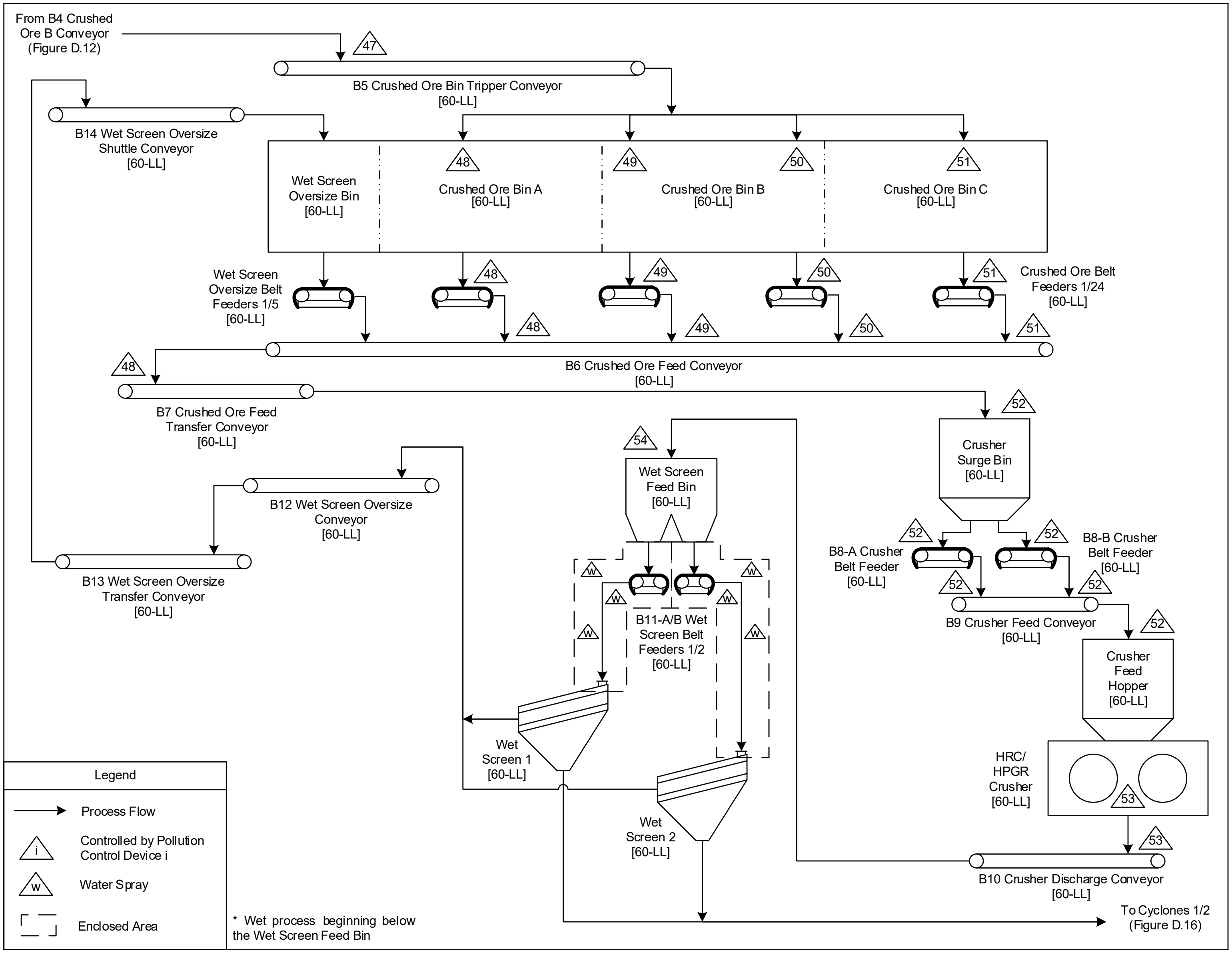

Figure D.14 Metcalf Concentrator Crushed Ore Storage, Reclaim, and Tertiary Crushing

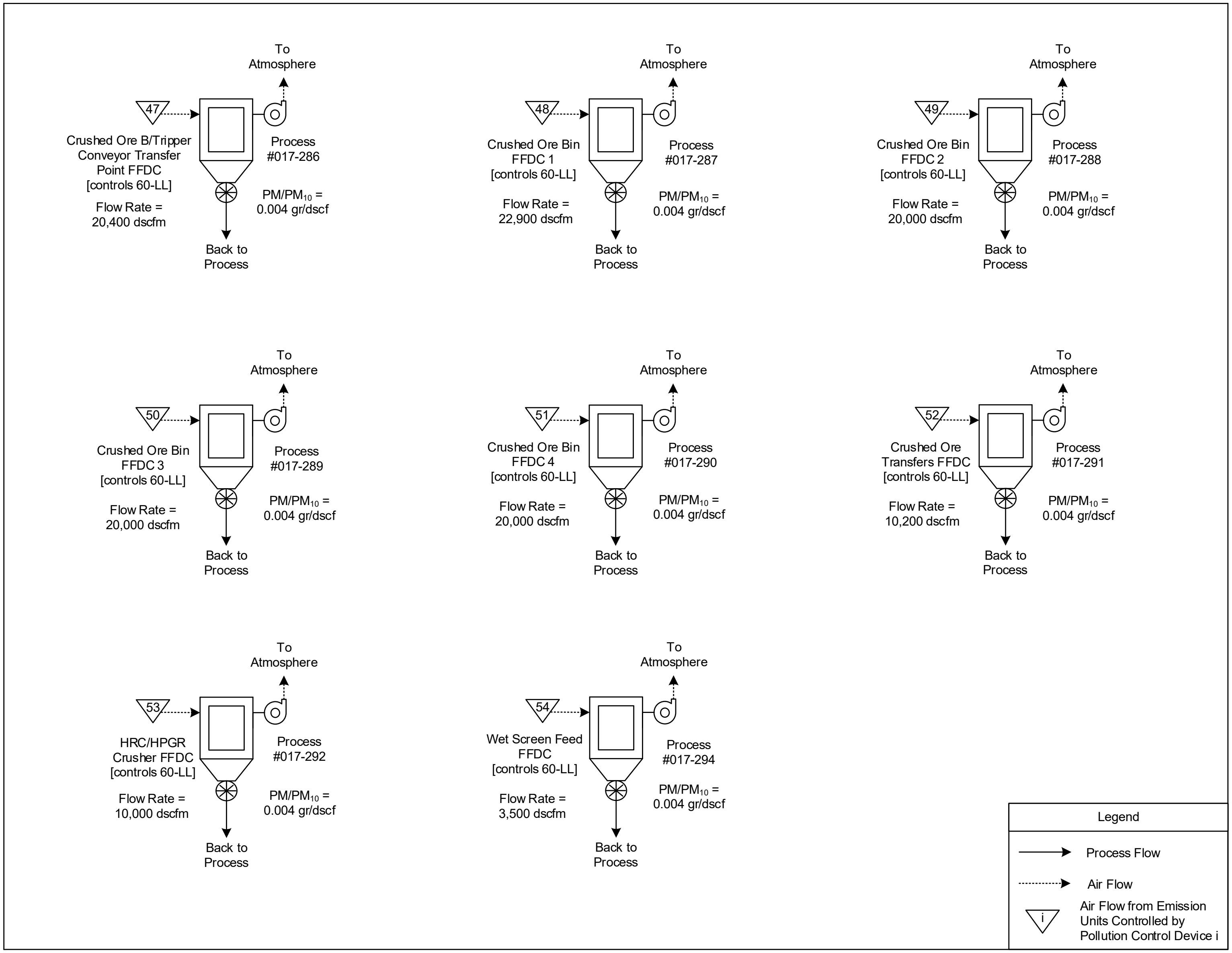

Figure D.15 Pollution Control Equipment for Metcalf Concentrator Crushed Ore Storage, Reclaim, and Tertiary Crushing

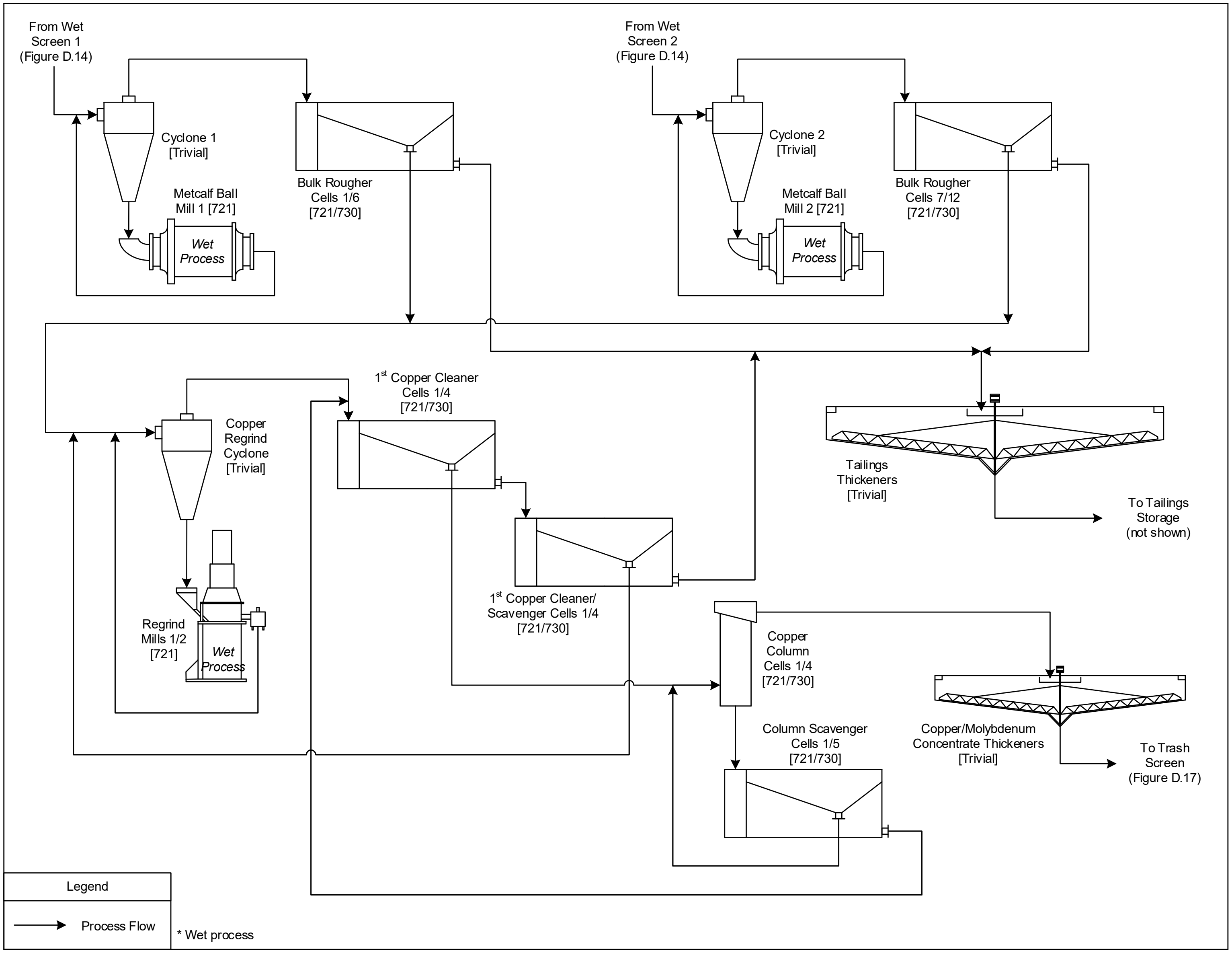

Figure D.16 Metcalf Concentrator Ball Milling and Bulk Flotation

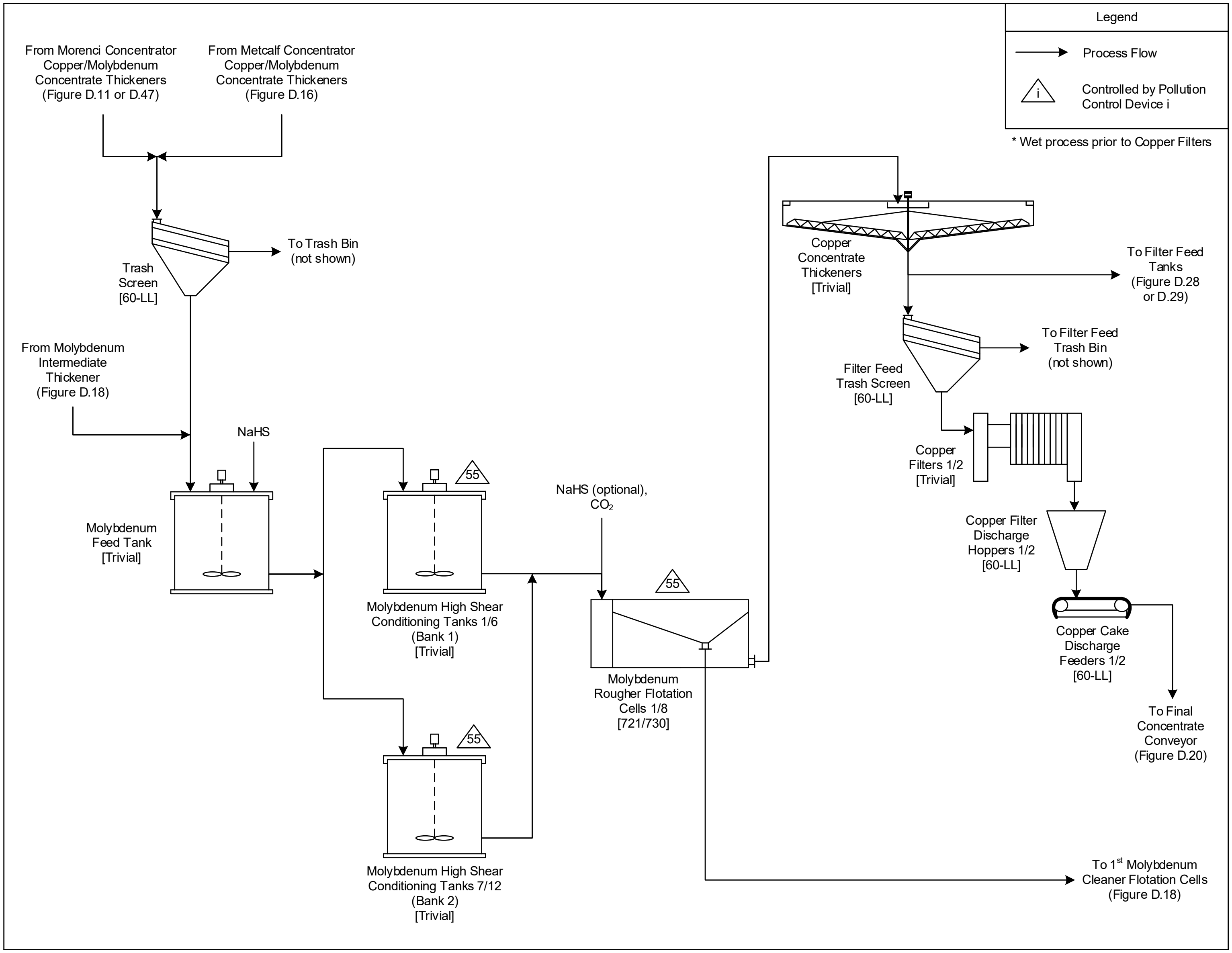

Figure D.17 Combined Molybdenum Flotation (Part 1) and Copper Concentrate Processing (Part 1)

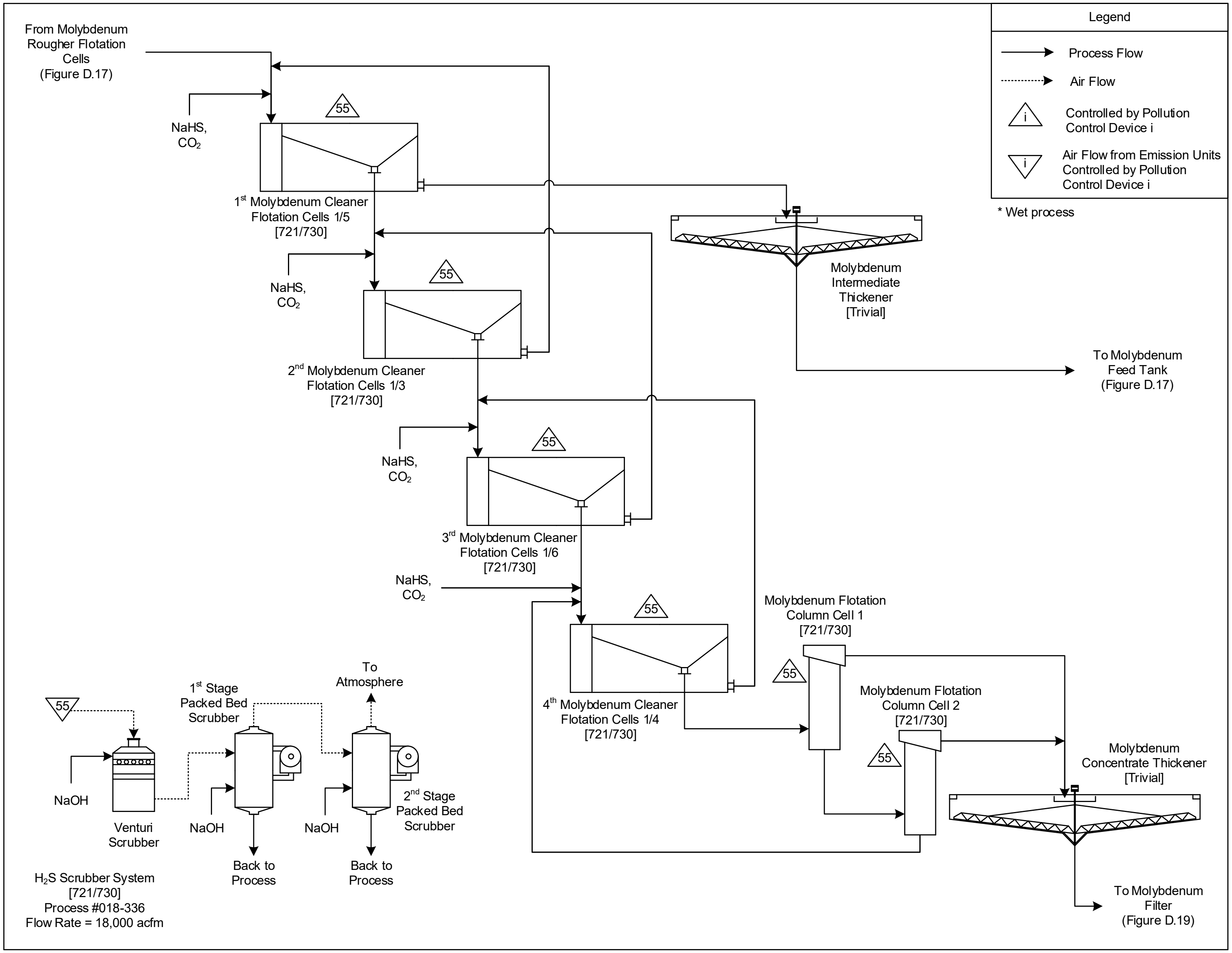

Figure D.18 Combined Molybdenum Flotation (Part 2)

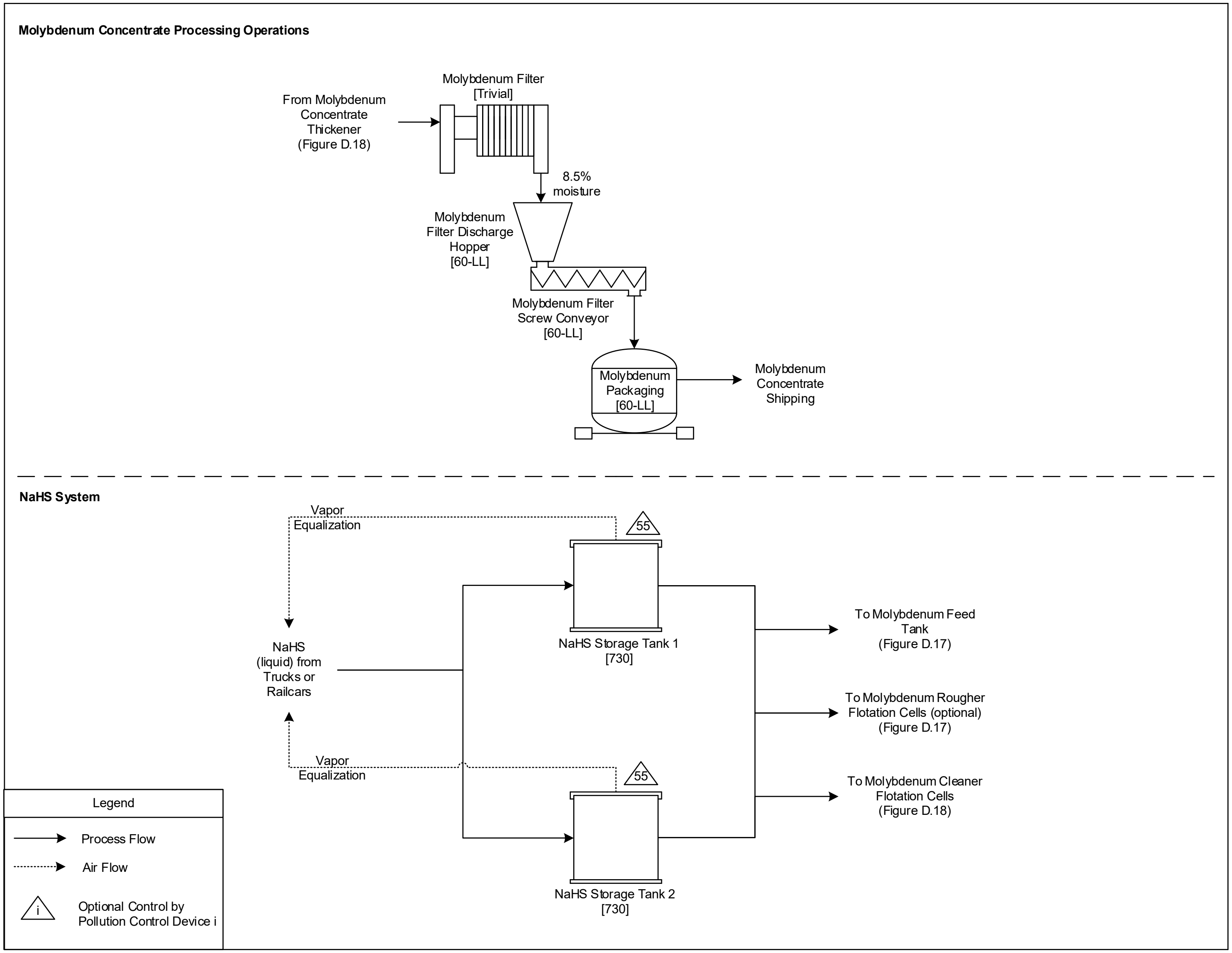

Figure D.19 Molybdenum Concentrate Processing and NaHS Storage

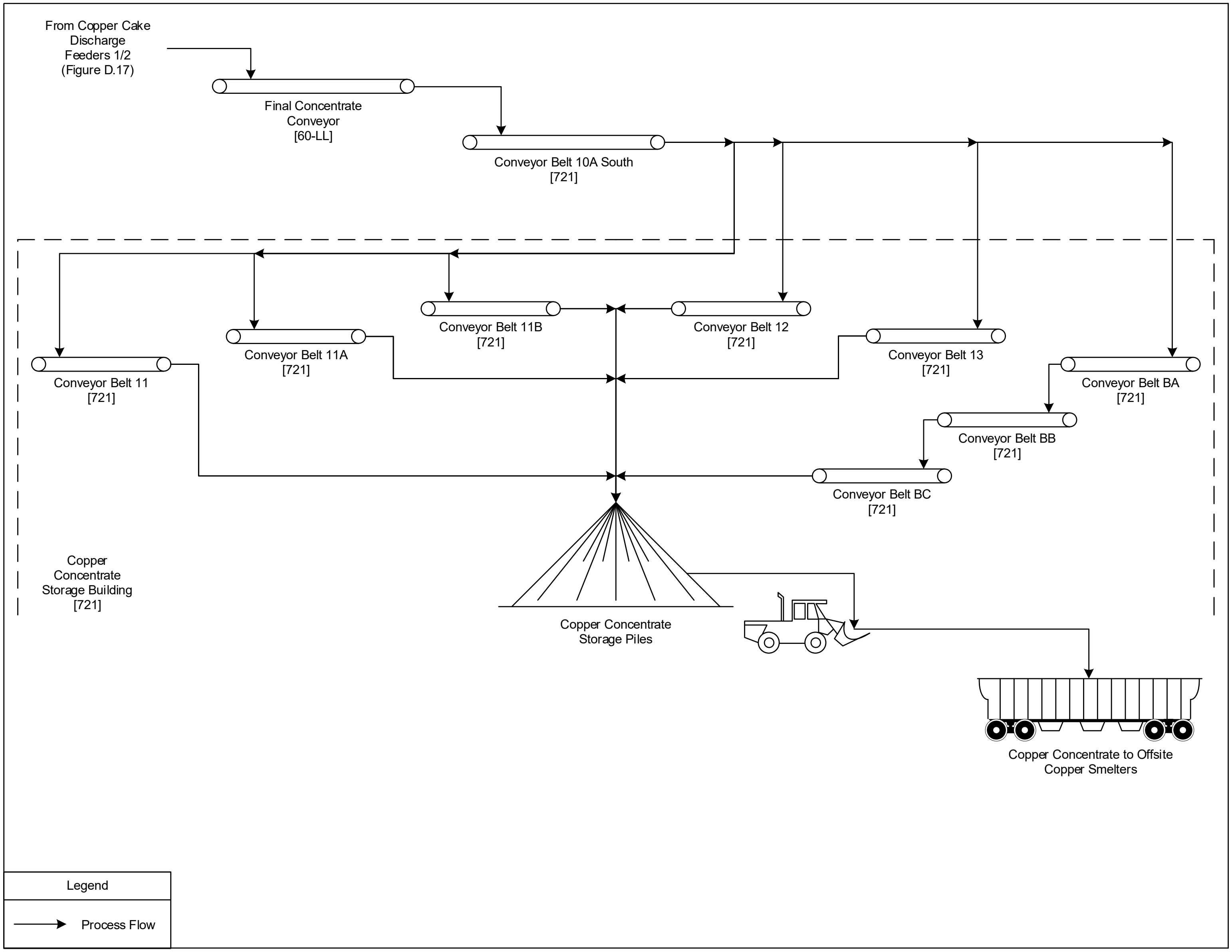

Figure D.20 Copper Concentrate Processing (Part 2)

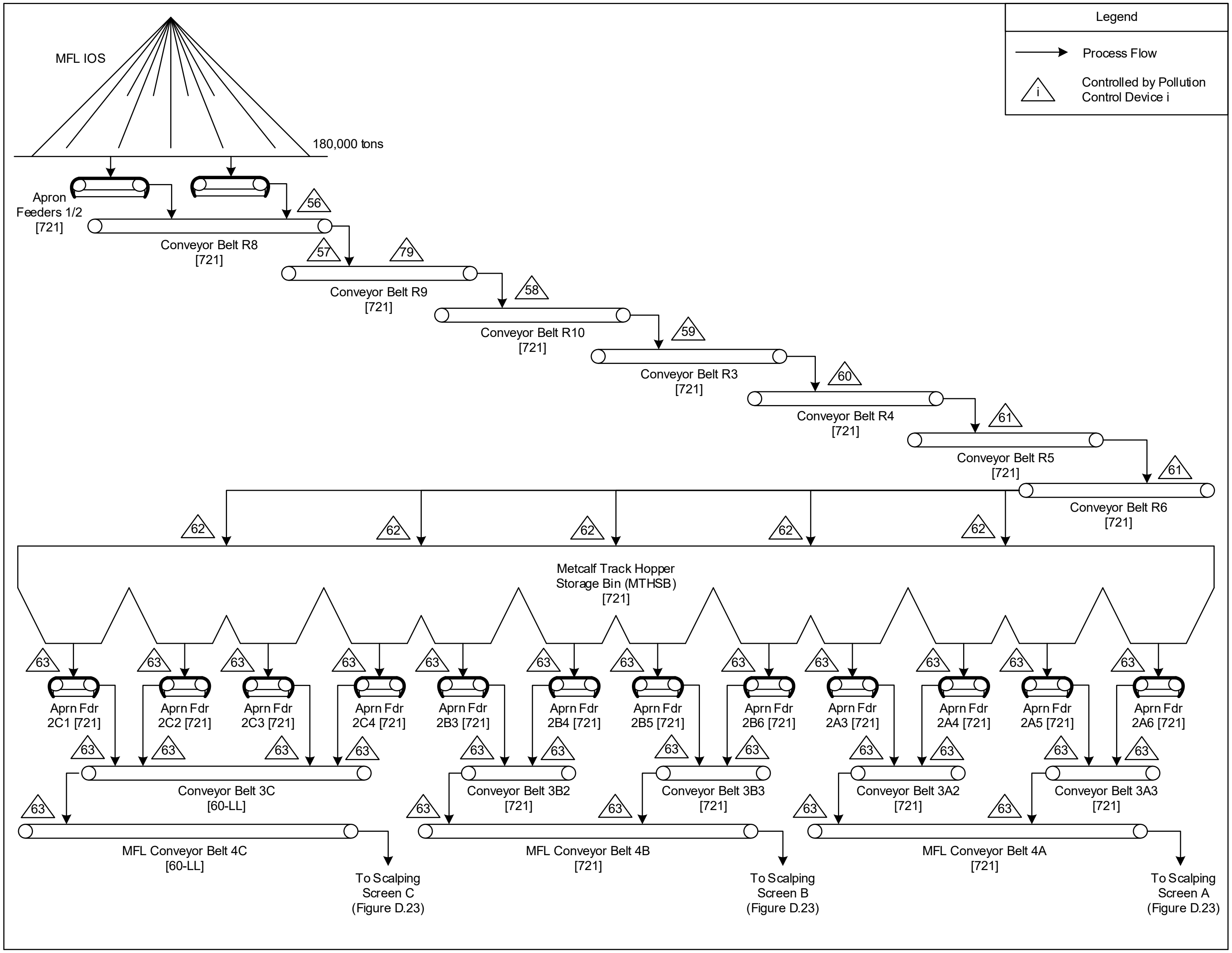

Figure D.21 MFL IOS Reclaim and MFL Storage and Conveying

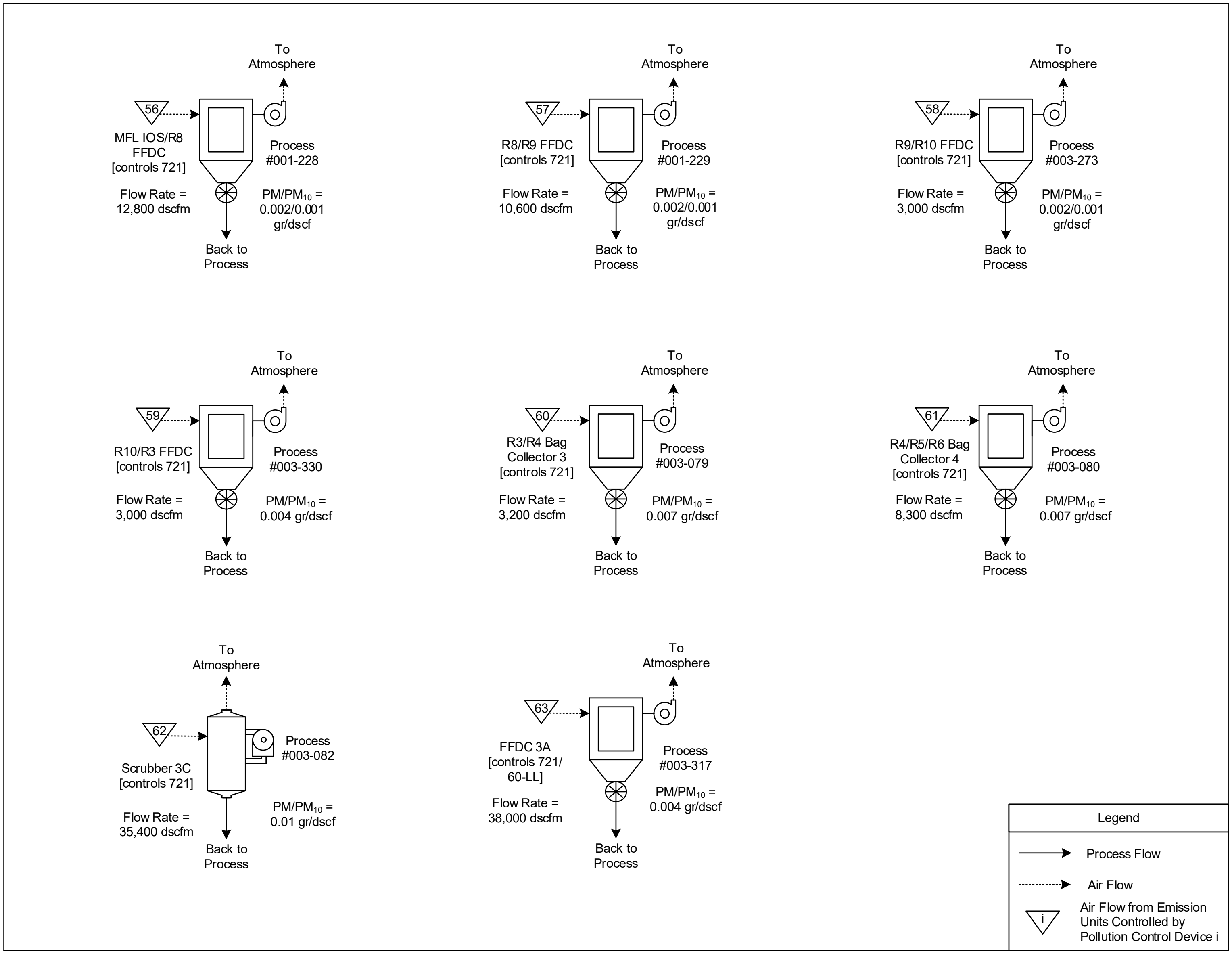

Figure D.22 Pollution Control Equipment for the MFL IOS Reclaim and MFL Storage and Conveying

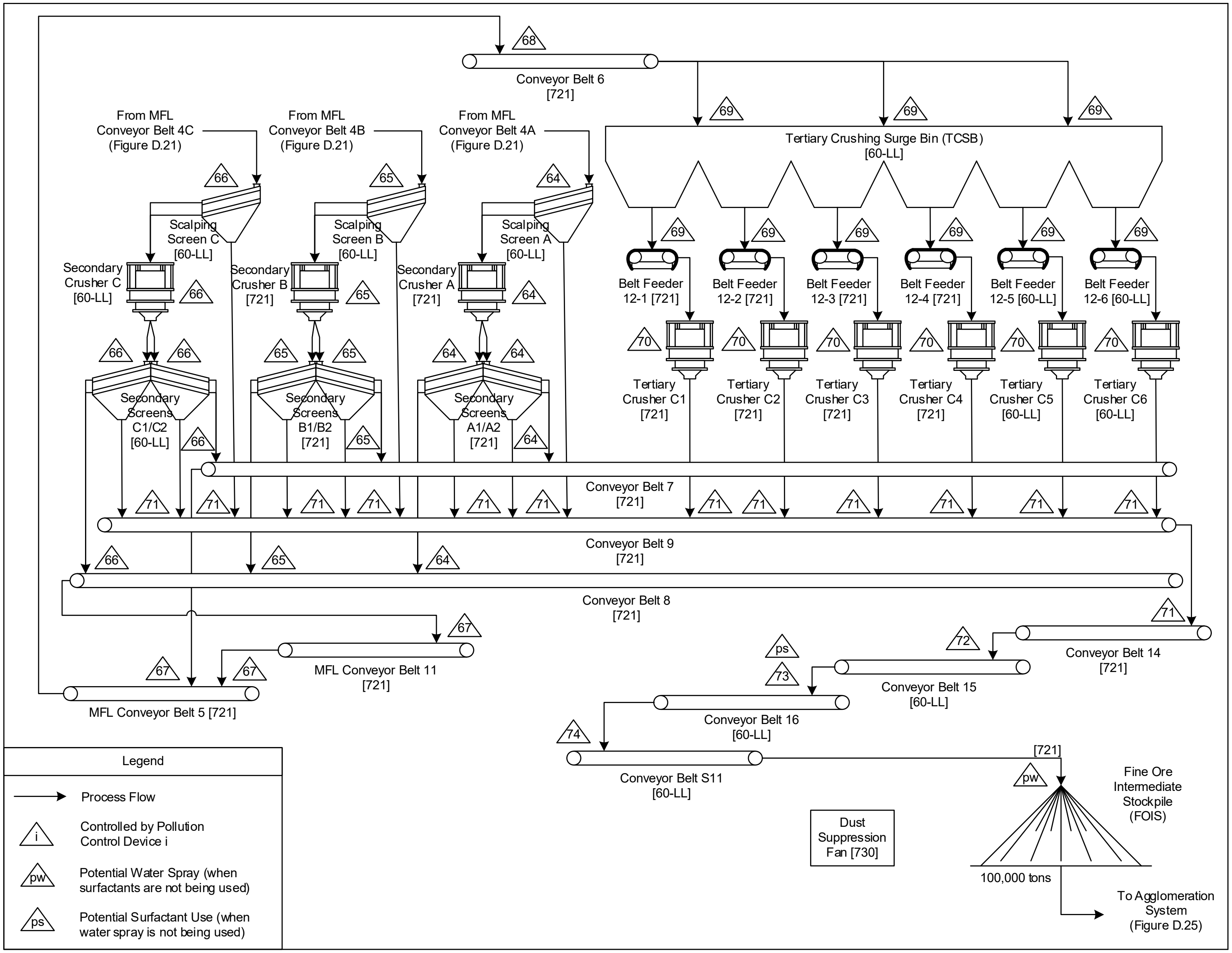

Figure D.23 MFL Secondary Crushing, Tertiary Crushing, and Conveying to FOIS

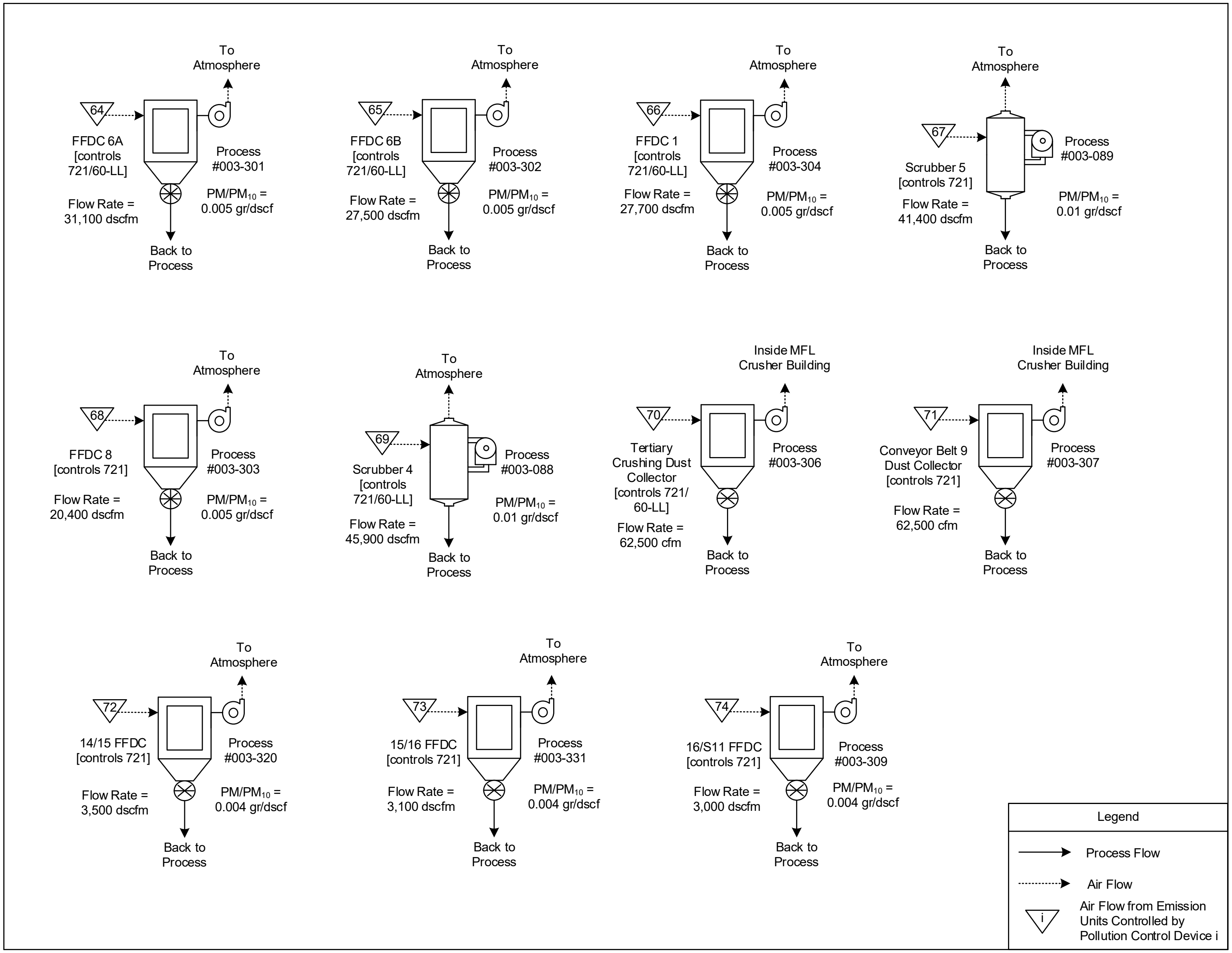

Figure D.24 Pollution Control Equipment for MFL Secondary Crushing, Tertiary Crushing, and Conveying to FOIS

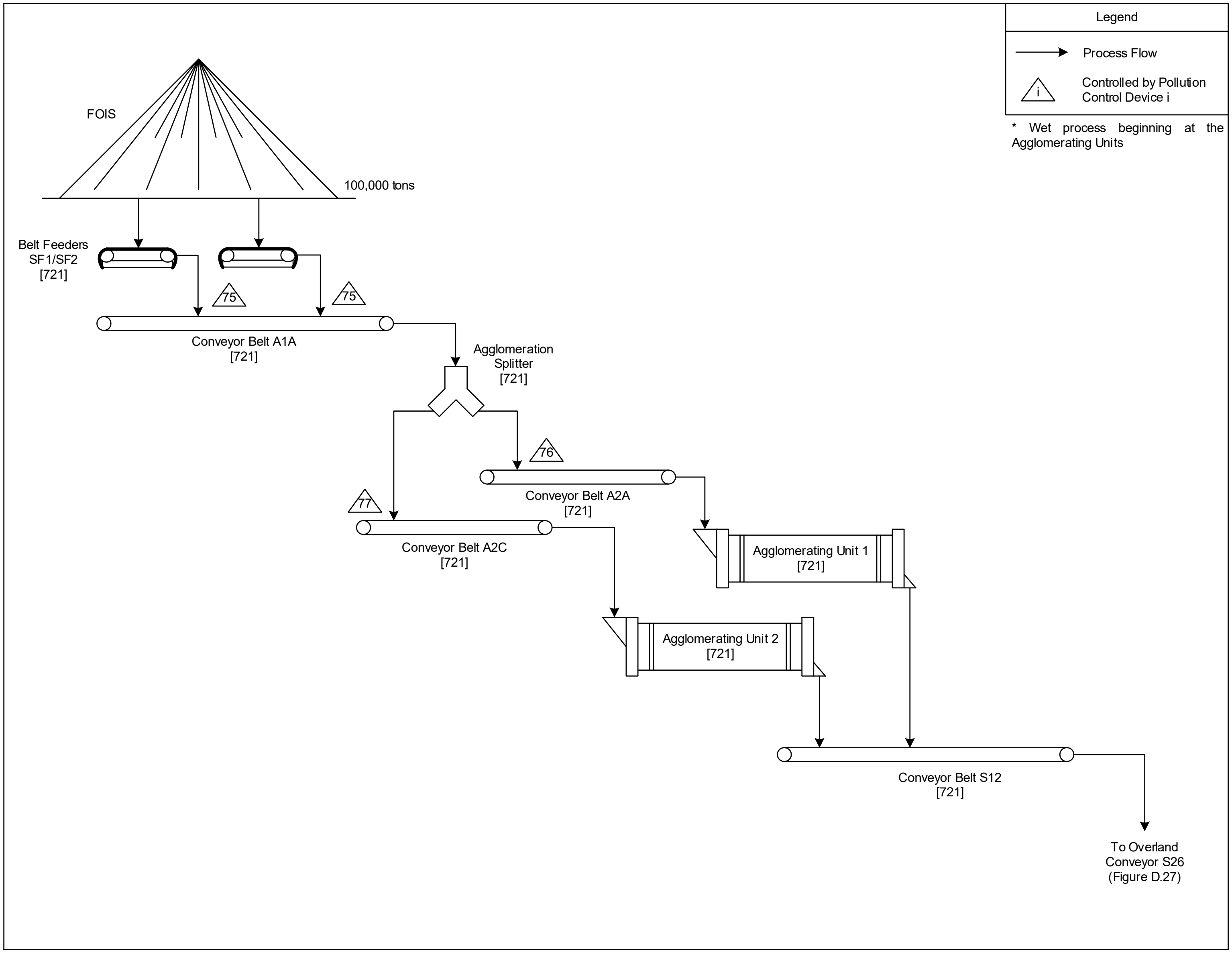

Figure D.25 MFL Agglomeration

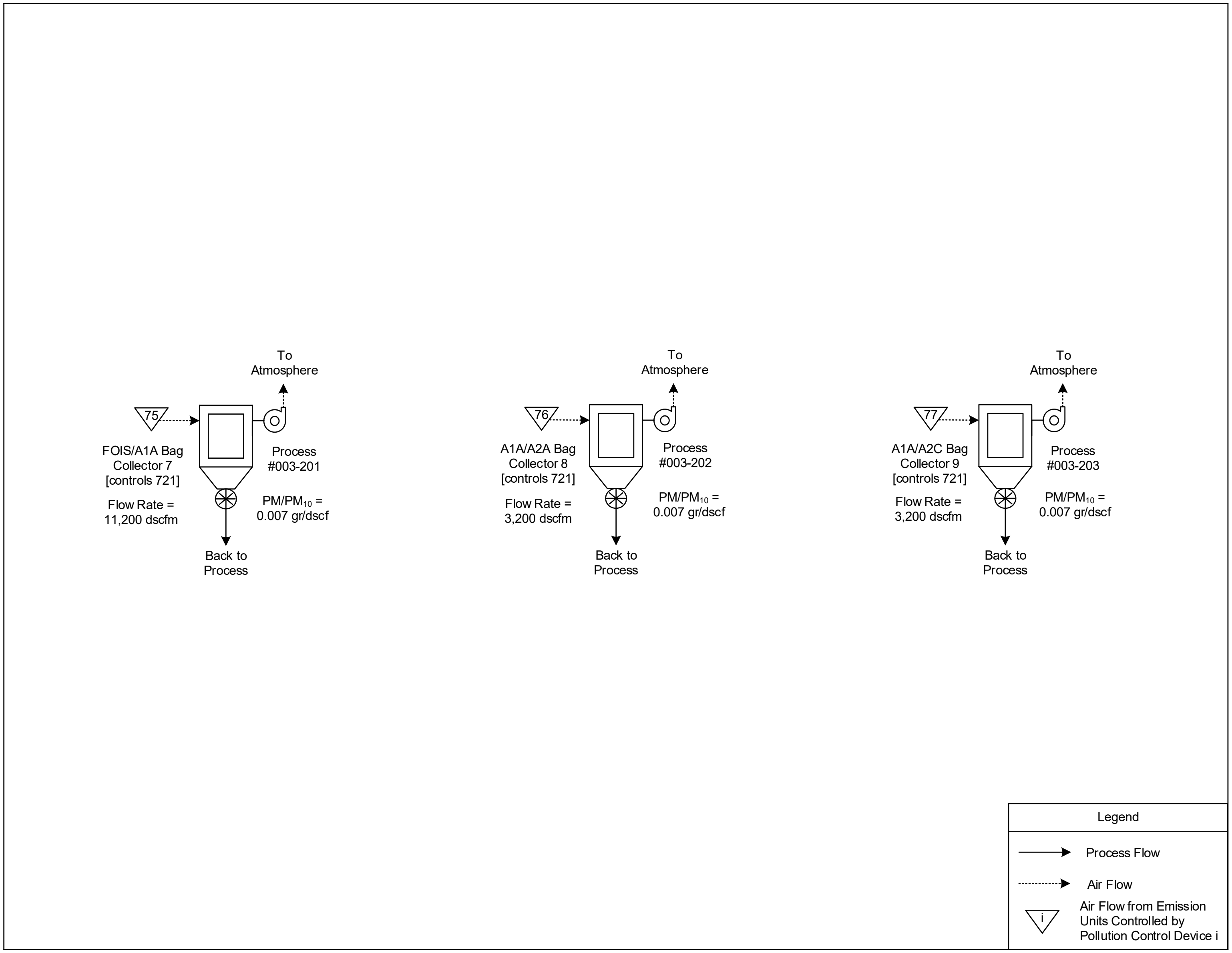

Figure D.26 Pollution Control Equipment for the MFL Agglomeration

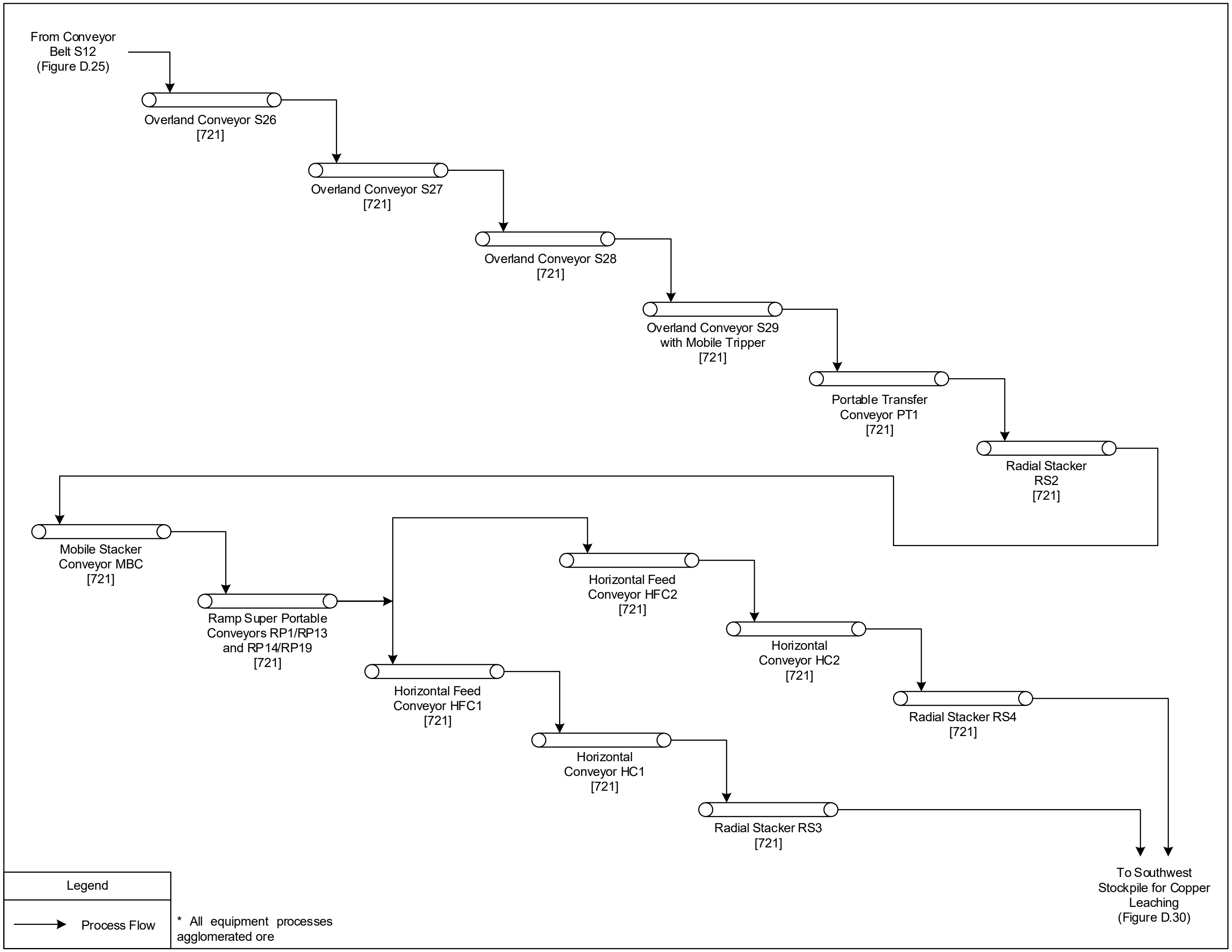

Figure D.27 MFL Conveyor Stacking System

CONFIDENTIAL AND PROPRIETARY

(see Section 19)

Figure D.28 Concentrate Leach Plant

CONFIDENTIAL AND PROPRIETARY

(see Section 19)

Figure D.29 Concentrate Leach Plant (AOS2)

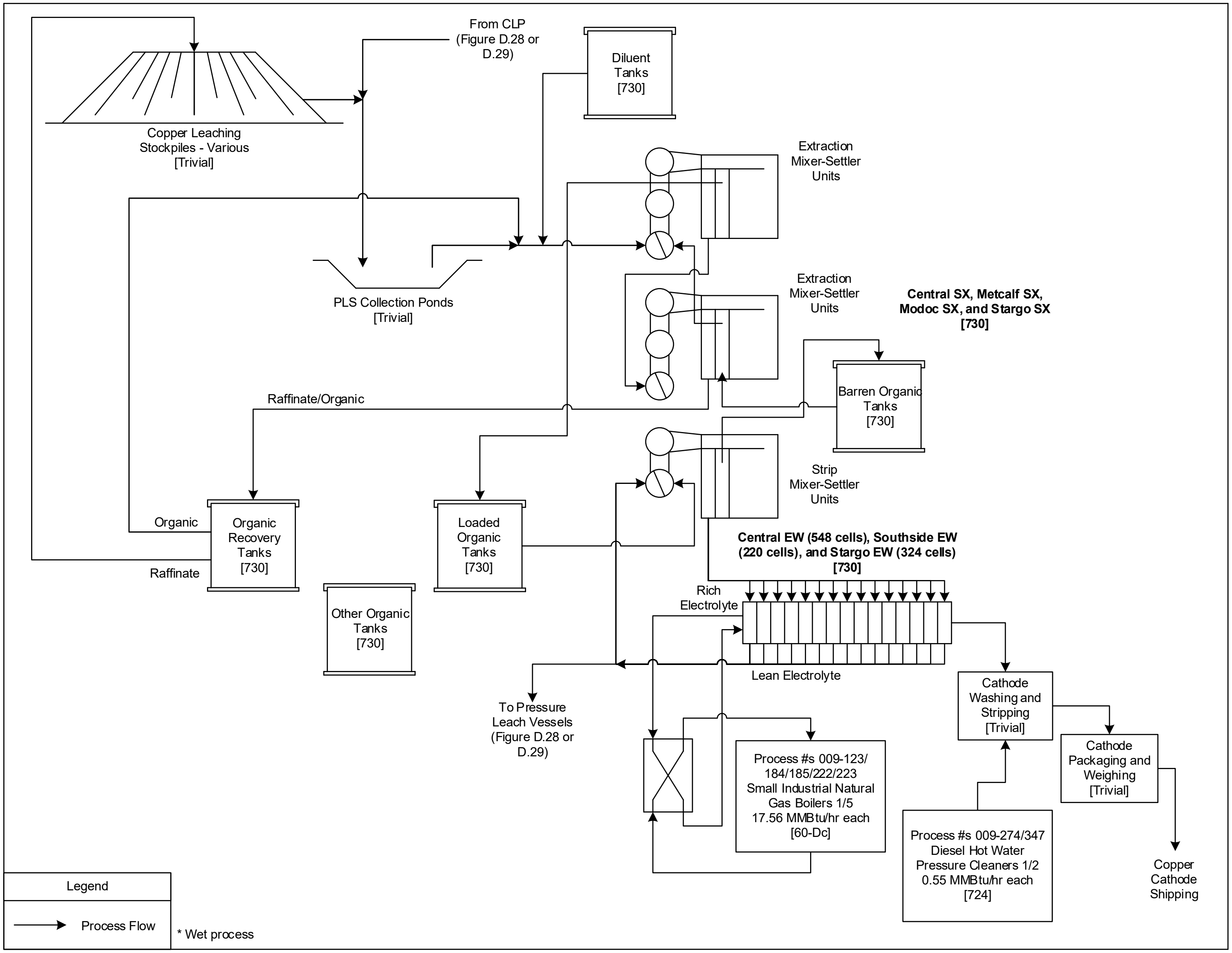

Figure D.30 Solution Extraction/Electrowinning

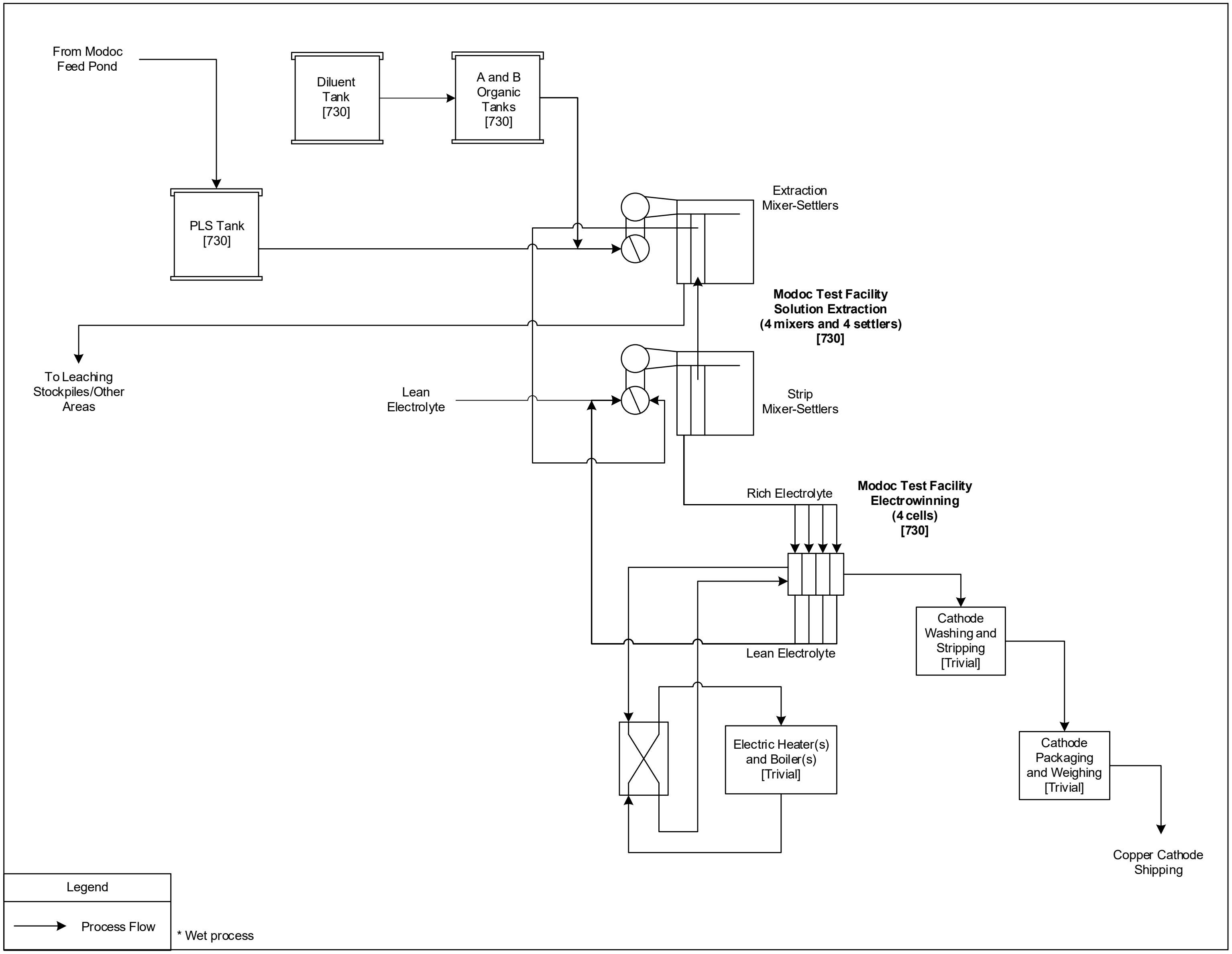

Figure D.31 Modoc Test Facility

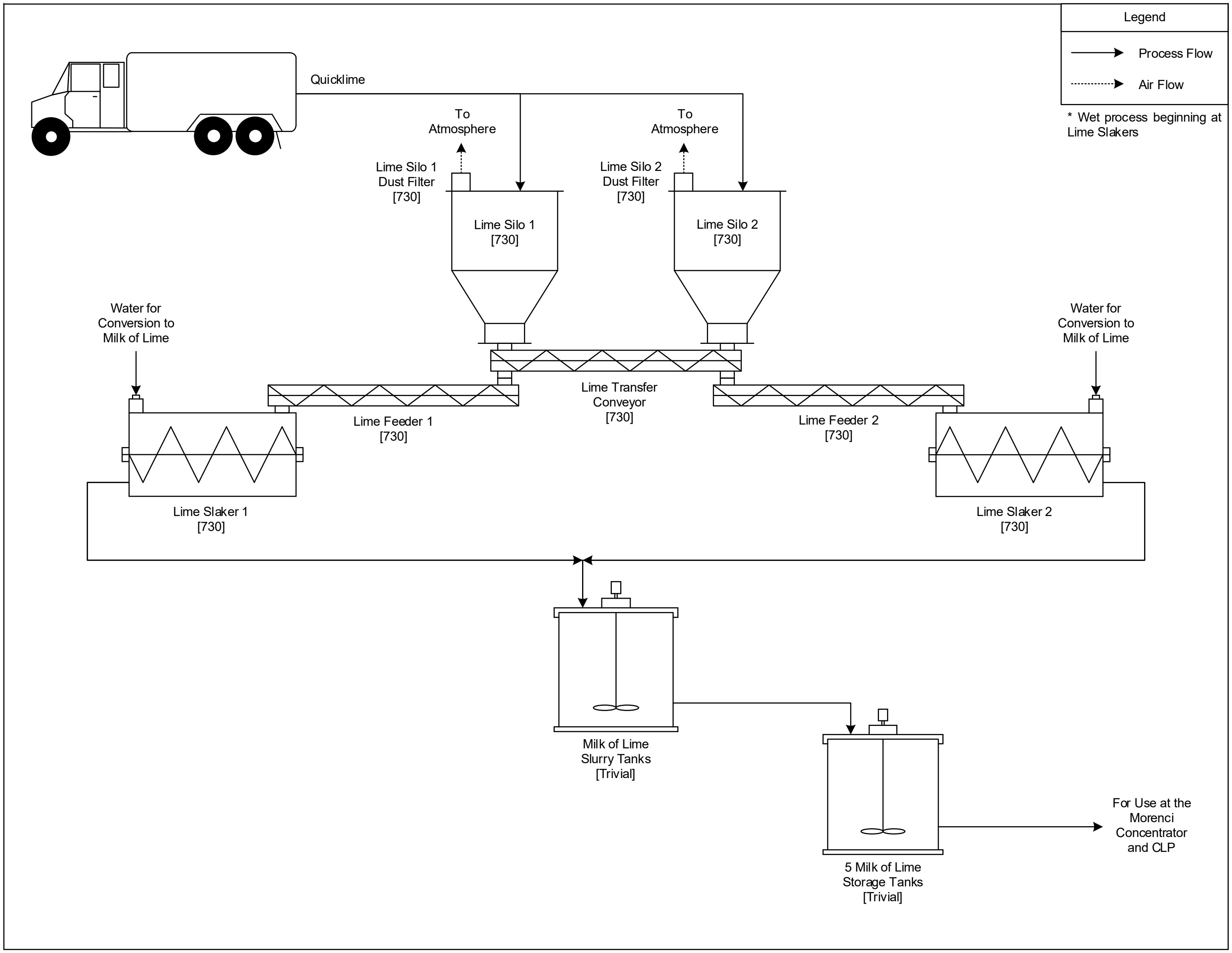

Figure D.32 Lime Slaking Plant for the Morenci Concentrator

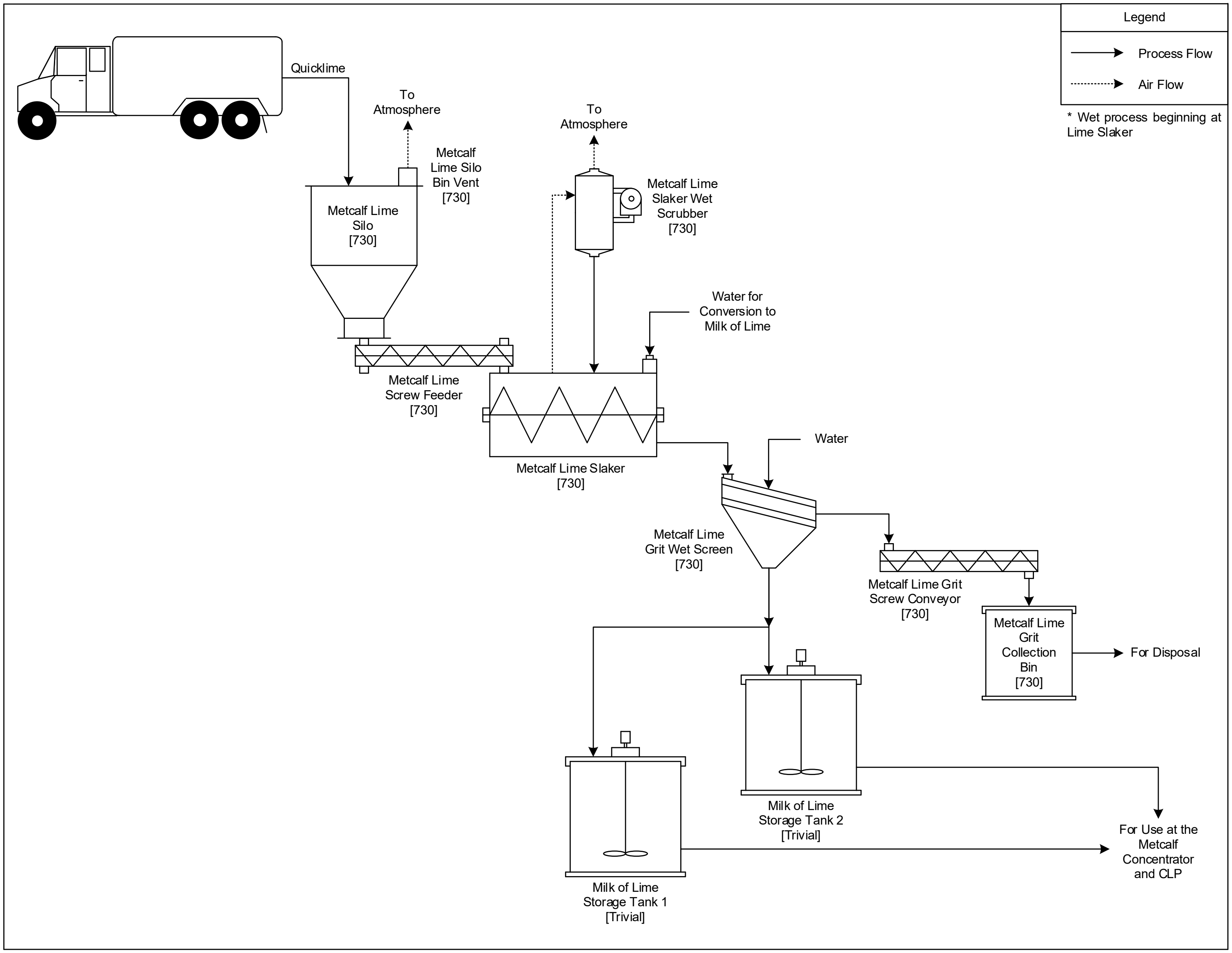

Figure D.33 Lime Slaking Plant for the Metcalf Concentrator

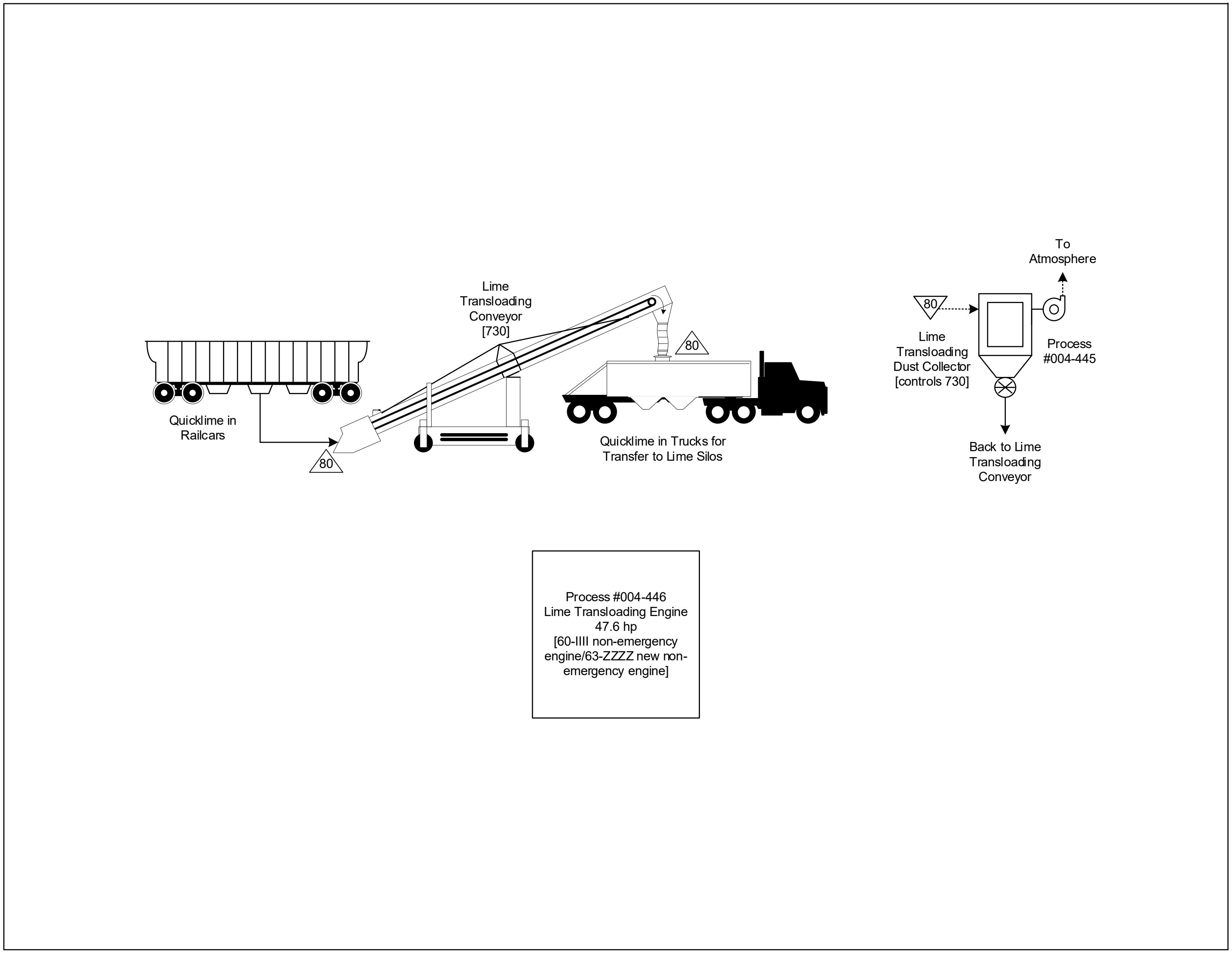

Figure D.34 Lime Transloading Operations

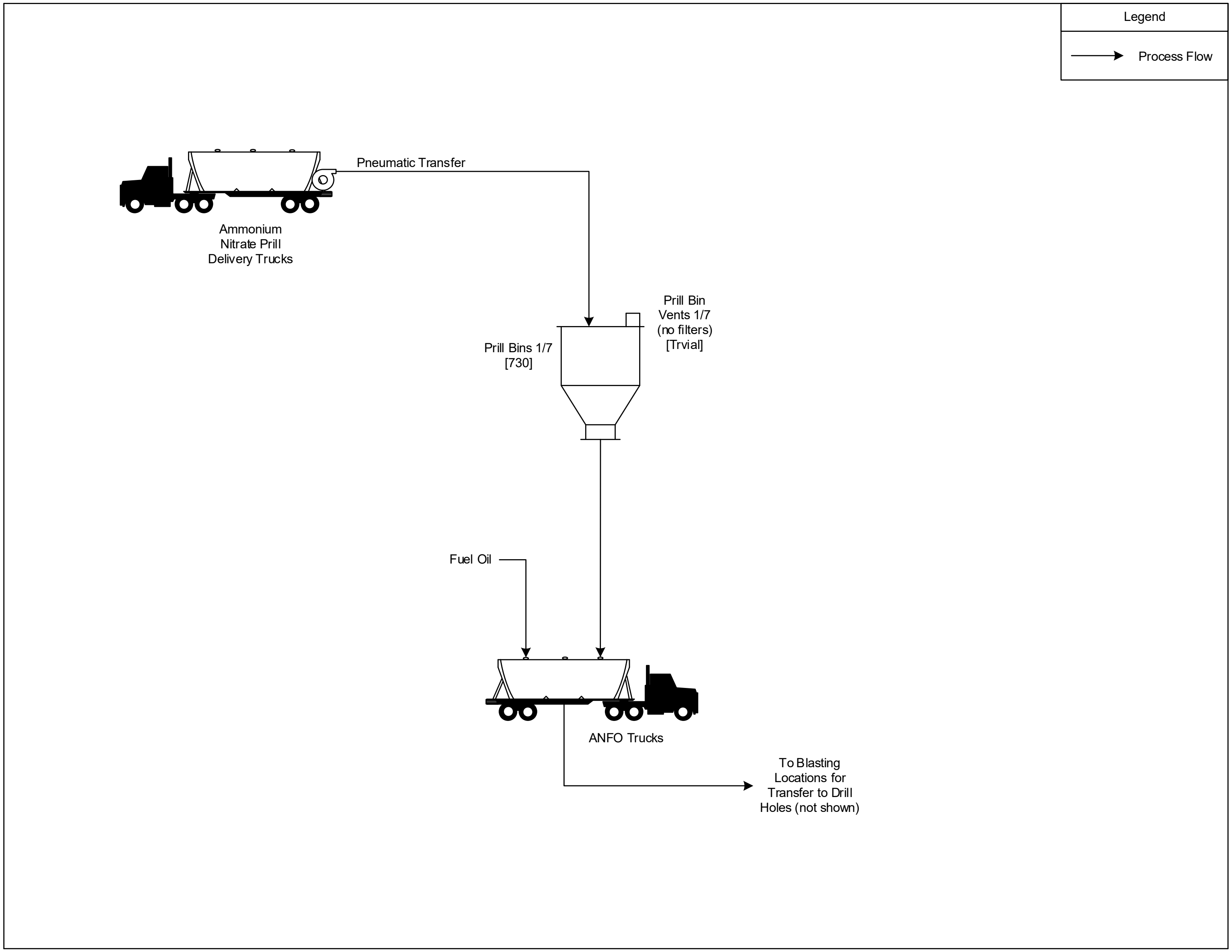

Figure D.35 Ammonium Nitrate Prill Delivery and Storage

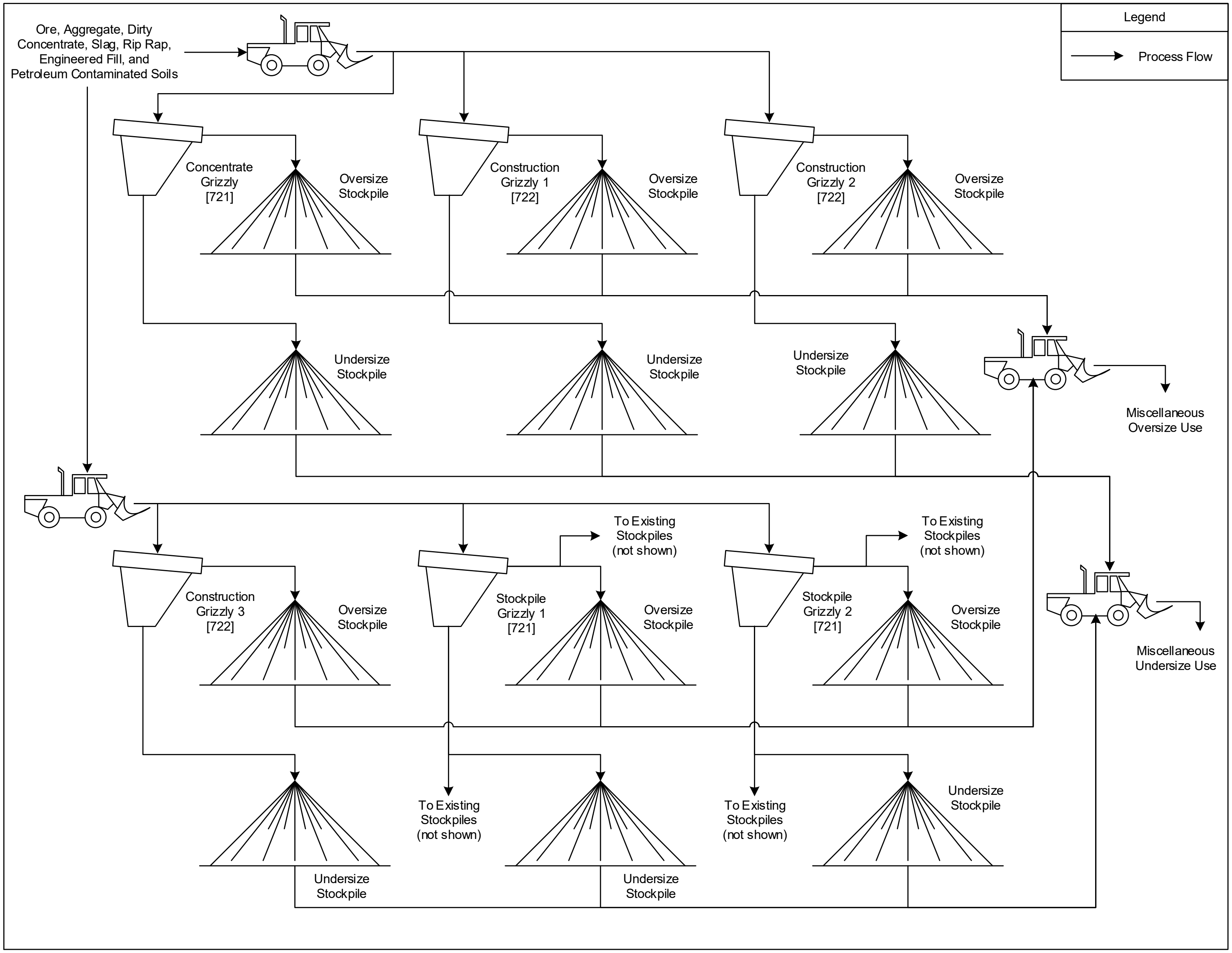

Figure D.36 Grizzly Operations

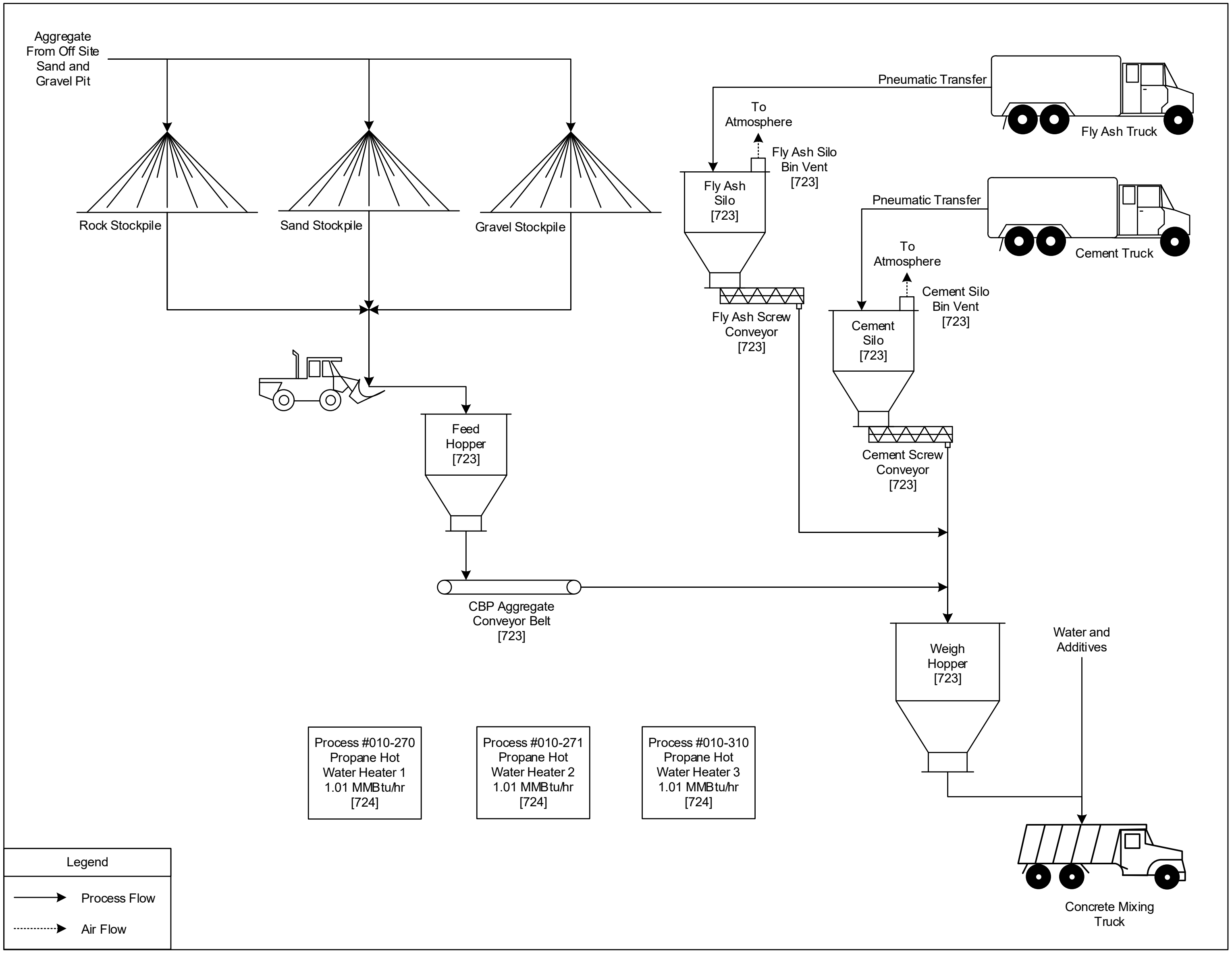

Figure D.37 Concrete Batch Plant

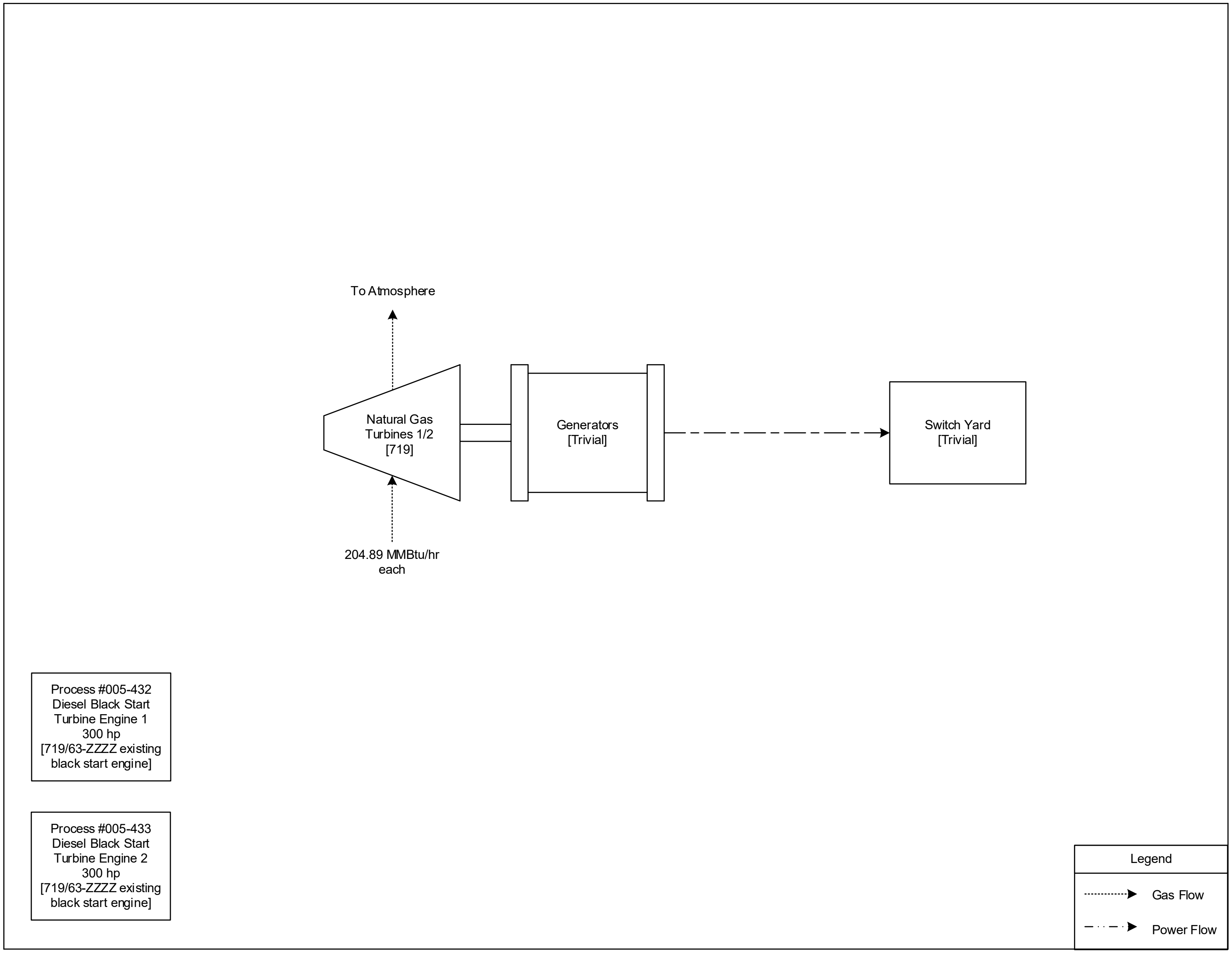

Figure D.38 Metcalf Power Plant

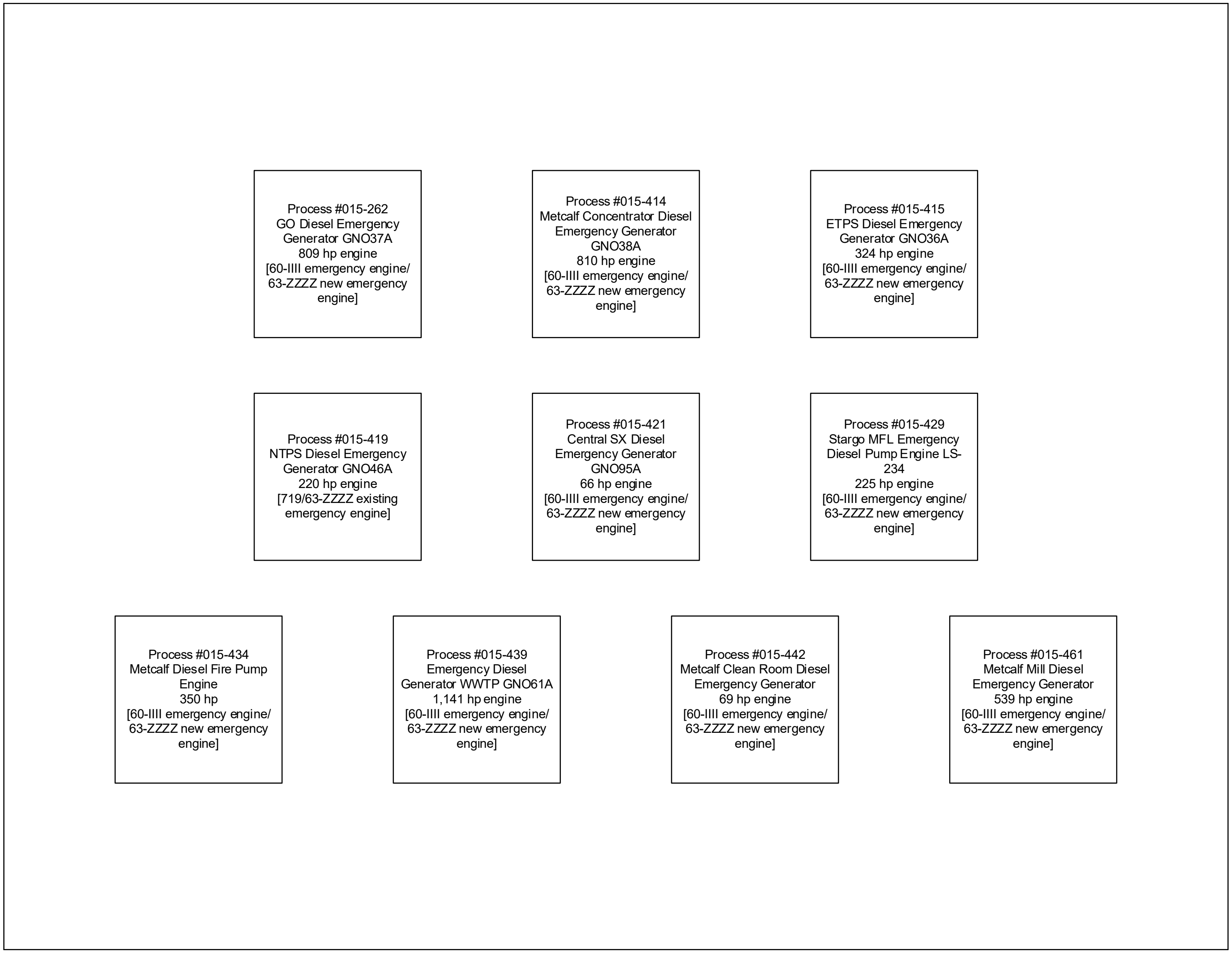

Figure D.39 Diesel Emergency Engines

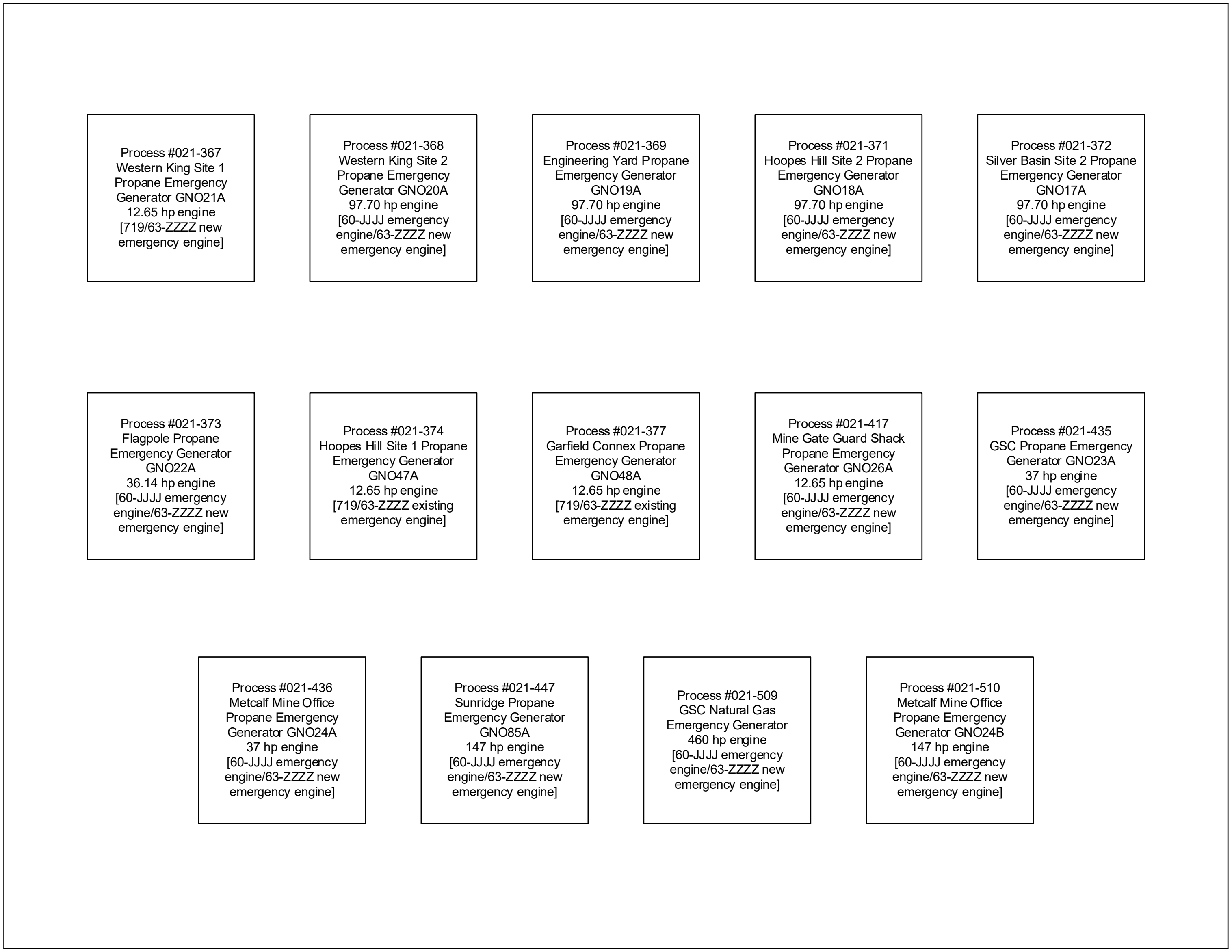

Figure D.40 Propane and Natural Gas Emergency Engines

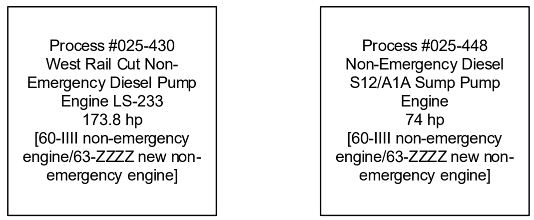

Figure D.41 Diesel Non-Emergency Engines

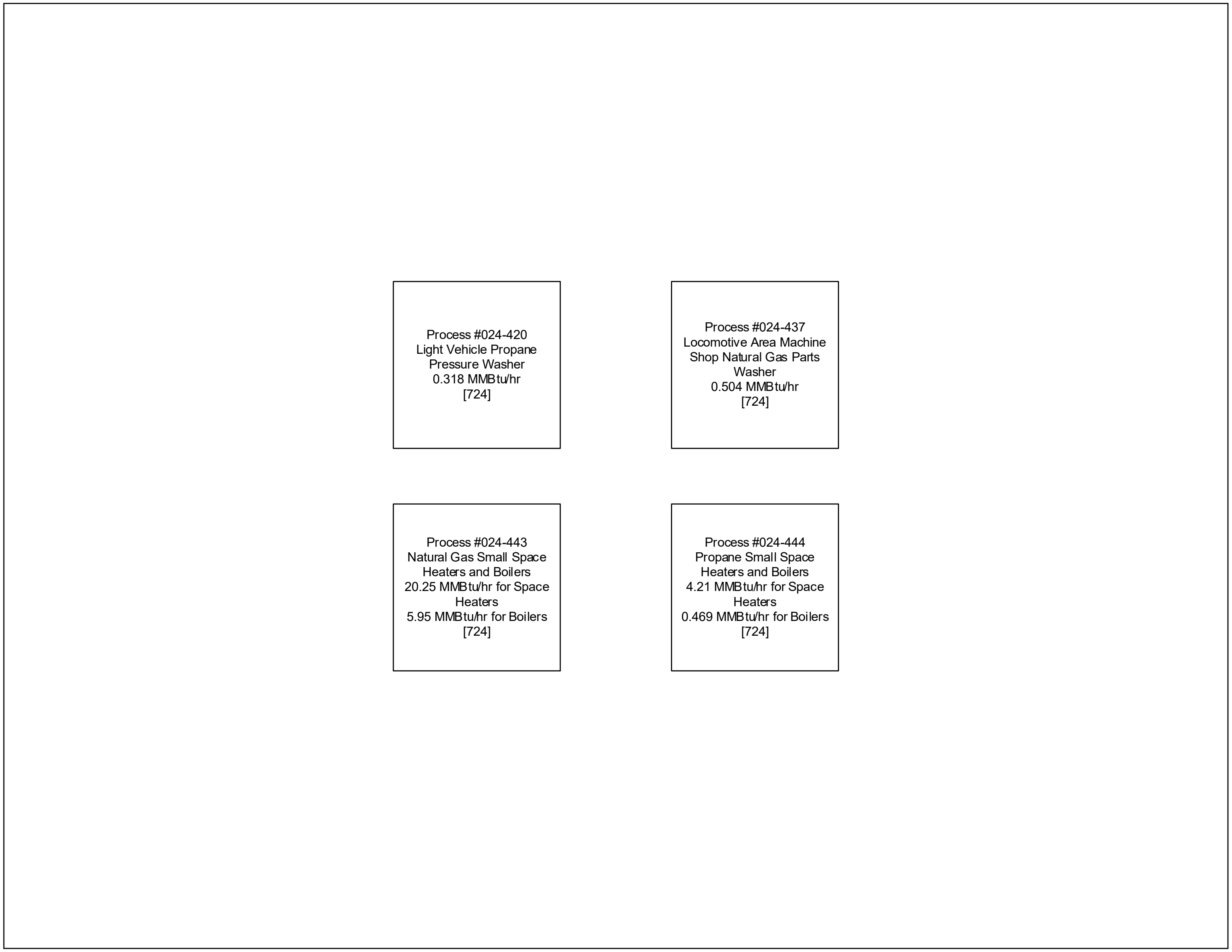

Figure D.42 Miscellaneous Fuel Burning Equipment

Diesel Storage Tanks (> 40,000 gallons only)

Process #011-150	Process #011-151	Process #011-154	Process #011-161
Diesel Tank D1	Diesel Tank D2	Diesel Tank D5	Diesel Tank Pit 95
31.25'D x 31'H	42.4'D x 31'H	20'D x 32'H	27'D x 30'H
177,850 gallons	200,434 gallons	47,255 gallons	101,690 gallons
[730]	[730]	[730]	[730]

Gasoline Storage Tanks (> 10,000 gallons only)

Process #011-155	Process #011-156	Process #011-157
Gasoline Tank G1	Gasoline Tank G2	Gasoline Tank G3
9.00'D x 25'L	9.00'D x 25'L	9.00'D x 25'L
12,000 gallons	12,000 gallons	12,000 gallons
[710/63-CCCCCC]	[710/63-CCCCCC]	[710/63-CCCCCC]

Figure D.43 Diesel and Gasoline Storage Tanks

APPENDIX E METHODOLOGY FOR POTENTIAL EMISSION CALCULATIONS

E.1 INTRODUCTION

The methodology used to calculate the emission rates presented in Section 6, Appendix C, and Appendix F of this application is explained in the following sections, including identification of process rates, emission factors, and control efficiencies. Emissions are calculated using the following general equations:

$$E_A = PR_A \times EF \times \left(1 - \frac{CE}{100}\right) \times \left(\frac{1\text{ ton}}{2{,}000\text{ lb}}\right)$$

$$E_H = PR_H \times EF \times \left(1 - \frac{CE}{100}\right)$$

where:

E_A	=	calculated emissions on an annual basis (tons of pollutant/yr);
E_H	=	calculated emissions on an hourly basis (lb of pollutant/hr);
PR_A	=	annual process rate associated with the emission unit (activity/yr);
PR_H	=	hourly process rate associated with the emission unit (activity/hr);
EF	=	emission factor (lb of pollutant/activity); and
CE	=	efficiency associated with a control method (%).

E.2 PROCESSES CONTROLLED BY POLLUTION CONTROL DEVICES WITH EMISSION FACTORS IN UNITS OF LB/DSCF

E.2.1 Process Rates

The annual and hourly process rates for the processes controlled by pollution control devices with emission factors in units of lb/dscf are based on the hours of operation and the exhaust flow rate of the pollution control devices in units of dscfm. When necessary, the exhaust flow rate of the pollution control devices in units of cfm is assumed equal to dscfm. The exhaust flow rate in units of dscfm will always be less than the exhaust flow rate in units of acfm due to the ambient pressure of the FMMI facility and the expected dust collectors exhaust temperature. Therefore, assuming dscfm is equal to cfm is a worst-case estimate in regard to emission calculations. The exhaust flow rates, and process rates of the processes controlled by pollution control devices with emission factors in units of lb/dscf are presented in Table E.1.

E.2.2 Emission Factors

PM and PM_{10} emissions from the processes controlled by pollution control devices with emission factors in units of lb/dscf are based on voluntary emission limitations (see Section 8) or maximum expected outlet grain loadings converted to units of lb/dscf. $PM_{2.5}$ emissions are assumed equal to PM_{10} emissions as a worst-case emission estimate.

HAP emissions from the processes controlled by pollution control devices with emission factors in units of lb/dscf are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for the processes controlled by pollution control devices with emission factors in units of lb/dscf are presented in Table E.1.

E.2.3 Control Efficiencies

Dust collectors, bag collectors, and scrubbers are used to control the affected processes. The control efficiency of these devices is incorporated into the emission factor discussed in Section E.2.2.

E.3 PROCESSES CONTROLLED BY POLLUTION CONTROL DEVICES WITH EMISSION FACTORS IN UNITS OF LB/HR

E.3.1 Process Rates

The annual and hourly process rates for the processes controlled by pollution control devices with emission factors in units of lb/hr are based on the hours of operation. The process rates are presented in Table E.2.

E.3.2 Emission Factors

PM and PM_{10} emissions from the processes controlled by pollution control devices with emission factors in units of lb/hr are based on engineering estimates, manufacturer guarantees, and/or voluntary emission limitations (see Section 8). $PM_{2.5}$ emissions are assumed equal to PM_{10} emissions as a worst-case emission estimate.

HAP emissions from processes controlled by pollution control devices with emission factors in units of lb/hr are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for the processes controlled by pollution control devices with emission factors in units of lb/hr are presented in Table E.2.

E.3.3 Control Efficiencies

Scrubbers are used to control the affected processes. The control efficiency of the scrubbers is incorporated into the emission factor discussed in Section E.3.2.

E.4 DRILLING

E.4.1 Process Rates

The annual and hourly process rates for drilling are based on the number of holes necessary for the quantity of blasts described in Section E.5.1. The process rates for drilling and a description of how they were determined are presented in Table E.3.

E.4.2 Emission Factors

PM emissions from drilling are calculated using the emission factor of from AP-42 Table 11.9-4 (10/98) for total suspended particulates (TSP) from drilling of overburden at western surface coal mines. The TSP emission factor is assumed to be applicable for PM. PM_{10} and $PM_{2.5}$ emissions from drilling are not listed in AP-42 Table 11.9-4. PM_{10} and $PM_{2.5}$ emissions are assumed equal to 60% and 11.1%, respectively, of PM emissions based on the ratio determined using the emission factors in AP-42 Table 11.9.2-2 and Figure 11.19-4 (08/04) for tertiary crushing (controlled).

HAP emissions from drilling are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for drilling are presented in Table E.4.

E.4.3 Control Efficiencies

Add-on pollution control methods are not implemented during drilling. Instead, emissions are minimized by using best operating practices and water application as needed.

E.5 BLASTING

E.5.1 Process Rates

The annual process rate for blasting is based on the number of blasts necessary to achieve the maximum mining rate. The hourly process rate is based on the assumption that a single blast can be detonated in an hour. The process rates for blasting are presented in Table E.3.

E.5.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from blasting are calculated using the following emission factor expression from AP-42 Table 11.9-1 (10/98) for blasting at western surface coal mines:

$$EF_h = (k)(0.000014)\left(A_{max}^{1.5}\right)$$

$$EF_a = (k)(0.000014)\left(A_{avg}^{1.5}\right)$$

where:

EF_h = emission factor on an hourly basis (lb/blast);

EF_a = emission factor on an annual basis (lb/blast);

k = particle size multiplier (1 for TSP, assumed to be equivalent to PM, 0.52 for PM_{10}, 0.03 for $PM_{2.5}$);

A_{max} = maximum horizontal area of a blast (220,000 ft^2 maximum); and

A_{avg} = average horizontal area of the blasts (85,694 ft^2 average).

HAP emissions from blasting are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

CO emissions from blasting are calculated using an emission factor from the article titled *Factors Affecting ANFO Fumes Production* by The National Institute for Occupational Safety and Health (NIOSH) (2001). The emission factor is based on the data points in Figure 2 for ANFO with a 6% fuel oil content. NO_X emissions are calculated using the average emission factor from the journal article titled *NO_X Emissions from Blasting Operations in Open-Cut Coal Mining* from Atmospheric Environment 42 (2008), which presents the results of a more successful technique used to measure NO_X emissions from blasting. SO_2 emissions are calculated assuming all the sulfur in the ANFO is converted to SO_2 emissions. The sulfur content of the diesel fuel is a maximum of 0.0015% while the sulfur content of the animal fat used in the ANFO emulsions is estimated at a worst-case value of 500 ppm based on a 03/2003 EPA document that states biofuels reduce SO_2 emissions more than No. 2 diesel. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2 and rendered animal fat.

Supplementary HAP emissions from blasting are calculated using emission factors from AP-42 Tables 1.3-8 and 1.3-10 (05/10) for distillate fuel oil combustion. The formaldehyde emission factor is assumed to be equal to the high-end value of the formaldehyde range as a worst-case emission estimate. Additionally, it is assumed that HAP emissions from diesel combustion are an upper limit for HAP emissions from animal fat combustion.

The following parameters are used to express the blasting emission factors in units of lb/blast:

- A diesel fuel density of 7.05 lb/gal (AP-42 Table 1.3-12);
- An animal fat density of 7.34 lb/gal (*A Demonstration of Fat and Grease as an Industrial Boiler Fuel*);
- Maximum annual and hourly usage of ammonium nitrate prill, ammonium nitrate solution, diesel fuel, and animal fat (maximum mining rates with a 94% ammonium nitrate and 6% fuel oil blasting mixture);
- The ammonium nitrate prill contains 99.8% ammonium nitrate;
- The ammonium nitrate solution contains 81% ammonium nitrate;
- The solution used to make ANFO emulsions contains 78.5% diesel and 21.5% animal fat;

- A diesel heating value of 137,000 Btu/gal; and
- An animal fat heating value of 0.125 MMBtu/gal.

The emission factors for blasting are presented in Table E.5. Because the inputs and parameters used to calculate the emission factors vary on an annual and hourly basis, two sets of emission factors are developed.

E.5.3 Control Efficiencies

Add-on pollution control methods are not implemented during blasting.

E.6 VEHICLE TRAVEL ON UNPAVED ROADS

E.6.1 Process Rates

The annual and hourly process rates for vehicle travel on unpaved roads are based on the miles traveled by the various vehicles to support the mining and processing operations. The annual and hourly process rates for vehicle travel on unpaved roads are presented in Table E.6.

E.6.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from vehicle travel on unpaved roads are calculated using the following equations from AP-42 Section 13.2.2 (11/06):

$$EF_h = (k)\left(\frac{s}{12}\right)^a\left(\frac{W}{3}\right)^b$$

$$EF_a = (k)\left(\frac{s}{12}\right)^a\left(\frac{W}{3}\right)^b\left(\frac{(365\text{-}p)}{365}\right)$$

where:

EF_h	=	emission factor on an hourly basis (lb per vehicle miles traveled [VMT]);
EF_a	=	emission factor on an annual basis (lb/VMT);
k	=	particle size multiplier (4.9 for PM, 1.5 for PM_{10}, 0.15 for $PM_{2.5}$);
a	=	constant (0.7 for PM, 0.9 for PM_{10} and $PM_{2.5}$);
b	=	constant (0.45 for PM, PM_{10}, and $PM_{2.5}$);
s	=	surface material silt content (5%, site-specific historic value);
W	=	mean weight of the haul trucks and other vehicles traveling the unpaved roads (see Table E.6); and
p	=	number of days per year with precipitation greater than 0.01 inch (52.80 days/yr, based on 2017-2021 data from the Townsite Meteorological Monitor).

HAP emissions from vehicle travel on unpaved roads are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for vehicle travel on unpaved roads are presented in Table E.7. Because the inputs and parameters used to calculate the emission factors vary on an annual and hourly basis, two sets of emission factors are developed.

E.6.3 Control Efficiencies

The control methods and corresponding control efficiencies for vehicle travel on unpaved roads are presented in Table E.68.

E.7 DOZER OPERATIONS

E.7.1 Process Rates

The annual and hourly process rates for dozer operations are based on the total operating hours of the dozer fleet. The process rates are calculated by multiplying the annual and hourly operating hours for each dozer by the quantity of dozers. The annual and hourly process rates for dozer operations are presented in Table E.8.

E.7.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from dozer operations are calculated using the following equation from AP-42 Table 11.9-1 (10/98) for bulldozing overburden:

$$EF = (k)\left(\frac{s^a}{M^b}\right)$$

where:

EF	=	emission factor (lb/hr);
k	=	particle size multiplier (5.7 for PM, 0.75 for PM_{10}, 0.5985 for $PM_{2.5}$);
a	=	constant (1.2 for PM and $PM_{2.5}$, 1.5 for PM_{10});
b	=	constant (1.3 for PM and $PM_{2.5}$, 1.4 for PM_{10});
s	=	material silt content (4%, estimated value based on similar copper mines); and
M	=	material moisture content (3.2%, assumed equivalent to the mined material).

HAP emissions from dozer operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for dozer operations are presented in Table E.9.

E.7.3 Control Efficiencies

The control methods and corresponding control efficiencies for dozer operations are presented in Table E.68.

E.8 ROAD GRADER OPERATIONS

E.8.1 Process Rates

The annual and hourly process rates for road grader operations are based on the total vehicle miles traveled by the grader fleet. The annal and hourly miles traveled are determined using the quantity of graders, average speed, and the assumption that all graders operate for 60 minutes/hour and 8,760 hr/yr. The annual and hourly process rates for road grader operations are presented in Table E.8.

E.8.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from road grader operations are calculated using the following equation from AP-42 Table 11.9-1 (10/98) for grading:

$$EF = (k)(a)\left(S^b\right)$$

where:

EF	=	emission factor (lb/VMT);
k	=	particle size multiplier (1 for PM, 0.60 for PM_{10}, 0.031 for $PM_{2.5}$);
a	=	constant (0.040 for PM and $PM_{2.5}$, 0.051 for PM_{10});
b	=	constant (2.5 for PM and $PM_{2.5}$, 2.0 for PM_{10}); and
S	=	mean vehicle speed (4 miles per hour [mph], site-specific historic value).

HAP emissions from road grader operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for road grader operations are presented in Table E.10.

E.8.3 Control Efficiencies

The control methods and corresponding control efficiencies for road grader operations are presented in Table E.68.

E.9 MATERIAL TRANSFER POINTS

E.9.1 Process Rates

The annual and hourly process rates for the material transfer points are based on the amount of material transferred and can be determined using equipment capacities and hours of operations, delivery rates, or maximum expected throughputs. The annual and hourly process rates for the material transfer points and a description of how they were determined are presented in Table E.11.

E.9.2 Emission Factors

The material transfer points are presented in Table E.12 along with identification of which of the following emission factors are used to calculate emissions.

E.9.2.1 Material Transfer of Mined Materials, Concentrate, Nonmetallic Minerals, and Aggregate

PM, PM_{10}, and $PM_{2.5}$ emissions from the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and aggregate are calculated using the following emission factor expression from AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes:

$$EF = (k)(0.0032)\left(\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}\right)$$

where:

EF = emission factor (lb/ton);

k = particle size multiplier (0.74 for PM, 0.35 for PM_{10}, 0.053 for $PM_{2.5}$);

U = mean wind speed; and

The mean ambient wind speed at the FMMI facility is 6.88 mph based on 2017-2021 data from the Townsite Meteorological Monitor. This wind speed is used for unprotected material transfer points subject to ambient winds.

The lowest wind speed able to be used in the aggregate drop process equation and retain an A rating is 1.3 mph. This wind speed is used for protected material transfer points such as those located indoors or underground or shielded from the ambient wind by enclosures, chutes, curtains, or seals.

M = material moisture content.

For each material transfer point, the type of material transferred, the moisture content of the material transferred, and the classification of the transfer as being either protected or unprotected is identified in Table E.12.

HAP emissions from the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and aggregate are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and aggregate are presented in Table E.13.

E.9.2.2 Material Transfer of Flocculant, Lime, and Diatomaceous Earth

PM emissions from the material transfer of flocculant, lime, and diatomaceous earth are calculated using the emission factor from AP-42 Table 11.17-4 (02/98) for lime product loading, enclosed truck. PM_{10} and $PM_{2.5}$ emissions are estimated to be 35% and 5.3%, respectively, of PM emissions based on the particle size fractions in AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes.

The emission factors for the material transfer of flocculant, lime, and diatomaceous earth are presented in Table E.14.

E.9.2.3 Material Transfer of Ammonium Nitrate Prill

PM emissions from the material transfer points associated with ammonium nitrate prill are calculated using the emission factor from AP-42 Table 8.3-2 (07/93) for ammonium nitrate bulk loading operations. PM_{10} and $PM_{2.5}$ emissions are estimated to be 35% and 5.3%, respectively, of PM emissions based on the particle size fractions in AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes.

The emission factors for the material transfer points associated with ammonium nitrate prill are presented in Table E.15.

E.9.2.4 Material Transfer of Cement

PM and PM_{10} emissions from the material transfer points associated with cement are calculated using the emission factors from AP-42 Table 11.12-2 (06/06) for cement unloading to an elevated storage silo (pneumatic). $PM_{2.5}$ emissions are estimated to be 5.3% of PM emissions based on the particle size fractions in AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes.

HAP emissions from the material transfer points associated with cement are calculated using the emission factors from AP-42 Table 11.12-8 (06/06) for cement silo filling (uncontrolled).

The emission factors for the material transfer points associated with cement are presented in Table E.16.

E.9.2.5 Material Transfer of Fly Ash

PM and PM_{10} emissions from the material transfer points associated with fly ash are calculated using the emission factors from AP-42 Table 11.12-2 (06/06) for cement supplement unloading to an elevated storage silo (pneumatic). $PM_{2.5}$ emissions are estimated to be 5.3% of PM emissions based on the particle size fractions in AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes.

HAP emissions from the material transfer points associated with fly ash are calculated using the emission factors from AP-42 Table 11.12-8 (06/06) for cement supplement silo filling (with fabric filter control) and dividing by (1-0.98). The fabric filters are assumed to have a 98% control efficiency based on footnote “b” of AP-42 Table 11.12-8 (06/06).

The emission factors for the material transfer points associated with fly ash are presented in Table E.17.

E.9.2.6 Material Transfer of Concrete

PM, PM_{10}, and $PM_{2.5}$ emissions from the material transfer points associated with concrete are calculated using the emission factors from AP-42 Tables 11.12-2 and 11.12-3 (06/06) for truck loading (truck mix). As noted in AP-42 Table 11.12-2 (06/06), footnote "g", the emission factors are in units of pound of pollutant per pound of cement and cement supplement.

HAP emissions from the material transfer points associated with concrete are calculated using the emission factors from AP-42 Table 11.12-8 (06/06) for truck loading (uncontrolled). As noted in AP-42 Table 11.12-8 (06/06), footnote "e", the emission factors are in units of pound of pollutant per pound of cement and cement supplement.

The emission factors for the material transfer points associated with concrete are presented in Table E.18.

E.9.3 Control Efficiencies

The control methods and corresponding control efficiencies for material transfer points are presented in Table E.68.

E.10 SCREENING OPERATIONS

E.10.1 Process Rates

The annual and hourly process rates for screening operations are based on the amount of material screened and are determined using equipment capacities and hours of operations or maximum expected throughputs. The annual and hourly process rates for screening operations and a description of how they were determined are presented in Table E.11.

E.10.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from screening operations are calculated using the emission factors from AP-42 Table 11.19.2-2 (08/04) for screening (controlled). AP-42 page 11.19.2-1 (08/04) states that the output from tertiary crushers typically ranges from $^{3}/_{16}$ inch to 1 inch while fines crushing product has a maximum size of $^{3}/_{16}$ inch. Since the output from crushers is typically processed by screens, it is assumed that these same size ranges apply to the screening and fines screening operations. Because all screening operations (as identified in Table E.11) process material greater than $^{3}/_{16}$ inch, the screening emission factors (as opposed to the fines screening emission factors) in AP-42 Table 11.19.2-2 (08/04) are most appropriate to use to estimate potential emissions.

The Background Information for AP-42 Section 11.19.2 (05/03) explains that results from testing at various crushed stone processing plants were used to develop the emission factors in AP-42 Section 11.19.2. The procedures for testing screens included using track-mounted hood systems to capture emissions. The captured emissions were ducted away using a forced air stream and an emission rate was measured. The material throughput rate was also measured during the test to determine emission factors in units of lb/ton of material processed. When using the track-mounted hood test method, the total emissions measured must include both emissions from the material transfer to the screen and emissions from the screening process, due to testing being performed with a continuous material flow. Therefore, it is assumed that the screening emission factors from AP-42 Section 11.19.2 include emissions from the transfer of material to the screen.

Furthermore, Table 11.19.2-2 states in footnote “b” that the wet suppression technology used during the testing at the various crushed stone processing plants caused the moisture content of the material processed to range from 0.55% to 2.88% (compared to a range of 0.21% to 1.3% for the same plants operated without wet suppression). Because all screening operations (as identified in Table E.11) process material that has a moisture content of at least 3.2%, the controlled emission factors are used to estimate PM, PM_{10}, and $PM_{2.5}$ emissions.

HAP emissions from screening operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The type of material processed by each screen is identified in Table E.12. The HAP concentrations of the various process material are presented in Table E.67.

The emission factors for screening operations are presented in Table E.19.

E.10.3 Control Efficiencies

The control methods and corresponding control efficiencies for screening operations are presented in Table E.68.

E.11 LIME SLAKING OPERATIONS

E.11.1 Process Rates

The annual and hourly process rates for lime slaking operations are based on the amount of material slaked and are determined using equipment capacities and hours of operations or maximum expected throughputs. The annual and hourly process rates for lime slaking operations and a description of how they were determined are presented in Table E.11.

E.11.2 Emission Factors

Identification of which of the following emission factors are used to calculate emissions from the lime slaking processes is presented in Table E.12.

E.11.2.1 Lime Slaking Associated with the Morenci Concentrator

PM emissions from lime slaking associated with the Morenci Concentrator are calculated using the results from a stack test of a lime slaker at the Western Sugar Company. PM_{10} and $PM_{2.5}$ emission factors are assumed to equal the PM emission factor as a worst-case emission estimate. The stack test results are used as a best estimate, as AP-42 does not include emission factors for lime slaking.

The emission factors for lime slaking associated with the Morenci Concentrator are presented in Table E.20.

E.11.2.2 Lime Slaking Associated with the Metcalf Concentrator

PM emissions from lime slaking associated with the Metcalf Concentrator are calculated using manufacturer's information from a stack test performed on a similar slaker (same manufacturer, same ZMI/Portec type lime slaker with wet scrubber, different maximum capacity). The stack test results in units of lb of PM per hour were converted to units of lb of PM per ton of lime to account for the difference in the capacity of the slaker tested versus the lime slaking associated with the Metcalf Concentrator. Additionally, a 20% safety factor was added to account for any differences in the configuration and/or location of the slaker. PM_{10} and $PM_{2.5}$ emission factors are assumed to equal the PM emission factor as a worst-case emission estimate.

The emission factors for lime slaking associated with the Metcalf Concentrator are presented in Table E.20.

E.11.3 Control Efficiencies

The control methods and corresponding control efficiencies for lime slaking operations are presented in Table E.68.

E.12 WIND EROSION OF CONTINUOUSLY ACTIVE STOCKPILES AND STORAGE PILES

E.12.1 Process Rates

The annual and hourly process rates for wind erosion of continuously active stockpiles and storage piles are based on the acreage of the storage area. The annual and hourly process rates for the continuously active stockpiles and storage piles are presented in Table E.21.

E.12.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions due to wind erosion of continuously active stockpiles and storage piles are calculated using the following emission factor expressions derived from the 4th Edition of AP-42 Section 11.2.3 (05/83) for wind erosion of active storage piles:

$$EF_{annual}=(k)(1.7)\left(\frac{s}{1.5}\right)\left(\frac{365-p}{235}\right)\left(\frac{f}{15}\right)(a)$$

$$EF_{hourly}=(k)(1.7)\left(\frac{s}{1.5}\right)\left(\frac{365-p}{235}\right)\left(\frac{f}{15}\right)\left(\frac{1}{h}\right)$$

where:

EF_{annual}	=	emission factor on an annual basis (lb/acre-yr);
EF_{hourly}	=	emission factor on an hourly basis (lb/acre-hr);
k	=	particle size multiplier (1 for PM, 0.5 for PM_{10}, 0.075 for $PM_{2.5}$ from AP-42 Section 13.2.5 (11/06));
s	=	silt content of surface material (see Table E.21);

p	=	number of days per year with precipitation greater than 0.01 inch (52.80 days/yr, based on 2017-2021 data from the Townsite Meteorological Monitor);
f	=	percentage of time the mean wind speed is greater than 12 mph at the mean pile height (11.81%, based on 2017-2021 data from the Townsite Meteorological Monitor);
a	=	number of days per year the stockpile is used (365 day/yr); and
h	=	number of hours per day the stockpile is used (24 hr/day).

HAP emissions from the wind erosion of continuously active stockpiles and storage piles are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the stored material is equivalent to the concentration of HAPs in the PM_{10} emitted. The type of material in each stockpile or storage pile is identified in Table E.21. The HAP concentrations of the various stored materials are presented in Table E.67.

The emission factors for the wind erosion of continuously active stockpiles and storage piles are presented in Table E.21.

E.12.3 Control Efficiencies

The control methods and corresponding control efficiencies for the wind erosion of continuously active stockpiles and storage piles are presented in Table E.68.

E.13 WIND EROSION OF TAILINGS

E.13.1 Process Rates

The annual and hourly process rates for wind erosion of tailings are based on the maximum area of the tailings area susceptible to wind erosion. The annual and hourly process rates for wind erosion of tailings are presented in Table E.21.

E.13.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from the wind erosion of tailings are calculated using the methodology and equations from AP-42 Section 13.2.5 (11/06), including:

$$EF_{annual} = (k)\left(\sum_{i=1}^{N} P_i\right)\left(\frac{1\ \text{lb}}{453.59237\ \text{g}}\right)\left(\frac{4{,}4046.856\ \text{m}^2}{1\ \text{acre}}\right)$$

$$EF_{hourly} = (k)\left(\sum_{i=1}^{N} P_i\right)\left(\frac{1\ \text{lb}}{453.59237\ \text{g}}\right)\left(\frac{4{,}4046.856\ \text{m}^2}{1\ \text{acre}}\right)\left(\frac{1}{a}\right)\left(\frac{1}{h}\right)$$

$$P = (58)\left(u^*-u_t^*\right)^2+(25)\left(u^*-u_t^*\right) \quad \text{for } u^*>u_t^*$$

$$P = 0 \quad \text{for } u^* \leq u_t^*$$

$$u^* = (0.053)(u_{10}^+)$$

where:

EF_{annual}	=	emission factor on an annual basis (lb/acre-yr, the PM emission factor is assumed to be equal to the emission factor for PM_{30});
EF_{hourly}	=	emission factor on an hourly basis (lb/acre-hr, the PM emission factor is assumed to be equal to the emission factor for PM_{30});
k	=	particle size multiplier (1 for PM, 0.5 for PM_{10}, 0.075 for $PM_{2.5}$);
P	=	erosion potential function;
N	=	number of annual disturbances (see Table E.21);
u^*	=	friction velocity (m/s);
u_t^*	=	threshold friction velocity (0.43 m/s, the smallest value from AP-42 Table 13.2.5-1, assumed to approximate the tailings);
u_{10}^+	=	fastest mile for the time period between disturbances (19.97 m/s, maximum hourly wind speed recorded by the Tailings Meteorological Monitor in 2018-2022, multiplied by 1.2 to convert to fastest mile, assume each time period between disturbances has the same maximum fastest mile as a worst-case emission estimate);
a	=	number of days per year the tailings are used (365 day/yr); and
h	=	number of hours per day the tailings are used (24 hr/day).

HAP emissions from the wind erosion of tailings are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the tailings is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the tailings are presented in Table E.67.

The emission factors for the wind erosion of tailings are presented in Table E.21.

E.13.3 Control Efficiencies

The control methods and corresponding control efficiencies for the wind erosion of tailings are presented in Table E.68.

E.14 COOLING TOWERS AND THE DUST SUPPRESSION FAN

E.14.1 Process Rates

The annual and hourly process rates for the cooling towers and the dust suppression fan are based on the water circulation rate and hours of operation. The annual and hourly process rates for the cooling towers and the dust suppression fan are presented in Table E.22.

E.14.2 Emission Factors

PM, PM_{10}, and $PM_{2.5}$ emissions from the cooling towers and the dust suppression fan are calculated using the following equation adapted from AP-42 Section 13.4 (01/95):

$$EF = (k)\left(\frac{Q_d}{100}\right)\left(\frac{8.34 \text{ lb circulating water}}{\text{gal circulating water}}\right)\left(\frac{TDS}{10^6}\right)\left(\frac{1{,}000 \text{ gal circulating water}}{1{,}000 \text{ gal circulating water}}\right)$$

where:

EF	=	emission factor (lb/1,000 gal);
k	=	particle size fractions;
		For cooling towers, the particle size fractions were determined using the Reisman/Frisbie methodology from “Calculating Realistic PM_{10} Emissions from Cooling Towers.” This resulted in particle size fractions of 1 for PM, 0.73 for PM_{10}, and 0.0022 for $PM_{2.5}$.
		For the dust suppression fan, PM_{10} and $PM_{2.5}$ are assumed to be equal to PM emissions (particle size fractions of 1 for PM, PM_{10}, and $PM_{2.5}$), as information about the actual particle size distribution is unknown.
Q_d	=	maximum liquid drift rate percentage (see Table E.22); and
		The drift rate for the cooling towers is based on design information for the drift eliminators.
		A 0.02% drift rate (equal to the value in AP-42 for induced draft cooling towers) is assumed to apply to the dust suppression fan because water from the fan will be sprayed directly onto stockpiles, resulting in minimal drift.
TDS	=	total parts per million of dissolved solids in the drift (see Table E.22).

HAP emissions from the cooling towers and the dust suppression fan are calculated by multiplying the concentration of HAPs in the TDS by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the TDS is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the TDS is presented in Table E.67.

The emission factors for the cooling towers and the dust suppression fan are presented in Table E.22.

E.14.3 Control Efficiencies

The control methods and corresponding control efficiencies for the cooling towers and the dust suppression fan are presented in Table E.68.

E.15 NATURAL GAS EXTERNAL COMBUSTION EQUIPMENT AND TURBINES

E.15.1 Process Rates

The annual and hourly process rates for natural gas external combustion equipment and turbines are based on heat input rates, hours of operation, and/or fuel quantity limitations. The annual and hourly process rates for natural gas external combustion equipment and turbines and a description of how they were determined are presented in Table E.23.

E.15.2 Emission Factors

The natural gas external combustion equipment and turbines are presented in Table E.23 along with identification of which of the following emission factors are used to calculate emissions.

E.15.2.1 General Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100

When manufacturer's information is not available, CPM, PM (with CPM), CO, NO_X, SO_2, and VOC emissions from general natural gas external combustion are calculated using the emission factors from AP-42 Tables 1.4-1 and 1.4-2 (07/98) for uncontrolled natural gas combustion less than 100 MMBtu/hr but greater than or equal to 0.3 MMBtu/hr. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions based on footnote "c" in AP-42 Table 1.4-2 (07/98).

CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas. HAP emissions are calculated using the emission factors from AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf is used to calculate the emission factors in units of lb/MMBtu.

The emission factors for general uncontrolled natural gas external combustion are presented in Table E.24.

E.15.2.2 Natural Gas Startup Boiler

CPM, PM (with CPM), CO, SO_2, and VOC emissions from the Natural Gas Startup Boiler are calculated using the emission factors from AP-42 Tables 1.4-1 and 1.4-2 (07/98) for uncontrolled natural gas combustion less than 100 MMBtu/hr but greater than or equal to 0.3 MMBtu/hr. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions based on footnote "c" in AP-42 Table 1.4-2 (07/98). NO_X emissions are calculated using a manufacturer-specified emission factor.

CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas. HAP emissions are calculated using the emission factors from AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf is used to calculate the emission factors in units of lb/MMBtu.

The emission factors for the Natural Gas Startup Boiler are presented in Table E.25.

E.15.2.3 Natural Gas Turbines Associated with the Metcalf Power Plant

CPM, PM (with CPM), SO_2, and VOC emissions from the Natural Gas Turbines Associated with the Metcalf Power Plant are calculated using the emission factors from AP-42 Table 3.1-2a (04/00) for stationary natural gas-fired turbines. PM_{10} and $PM_{2.5}$ emissions assumed to equal PM emissions. CO and NO_X emissions are calculated using the voluntary emission limitations (see Section 8).

CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas. HAP emissions are calculated using the emission factors from AP-42 Table 3.1-3 (04/00) for stationary natural gas-fired turbines.

The emission factors for the Natural Gas Turbines Associated with the Metcalf Power Plant are presented in Table E.26.

E.15.3 Control Efficiencies

The control methods and corresponding control efficiencies for the natural gas external combustion equipment and turbines are presented in Table E.68.

E.16 DIESEL EXTERNAL COMBUSTION EQUIPMENT < 100 MMBTU/HR

E.16.1 Process Rates

The annual and hourly process rates for diesel external combustion equipment are based on heat input rates and hours of operation. The annual and hourly process rates for diesel external combustion equipment and a description of how they were determined are presented in Table E.23.

E.16.2 Emission Factors

CPM, PM (with CPM), CO, NO_X, SO_2, and VOC emissions from diesel external combustion equipment are calculated using emission factors form AP-42 Tables 1.3-1, 1.3-2, and 1.3-3 (05/10) for either distillate fuel oil combustion rated less than 100 MMBtu/hr or No. 2 fuel oil. The SO_2 emission factor includes an input for the sulfur content of the diesel fuel used during external combustion. The only diesel fuel available at the FMMI facility is ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. The VOC emission factor is assumed to be equal to the non-methane total organic compound emission factor.

The total PM emission factor is calculated by summing the filterable and condensable emission factors. The PM_{10} and $PM_{2.5}$ emission factors are calculated using the particle size distribution data in AP-42

Table 1.3-6 (05/10) for uncontrolled industrial boilers firing distillate oil (PM_{10} is 50% of PM emissions and $PM_{2.5}$ is 12% of PM emissions) and applying it to the filterable PM emission factor. All CPM is assumed to be less than 1.0 micron in diameter.

CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2. HAP emissions from diesel external combustion equipment are calculated using emission factors from AP-42 Tables 1.3-8 and 1.3-10 (05/10) for distillate fuel oil combustion. The formaldehyde emission factor is assumed to be equal to the high-end value of the formaldehyde range as a worst-case emission estimate.

When necessary, a diesel heating value of 137,000 Btu/gal (AP-42 Appendix A, page A-5 (09/85)) is used to calculate the emission factors in units of lb/MMBtu.

The emission factors for the diesel external combustion equipment are presented in Table E.27.

E.16.3 Control Efficiencies

The control methods and corresponding control efficiencies for the diesel external combustion equipment are presented in Table E.68.

E.17 PROPANE EXTERNAL COMBUSTION EQUIPMENT

E.17.1 Process Rates

The annual and hourly process rates for propane external combustion equipment are based on heat input rates and hours of operation. The annual and hourly process rates for propane external combustion equipment and a description of how they were determined are presented in Table E.24.

E.17.2 Emission Factors

CPM, PM (with CPM), CO, NO_X, and SO_2 emissions from propane external combustion equipment are calculated using the emission factors from AP-42 Table 1.5-1 (07/08) for industrial propane boilers. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions based on footnote “c” in AP-42 Table 1.4-2 (07/98). The SO_2 emission factor includes an input for the sulfur content of the propane. The sulfur content is assumed to equal 15 gr/100 scf.

VOC and HAP emissions from propane external combustion equipment are calculated using the emission factor from AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) for natural gas combustion. AP-42 Table 1.5-1 (07/08), footnote “a” states that emissions from propane combustion can be assumed to equal emissions from natural gas combustion on a heat input basis, when emission factors for propane combustion are not available. Therefore, the VOC and HAP emission factors for natural gas combustion are converted to VOC and HAP emission factors for propane combustion using a natural gas heating value of 1,020 Btu per standard cubic foot (Btu/scf).

CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane.

When necessary, a propane heat content of 91.5 MMBtu/10^3 gal is used to calculate the emission factors in units of lb/MMBtu.

The emission factors for propane external combustion equipment are presented in Table E.28.

E.17.3 Control Efficiencies

The control methods and corresponding control efficiencies for propane external combustion equipment are presented in Table E.68.

E.18 DIESEL EMERGENCY ENGINES

E.18.1 Process Rates

The annual and hourly process rates for diesel emergency engines are based on power ratings (capacity) and hours of operation. The annual and hourly process rates for diesel emergency engines and a description of how they were determined are presented in Table E.29.

E.18.2 Emission Factors

The diesel emergency engines are presented in Table E.29 along with identification of which of the following emission factors are used to calculate emissions.

E.18.2.1 Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)

PM_{10}, CO, NO_X, and VOC emissions from diesel engines with no tier rating or engine family number (≤ 600 hp) are calculated using the emission factors from AP-42 Table 3.3-1 (10/96) for diesel fuel industrial engines. The VOC emission factor is determined by summing the exhaust, evaporative, crankcase, and refueling TOC emission factors. PM (with CPM) and $PM_{2.5}$ emissions are assumed to equal PM_{10} emissions based on footnote "b" in AP-42 Table 3.3-1 (10/96). CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from diesel engines with no tier rating or engine family number (≤ 600 hp) are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp.

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for diesel engines with no tier rating or engine family number (≤ 600 hp) are presented in Table E.30.

E.18.2.2 Tier 3 Diesel Engines (130 ≤ kW < 225)

PM (with CPM), CO, NO_X, and VOC emissions from Tier 3 diesel engines rated greater than or equal to 130 kW, but less than 225 kW are calculated using the applicable exhaust emission standards from Table 3 of Appendix I of 40 CFR 1039. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp. The combined NO_X and VOC emission standard is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions for Tier 3 engines rated greater than or equal to 130 kW, but less than 225 kW are assumed to be equal to 93.33% and 6.67%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from Tier 3 diesel engines rated greater than or equal to 130 kW, but less than 225 kW are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for Tier 3 diesel engines rated greater than or equal to 130 kW, but less than 225 kW are presented in Table E.31.

E.18.2.3 Tier 3 Diesel Engines (225 ≤ kW < 450)

PM (with CPM), CO, NO_X, and VOC emissions from Tier 3 diesel engines rated greater than or equal to 225 kW, but less than 450 kW are calculated using the applicable exhaust emission standards from Table 3 of Appendix I of 40 CFR 1039. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp. The combined NO_X and VOC emission standard is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions for Tier 3 engines rated greater than or equal to 225 kW, but less than 450 kW are assumed to be equal to 93.33% and 6.67%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from Tier 3 diesel engines rated greater than or equal to 225 kW, but less than 450 kW are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for Tier 3 diesel engines rated greater than or equal to 225 kW, but less than 450 kW are presented in Table E.32.

E.18.2.4 Tier 4 Diesel Engines (19 ≤ kW < 37)

PM (with CPM), CO, NO_X, and VOC emissions from Tier 4 diesel engines rated greater than or equal to 19 kW, but less than 37 kW are calculated using the applicable exhaust emission standards from Table 1 of 40 CFR 1039.101 for Tier 4 Final diesel engines. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp. The combined NO_X and VOC emission standard is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions are assumed to be equal to 94.29% and 5.71%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from Tier 4 diesel engines rated greater than or equal to 19 kW, but less than 37 kW are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for Tier 4 diesel engines rated greater than or equal to 19 kW, but less than 37 kW are presented in Table E.33.

E.18.2.5 GO Diesel Emergency Generator GNO37A

PM (with CPM), CO, NO_X, and VOC emissions from the GO Diesel Emergency Generator GNO37A are calculated using the certification values for EPA engine family 8VPXL16.1ACB. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). The combined NO_X and VOC certification value is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions are assumed to be equal to 93.75% and 6.25%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from GO Diesel Emergency Generator GNO37A are calculated using the emission factors from AP-42 Tables 3.4-3 and 3.4-4 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated greater than 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the GO Diesel Emergency Generator GNO37A are presented in Table E.34.

E.18.2.6 Metcalf Concentrator Diesel Emergency Generator GNO38A

PM (with CPM), CO, NO_X, and VOC emissions from the Metcalf Concentrator Diesel Emergency Generator GNO38A are calculated using the certification values for EPA engine family AVPXL16.1ACB. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). The combined NO_X and VOC certification value is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions are assumed to be equal to 93.75% and 6.25%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from Metcalf Concentrator Diesel Emergency Generator GNO38A are calculated using the emission factors from AP-42 Tables 3.4-3 and 3.4-4 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated greater than 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Metcalf Concentrator Diesel Emergency Generator GNO38A are presented in Table E.35.

E.18.2.7 ETPS Diesel Emergency Generator GNO36A

PM (with CPM), CO, NO_X, VOC, and CO_2 emissions from the ETPS Diesel Emergency Generator GNO36A are calculated using the certification values for EPA engine family FCEXL0409AAD. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the ETPS Diesel Emergency Generator GNO36A are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the ETPS Diesel Emergency Generator GNO36A are presented in Table E.36.

E.18.2.8 NTPS Diesel Emergency Generator GNO46A

PM (with CPM), CO, NO_X, and VOC emissions from the NTPS Diesel Emergency Generator GNO46A are calculated using the certification values for EPA engine family FCEXL0409AAD. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp. The combined NO_X and VOC certification value is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2*, which states that NO_X and VOC emissions are assumed to be equal to 91.84% and 8.16%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from the NTPS Diesel Emergency Generator GNO46A are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the NTPS Diesel Emergency Generator GNO46A are presented in Table E.37.

E.18.2.9 Central SX Diesel Emergency Generator GNO95A

PM (with CPM), CO, NO_X, VOC, and CO_2 emissions from the Central SX Diesel Emergency Generator GNO95A are calculated using the certification values for EPA engine family KSZXL02.2PXB. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Central SX Diesel Emergency Generator GNO95A are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Central SX Diesel Emergency Generator GNO95A are presented in Table E.38.

E.18.2.10 Metcalf Diesel Fire Pump Engine

PM (with CPM), CO, NO_X, VOC, and CO_2 emissions from the Metcalf Diesel Fire Pump Engine are calculated using the certification values for EPA engine family EJDXL09.0114. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Metcalf Diesel Fire Pump Engine are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Metcalf Diesel Fire Pump Engine are presented in Table E.39.

E.18.2.11 Emergency Diesel Generator WWTP GNO61A

PM (with CPM), CO, NO_X, VOC, and CO_2 emissions from Emergency Diesel Generator WWTP GNO61A are calculated using the certification values for EPA engine family HCPXL27.0NZS. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96).

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from Emergency Diesel Generator WWTP GNO61A are calculated using the emission factors from AP-42 Tables 3.4-3 and 3.4-4 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated greater than 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for Emergency Diesel Generator WWTP GNO61A are presented in Table E.40.

E.18.2.12 Metcalf Clean Room Diesel Emergency Generator

PM (with CPM), CO, NO_X, VOC, and CO_2 emissions from the Metcalf Clean Room Diesel Emergency Generator are calculated using the certification values for EPA engine family HCEXL03.3BAA. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Metcalf Clean Room Diesel Emergency Generator are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Metcalf Clean Room Diesel Emergency Generator are presented in Table E.41.

E.18.3 Control Efficiencies

The control methods and corresponding control efficiencies for diesel emergency engines are presented in Table E.68.

E.19 PROPANE EMERGENCY ENGINES

E.19.1 Process Rates

The annual and hourly process rates for propane emergency engines are based on power ratings (capacity) and hours of operation. The annual and hourly process rates for propane emergency engines and a description of how they were determined are presented in Table E.29.

E.19.2 Emission Factors

The propane emergency engines are presented in Table E.29 along with identification of which of the following emission factors are used to calculate emissions.

E.19.2.1 Propane 4-Stroke Rich Burn Phase 1 Class II Engines

CPM, PM (with CPM), and HAP emissions from the propane 4-stroke rich burn Phase 1 Class II engines are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter are assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas-fired reciprocating engines is used to estimate emissions from the propane 4-stroke rich burn Phase 1 Class II engines because AP-42 does not have a section for propane-fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane-fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, and VOC emissions from the propane 4-stroke rich burn Phase 1 Class II engines are calculated using the applicable exhaust emission standards from Appendix A, Table 3 of 40 CFR 1054. The combined NO_X and VOC emission standard is separated based on Table 6 of the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*, which states that NO_X and VOC emissions for Phase 1 propane engines are assumed to be equal to 89.36% and 10.64%, respectively, of the combined emission standard.

SO_2 emissions from the propane 4-stroke rich burn Phase 1 Class II engines are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the propane 4-stroke rich-burn Phase 1 Class II engines are presented in Table E.42.

E.19.2.2 Generac Propane Engines with EPA Engine Family 7GNXS.4072DA

CPM, PM (with CPM) and HAP emissions from the Generac propane engines with EPA engine family 7GNXS.4072DA are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Generac propane engines with EPA engine family 7GNXS.4072DA because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, and VOC emissions from the Generac propane engines with EPA engine family 7GNXS.4072DA are calculated using the certification values for the engine family.

SO_2 emissions from the Generac propane engines with EPA engine family 7GNXS.4072DA are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Generac propane engines with EPA engine family 7GNXS.4072DA are presented in Table E.43.

E.19.2.3 Generac Propane Engines with EPA Engine Family 8GNXS.4072DA

CPM, PM (with CPM) and HAP emissions from the Generac propane engines with EPA engine family 8GNXS.4072DA are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Generac propane engines with EPA engine family 8GNXS.4072DA because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, and VOC emissions from the Generac propane engines with EPA engine family 8GNXS.4072DA are calculated using the certification values for the engine family.

SO_2 emissions from the Generac propane engines with EPA engine family 8GNXS.4072DA are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Generac propane engines with EPA engine family 8GNXS.4072DA are presented in Table E.44.

E.19.2.4 Generac Propane Engines with EPA Engine Family CGNXS.4072DC

CPM, PM (with CPM) and HAP emissions from the Generac propane engines with EPA engine family CGNXS.4072DC are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Generac propane engines with EPA engine family CGNXS.4072DC because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, VOC, and CO_2 emissions from the Generac propane engines with EPA engine family CGNXS.4072DC are calculated using the certification values for the engine family.

SO_2 emissions from the Generac propane engines with EPA engine family CGNXS.4072DC are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Generac propane engines with EPA engine family CGNXS.4072DC are presented in Table E.45.

E.19.2.5 Cummins Propane Emergency Generators with Manufacturer's Information

CPM, PM (with CPM) and HAP emissions from the Cummins propane emergency generators with manufacturer's information are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Cummins propane emergency generators with manufacturer's information because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, and VOC emissions are calculated using manufacturer information. SO_2 emissions from the Cummins propane emergency generators with manufacturer's information are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Cummins propane emergency generators with manufacturer's information are presented in Table E.46.

E.19.2.6 Cummins Propane Emergency Generators with Engine Family Number CCEXB06.8GDC

CPM, PM (with CPM) and HAP emissions from the Cummins propane engines with EPA engine family CCEXB06.8GDC are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to

PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Cummins propane engines with EPA engine family CCEXB06.8GDC because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, and VOC emissions from the Cummins propane engines with EPA engine family CCEXB06.8GDC are calculated using the certification values for the engine family.

SO_2 emissions from the Cummins propane engines with EPA engine family CCEXB06.8GDC are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Cummins propane engines with EPA engine family CCEXB06.8GDC are presented in Table E.47.

E.19.2.7 Sunridge Propane Emergency Generator GNO85A

CPM, PM (with CPM) and HAP emissions from the Sunridge Propane Emergency Generator GNO85A are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Sunridge Propane Emergency Generator GNO85A because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, VOC, and CO_2 emissions from the Sunridge Propane Emergency Generator GNO85A are calculated using the certification values for engine family KPSIB5.702ED.

SO_2 emissions from the Sunridge Propane Emergency Generator GNO85A are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Sunridge Propane Emergency Generator GNO85A are presented in Table E.48.

E.19.2.8 Metcalf Mine Office Propane Emergency Generator GNO24B

CPM, PM (with CPM) and HAP emissions from the Metcalf Mine Office Propane Emergency Generator GNO24B are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Metcalf Mine Office Propane Emergency Generator GNO24B because AP-42 does not have a section for propane fired reciprocating engines. However, review of EPA reference documents (see the EPA document titled *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*) shows that emissions from propane fired engines are similar or less than emissions from natural gas engines.

CO, NO_X, VOC, and CO_2 emissions from the Metcalf Mine Office Propane Emergency Generator GNO24B are calculated using the certification values for engine family NPSIB5.702ED.

SO_2 emissions from the Metcalf Mine Office Propane Emergency Generator GNO24B are calculated assuming all the sulfur in the propane fuel is converted to SO_2 emissions and the sulfur content of the propane fuel is 0.15 gr/scf. CH_4 and N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Metcalf Mine Office Propane Emergency Generator GNO24B are presented in Table E.49.

E.19.3 Control Efficiencies

The control methods and corresponding control efficiencies for propane emergency engines are presented in Table E.68.

E.20 GSC NATURAL GAS EMERGENCY GENERATOR

E.20.1 Process Rates

The annual and hourly process rates for the GSC Natural Gas Emergency Generator are based on the power rating (capacity) and hours of operation. The annual and hourly process rates for the GSC Natural Gas Emergency Generator and a description of how they were determined are presented in Table E.29.

E.20.2 Emission Factors

CPM, PM (with CPM) and HAP emissions from the GSC Natural Gas Emergency Generator are calculated using the emission factors from AP-42 Table 3.2-3 (08/00) for 4-stroke rich burn natural gas engines. The PM (with CPM) emission factor is the sum of the filterable PM_{10} emission factor and the CPM emission factor. PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM emissions since both the filterable and condensable particulate matter is assumed to be less than 1 micron in diameter.

CO, NO_X, VOC, CO_2, CH_4, and N_2O emissions from the GSC Natural Gas Emergency Generator are calculated using the certification values for engine family NGNXB14.22C1.

SO_2 emissions from the GSC Natural Gas Emergency Generator are calculated assuming all the sulfur in the natural gas fuel is converted to SO_2 emissions and the sulfur content of the natural gas fuel is 2,000 grains/MMscf.

When necessary, a natural gas higher heating value of 1,020 Btu/scf and a brake-specific fuel consumption value of 10,500 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the GSC Natural Gas Emergency Generator are presented in Table E.50.

E.20.3 Control Efficiencies

The control methods and corresponding control efficiencies for the GSC Natural Gas Emergency Generator are presented in Table E.68.

E.21 DIESEL NON-EMERGENCY ENGINES

E.21.1 Process Rates

The annual and hourly process rates for diesel non-emergency engines are based on power ratings (capacity) and hours of operation. The annual and hourly process rates for diesel non-emergency engines and a description of how they were determined are presented in Table E.29.

E.21.2 Emission Factors

The diesel non-emergency engines are presented in Table E.29 along with identification of which of the following emission factors are used to calculate emissions.

E.21.2.1 Tier 3 Diesel Engines (75 ≤ kW < 130)

PM (with CPM), CO, NO_X, and VOC emissions from Tier 3 diesel engines rated greater than or equal to 75 kW, but less than 130 kW are calculated using the applicable exhaust emission standards from Table 3 of Appendix I of 40 CFR 1039. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp. The combined NO_X and VOC emission standard is separated based on Table 4-6 of the EPA document titled *Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines* *in MOVES3.0.2*, which states that NO_X and VOC emissions for Tier 3 engines rated greater than or equal to 75 kW, but less than 130 kW are assumed to be equal to 93.33% and 6.67%, respectively, of the combined emission standard.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO_2, CH_4, and N_2O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for distillate fuel oil No. 2.

HAP emissions from Tier 3 diesel engines rated greater than or equal to 75 kW, but less than 130 kW are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for Tier 3 diesel engines rated greater than or equal to 75 kW, but less than 130 kW are presented in Table E.51.

E.21.2.2 Non-Emergency Diesel S12/A1A Sump Pump Engine

PM (with CPM), CO, NO_X, VOC, CO_2, and CH_4 emissions from the Non-Emergency Diesel S12/A1A Sump Pump Engine are calculated using the certification values for EPA engine family NDZXL02.9020. PM_{10} and $PM_{2.5}$ emissions are assumed to equal PM emissions as a worst-case emission estimate. CPM emissions are estimated to be 11.05% of total PM emissions based on the condensable and total filterable emission factors in AP-42 Table 3.4-2 (10/96). It is assumed that the condensable fraction of particulate matter for engines >600 hp is similar to engines ≤600 hp.

SO_2 emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO_2 emissions. The FMMI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. N_2O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Non-Emergency Diesel S12/A1A Sump Pump Engine are calculated using the emission factors from AP-42 Table 3.3-2 (10/96) for uncontrolled diesel engines. These emission factors are applicable to engines rated less than or equal to 600 hp (447.42 kW).

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an average brake-specific fuel consumption value of 7,000 Btu/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Non-Emergency Diesel S12/A1A Sump Pump Engine are presented in Table E.52.

E.21.3 Control Efficiencies

The control methods and corresponding control efficiencies for diesel non-emergency engines are presented in Table E.68.

E.22 SX, ORGANIC TANKS, AND RAFFINATE PONDS

E.22.1 Process Rates

The annual and hourly process rates for SX, organic tanks, and raffinate ponds are based on hours of operation. The process rates are presented in Table E.53.

E.22.2 Emission Factors

VOC and HAP emissions from SX, organic tanks, and raffinate ponds are calculated using the methodology and equations from the *Hydrometallurgy of Copper*. The following equations and data presented in Tables E.53 through E.60 are used to calculate VOC and HAP emissions from SX, organic tanks, and raffinate ponds.

$$EF_i = \left(F_{i,UC}\right)(A)\left(1-\left(\frac{COV}{100}\right)\right) + \left(F_{i,C}\right)(A)\left(\frac{COV}{100}\right)$$

$$F_{i,UC}=\frac{\left(C_i^0-C_i^H\right)(D_i)\left(\frac{m^2}{100^2\ cm^2}\right)}{H}\left(\frac{3,600\ sec}{1\ hr}\right)\left(\frac{1\ lb}{453.59237\ g}\right)\left(\frac{1\ m^2}{10.76\ ft^2}\right)$$

$$F_{i,C}=\frac{\left(C_i^0-C_i^H\right)(D_i)\left(\frac{m^2}{100^2\ cm^2}\right)}{H}\left(\frac{3,600\ sec}{1\ hr}\right)\left(\frac{1\ lb}{453.59237\ g}\right)\left(\frac{1\ m^2}{10.76\ ft^2}\right)(1 - CE)$$

$$D_i= \left(10^{-3}\right)\left(T^{1.75}\right)\left(\frac{\left(\frac{M_i+M_A}{(M_i)(M_A)}\right)^{1/2}}{\left(P\left(V_i^{1/3}+V_A^{1/3}\right)\right)^2}\right)$$

where:

EF_i	=	emission factor for component i (lb/hr)
$F_{i,UC}$	=	uncontrolled diffusive flux of component i in the air (lb/ft^2-hr, VOC emissions are calculated by summing the diffusive flux of each component in the air, see Tables E.54 through E.60);
$F_{i,C}$	=	controlled diffusive flux of component i in the air (lb/ft^2-hr, VOC emissions are calculated by summing the diffusive flux of each component in the air, see Tables E.54 through E.60);
A	=	surface area of the SX, organic tank, or raffinate pond (see Table E.53);
COV	=	percent of the SX, organic tank, or raffinate pond that is covered (see Table E.53)

C_i^0	=	component concentration at the surface (g/m^3, see Tables E.54 through E.60, some values are estimated based on worst-case chemicals used while others are from the *Hydrometallurgy of Copper*);
C_i^H	=	component concentration at the measured height (g/m^3, see Tables E.54 through E.60, some values are estimated based on worst-case chemicals used while others are from the *Hydrometallurgy of Copper*);
H	=	height at which concentration measurement was taken (1 m);
CE	=	control efficiency (66.67% for the covered portion, 0% for the uncovered portion);
D_i	=	diffusivity of component i in the air (square centimeter per second [cm^2/s], see Tables E.54 through E.60);
T	=	temperature (291.96 K, based on 2017-2021 data from the Townsite Meteorological Monitor);
M_i	=	molecular weight of the component in the air (g/g-mol, see Tables E.54 through E.60);
M_A	=	molecular weight of the air (28.97 g/g-mol);
P	=	pressure (0.87 atm, the actual pressure at the FMMI facility, calculated using an elevation of 4,000 feet);
V_i	=	sum of atmospheric diffusion volume increments by atom and structure for the component in the air (see Tables E.54 through E.60); and
V_A	=	sum of atmospheric diffusion volume increments by atom and structure for air (20.10).

The emission factors for the SX, organic tanks, and raffinate ponds are presented in Table E.53.

E.22.3 Control Efficiencies

The control methods and corresponding control efficiencies for the SX, organic tanks, and raffinate ponds are presented in Table E.68.

E.23 ELECTROWINNING

E.23.1 Process Rates

The annual and hourly process rates for EW are based on hours of operation and are presented in Table E.61.

E.23.2 Emission Factors

E.23.2.1 Central EW, Southside EW and Stargo EW

PM and H_2SO_4 emissions from Central EW, Southside EW and Stargo EW are calculated using the concentration of H_2SO_4 inside the EW tankhouse buildings and the flow rate of air out of the buildings (i.e., natural ventilation due to temperature differentials). The following equations and data presented in Table E.62 are used to calculate H_2SO_4 emissions from Central EW, Southside EW and Stargo EW. The equations used to calculate the wind and thermal effects of the natural ventilation are from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRE) Fundamentals Handbook.

$$\mathrm{EF} = (\mathrm{Q_{wt}})\left(\frac{60\ \mathrm{min}}{1\ \mathrm{hour}}\right)(\mathrm{C_{SA}})\left(\frac{1\ \mathrm{gram}}{1{,}000\ \mathrm{mg}}\right)\left(\frac{1\ \mathrm{lb}}{453.59237\ \mathrm{g}}\right)\left(\frac{1\ \mathrm{m^3}}{35.315\ \mathrm{ft^3}}\right)$$

$$\mathrm{Q_{wt}} = (\mathrm{Q_w^2} + \mathrm{Q_s^2})^{0.5}$$

$$\mathrm{Q_w} = (\mathrm{cf})(\mathrm{CV})(\mathrm{A}_w)(\mathrm{V})$$

$$\mathrm{Q_s} = (60)(\mathrm{C_s})(\mathrm{minimum(A1,A2)})(\mathrm{F_c})\left(\frac{(2\mathrm{g})(\mathrm{h})(\mathrm{T1}-\mathrm{T2})}{\mathrm{T1}}\right)^{0.5}$$

$$\mathrm{h} = \frac{\mathrm{H}}{1 + \left(\left(\frac{\mathrm{A1}}{\mathrm{A2}}\right)^2\left(\frac{\mathrm{T1}}{\mathrm{T2}}\right)\right)}$$

where:

EF	=	emission factor (lb/hr, see Table E.55)
Q_{wt}	=	the flow rate of air through the building due to the combined wind and thermal effects (acfm, see Table E.62)
C_{SA}	=	concentration of H_2SO_4 inside the EW tankhouse building (assumed equal to the OSHA permissible exposure limit of 1 mg/m^3 as a worst-case emission estimate, actual concentrations are expected to be much less)
Q_w	=	the flow rate of air through the building due to wind effects (acfm, see Table E.62)
Q_s	=	the flow rate of air through the building due to thermal effects (acfm, see Table E.62)
cf	=	conversion from mph to fpm (88 fpm/1 mph)
CV	=	the orifice coefficient or effectiveness of the opening (0.5-0.6 for perpendicular winds, average of 0.55 is used)
A_w	=	free area of openings (ft^2, free area is the net area of opening through which air can pass - in the absence of a measured value, assumed equal to A1, see Table E.62)
V	=	wind speed (6.88 mph, the mean ambient wind speed at the FMMI facility based on 2017-2021 data from the Townsite Meteorological Monitor)

C_s	=	discharge coefficient for opening (0.65, the default value used when the airflow is unidirectional, and mixing cannot occur)
A1	=	area of the inlet opening (ft^2, see Table E.62)
A2	=	area of the outlet opening (ft^2, see Table E.62)
F_c	=	correction factor for unequal inlet and outlet openings (1.35, based on a graph from the ASHRE Fundamentals Handbook)
g	=	gravitational constant (32.2 ft/s^2)
h	=	natural plane length (ft, see Table E.62)
T1	=	inside temperature (530.204°R for the EW tankhouse buildings, which assumes a +5°R temperature difference from outside)
T2	=	outside temperature (525.534°R, average temperature at the FMMI facility based on 2017-2021 data from the Townsite Meteorological Monitor)
H	=	vertical height separating inlet and outlet areas (ft, see Table E.62)

HAP emissions from Central EW, Southside EW and Stargo EW include only cobalt compounds. Emissions of cobalt compounds are determined by considering the fraction of cobalt sulfate in the electrolyte solution sent to the EW cells (approximately 150 ppm) and assuming that the H_2SO_4 emissions from EW contain the same fraction of cobalt compounds.

The emission factors for Central EW, Southside EW and Stargo EW are presented in Table E.61.

E.23.2.2 Modoc Test Facility EW

PM, PM_{10}, $PM_{2.5}$, and H_2SO_4 emissions from the Modoc Test Facility EW are calculated using the emission factor of 0.000157 pounds per square foot-hour (lb/ft^2-hr), from a report entitled *Measurement of Sulfuric Acid Mist Emissions from the Cyprus Twin Buttes Copper Company Electrowinning Tankhouse* (12/92) produced by Applied Environmental Consultants, Inc. The emission factor includes the control efficiency from dispersion balls used during EW at the Copper Twin Buttes facility. The Modoc Test Facility EW uses similar methods to control H_2SO_4 emissions (e.g., heat retention balls and surfactants) such that the measurements found at the Cyprus Twin Buttes Copper Company Electrowinning Tankhouse are applicable to the Modoc Test Facility EW.

The PM, PM_{10}, $PM_{2.5}$, H_2SO_4, and HAP emission factors are converted from units of lb/ft^2-hr to units of lb/hr using the surface areas of the EW cells. The emission factors for the Modoc Test Facility EW are presented in Table E.61. The Modoc Test Facility EW does not use cobalt sulfates in the electrolyte solution, such that no HAPs are emitted.

E.23.3 Control Efficiencies

The control methods and corresponding control efficiencies for EW are presented in Table E.68.

E.24 STORAGE TANKS

E.24.1 Process Rates

The annual and hourly process rates for the storage tanks are based on hours of operation. The process rates of the storage tanks are presented in Table E.63.

E.24.2 Emission Factors

VOC and HAP emissions from the storage tanks are calculated using the EPA TANKS program. The input parameters for the EPA TANKS program that are consistent for all of the tanks include:

a) The tanks are not heated;

b) The tanks are located above ground;

c) The shell condition of the tanks is good;

d) The vacuum and pressure settings are -0.03 psig and 0.03 psig, respectively;

e) For vertical tanks, the roof type is a cone with a height of 0 feet and a slope of 0.0625 ft/ft;

f) The meteorological data corresponds to San Diego, California as it is most similar to Morenci, Arizona; and

g) The throughput of the tanks is evenly distributed throughout the year.

The input parameters for the EPA TANKS program that vary between the storage tanks are presented in Tables E.63 and E.64. The VOC and HAP emission factors are equivalent to the EPA TANKS program annual emission report output and converted to units of lb/hr assuming continuous operation of 8,760 hr/yr.

The EPA TANKS program output files showing the annual emission reports for the storage tanks can be provided upon request. The resulting emission factors for the storage tanks are presented in Table E.63.

E.24.3 Control Efficiencies

The control methods and corresponding control efficiencies for the storage tanks are presented in Table E.68.

E.25 BULK FLOTATION OPERATIONS

E.25.1 Process Rates

The annual and hourly process rates for the bulk flotation operations are based on the quantity of organic reagent (frother and molybdenum collector) used in the bulk flotation operations. The process rates for the bulk flotation operations are presented in Table E.65.

E.25.2 Emission Factors

VOC emissions from the bulk flotation operations are calculated using an emission factor based on testing conducted at the Freeport-McMoRan Henderson Mill in 2009. HAP emissions are calculated by applying diesel vapor mass fractions to the VOC emission factor. Diesel is representative of the organic used in the flotation operations.

The emission factors for the bulk flotation operations are presented in Table E.65.

E.25.3 Control Efficiencies

The control methods and corresponding control efficiencies for the bulk flotation operations are presented in Table E.68.

E.26 AGGLOMERATING UNITS

E.26.1 Process Rates

The annual and hourly process rates for the agglomerating units are based on the quantity of ore processed in the units. The process rates are presented in Table E.66.

E.26.2 Emission Factors

CO, NO_X, SO_2, and CO_2 emissions from the agglomerating units are calculated based on the results of performance testing completed on similar units. Testing of the common stack of the similar agglomerating units was completed from 14:07 on December 2, 2015 through 09:33 on December 4, 2015. Results of the testing were presented as overall lb/hr averages for each pollutant and the highest lb/hr average for each pollutant. Emission factors on an annual basis are based on the overall lb/hr averages with added 20% safety factors. Emission factors on an hourly basis are based on the highest lb/hr averages with added 20% safety factors. The emission factors for the individual agglomerating units are assumed equal to 50% of the result from the common stack. The test results were converted to units of lb/ton to account for differences in ore throughput for the agglomerating units at the FMMI facility.

The emission factors for the agglomerating units are presented in Table E.66.

E.26.3 Control Efficiencies

The control methods and corresponding control efficiencies for the agglomerating units are presented in Table E.68.

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
Operation 001: Mining Operations													
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	17,900	1,074,000	9.41E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	12,000	720,000	6.31E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Manufacturer Information	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	15,300	918,000	8.04E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
001-015	Processes Controlled by P5/P6 FFDC	12,800	768,000	6.73E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	18,400	1,104,000	9.67E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
001-325	Processes Controlled by DC2/P5 FFDC	7,300	438,000	3.84E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11
001-299	Processes Controlled by Mill IOS/R1A FFDC	12,500	750,000	6.57E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
001-300	Processes Controlled by Mill IOS/R1B FFDC	10,000	600,000	5.26E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
001-272	Processes Controlled by R1A and R1B/R7 FFDC	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	3,100	186,000	1.63E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.65E-10

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
001-278	Processes Controlled by R2/R11 FFDC	4,600	276,000	2.42E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
001-228	Processes Controlled by MFL IOS/R8 FFDC	12,800	768,000	6.73E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11
001-229	Processes Controlled by R8/R9 FFDC	10,600	636,000	5.57E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11
Operation 002: Morenci Concentrator													
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	23,700	1,422,000	1.25E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	25,100	1,506,000	1.32E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	13,900	834,000	7.31E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	16,500	990,000	8.67E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	23,700	1,422,000	1.25E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
Operation 003: MFL Fine Crushing Plant													
003-273	Processes Controlled by R9/R10 FFDC	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	2.12E-11
003-330	Processes Controlled by R10/R3 FFDC	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
003-079	Processes Controlled by R3/R4 Bag Collector 3	3,200	192,000	1.68E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.49E-10
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	8,300	498,000	4.36E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.49E-10
003-082	Processes Controlled by Scrubber 3C	35,400	2,124,000	1.86E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.01	0.01	Emission Limits	1.43E-06	1.43E-06	1.43E-06	1.09E-10	2.12E-10
003-317	Processes Controlled by FFDC 3A	38,000	2,280,000	2.00E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
003-301	Processes Controlled by FFDC 6A	31,100	1,866,000	1.63E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.005	0.005	Emission Limits	7.14E-07	7.14E-07	7.14E-07	5.43E-11	1.06E-10

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
003-302	Processes Controlled by FFDC 6B	27,500	1,650,000	1.45E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.005	0.005	Emission Limits	7.14E-07	7.14E-07	7.14E-07	5.43E-11	1.06E-10
003-304	Processes Controlled by FFDC 1	27,700	1,662,000	1.46E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.005	0.005	Emission Limits	7.14E-07	7.14E-07	7.14E-07	5.43E-11	1.06E-10
003-089	Processes Controlled by Scrubber 5	41,400	2,484,000	2.18E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.01	0.01	Emission Limits	1.43E-06	1.43E-06	1.43E-06	1.09E-10	2.12E-10
003-303	Processes Controlled by FFDC 8	20,400	1,224,000	1.07E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.005	0.005	Emission Limits	7.14E-07	7.14E-07	7.14E-07	5.43E-11	1.06E-10
003-088	Processes Controlled by Scrubber 4	45,900	2,754,000	2.41E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.01	0.01	Emission Limits	1.43E-06	1.43E-06	1.43E-06	1.09E-10	2.12E-10

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
003-320	Processes Controlled by 14/15 FFDC	3,500	210,000	1.84E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
003-331	Processes Controlled by 15/16 FFDC	3,100	186,000	1.63E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
003-309	Processes Controlled by 16/S11 FFDC	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	8.49E-11
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	11,200	672,000	5.89E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.49E-10
003-202	Processes Controlled by A1A/A2A Bag Collector 8	3,200	192,000	1.68E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.49E-10

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
003-203	Processes Controlled by A1A/A2C Bag Collector 9	3,200	192,000	1.68E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.007	0.007	Emission Limits	1.00E-06	1.00E-06	1.00E-06	7.60E-11	1.49E-10
Operation 017: Metcalf Concentrator													
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	6,800	408,000	3.57E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-280	Processes Controlled by Secondary Screening FFDC 1	26,200	1,572,000	1.38E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-281	Processes Controlled by Secondary Screening FFDC 2	25,900	1,554,000	1.36E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	3,700	222,000	1.94E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
017-283	Processes Controlled by Secondary Crushing FFDC 1	8,800	528,000	4.63E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-284	Processes Controlled by Secondary Crushing FFDC 2	11,200	672,000	5.89E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	4,100	246,000	2.15E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	20,400	1,224,000	1.07E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	22,900	1,374,000	1.20E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	20,000	1,200,000	1.05E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	20,000	1,200,000	1.05E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	20,000	1,200,000	1.05E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-291	Processes Controlled by Crushed Ore Transfers FFDC	10,200	612,000	5.36E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	10,000	600,000	5.26E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
017-294	Processes Controlled by Wet Screen Feed FFDC	3,500	210,000	1.84E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	9.40E-11
AOS1: Morenci Concentrator Quaternary Crushing Operations													
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	13,900	834,000	7.31E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	16,500	990,000	8.67E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.002	0.001	Emission Limits	2.86E-07	1.43E-07	1.43E-07	1.09E-11	1.90E-11
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	16,900	1,014,000	8.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11

Table E.1 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/dscf

Process Number	Process/Emission Unit Description	Exhaust Flow Rate (dscfm)	Process Rates			Outlet Grain Loading (gr/dscf)			Emission Factors (lb/dscf)				
			Hourly (dscf/hr)	Annual (dscf/yr)	Description	PM	PM_{10}	Reference	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	9,300	558,000	4.89E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	16,900	1,014,000	8.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	3,000	180,000	1.58E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	9,300	558,000	4.89E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.004	0.004	Emission Limits	5.71E-07	5.71E-07	5.71E-07	4.34E-11	7.58E-11

Table E.2 Process Rate and Emission Factor Information for Process Controlled by Pollution Control Devices with Emission Factors in Units of lb/hr

Process Number	Process/Emission Unit Description	Process Rates			Emission Factors (lb/hour)							
		Hourly (hr/hr)	Annual (hr/yr)	Description	PM	PM_{10}	$PM_{2.5}$	VOC	H_2SO_4	H_2S	Lead	Total HAPs
Operation 014: Concentrate Leach Plant												
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr).	0.75	0.75	0.75	5.82	0.75	--	1.48E-04	5.33E-04
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations												
018-336	Processes Controlled by H_2S Scrubber System	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr).	0.43	0.43	0.43	--	--	0.47	8.26E-06	3.76E-04
AOS2: Concentrate Leach Plant Upgrades												
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr).	0.53	0.53	0.53	4.07	0.53	--	1.03E-04	3.73E-04
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr).	0.53	0.53	0.53	4.07	0.53	--	1.03E-04	3.73E-04

Table E.3 Process Rate Information for Drilling and Blasting

Process Number	Process/Emission Unit Description	Hourly Process Rate			Annual Process Rate		
		Value	Units	Description	Value	Units	Description
Operation 001: Mining Operations							
001-004	Drilling	350	holes	Estimated maximum hourly drilling rate.	211,174	holes	Based on actual 2018-2022 data scaled up according to the maximum mining rate.
001-003	Blasting	1	blasts	Assumption that only one blast can occur in an hour.	2,136	blasts	Based on actual 2018-2022 data scaled up according to the maximum mining rate.

Table E.4 Emission Factors for Drilling

Pollutant	Emission Factor	Reference
PM	1.30 lb/ton	AP-42 Table 11.9-4 (10/98), Drilling Overburden
PM_{10}	0.78 lb/ton	60% of the PM Emission Factor Based on the PM_{30} and PM_{10} Emission Factors from AP-42 Table 11.9.2-2 and Figure 11.19-4 (08/04), Tertiary Crushing (controlled)
$PM_{2.5}$	0.14 lb/ton	11.1% of the PM Emission Factor Based on the PM_{30} and $PM_{2.5}$ Emission Factors from AP-42 Table 11.9.2-2 and Figure 11.19-4 (08/04), Tertiary Crushing (controlled)
Lead	5.13E-05 lb/ton	PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	2.96E-04 lb/ton	PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.5 Emission Factors for Blasting

Pollutant	Hourly Emission Factor		Annual Emission Factor		Reference
	As Presented in Reference	Unit Conversion	As Presented in Reference	Unit Conversion	
PM	1,444.65 lb/blast	--	170.86 lb/blast	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
PM_{10}	751.22 lb/blast	--	88.85 lb/blast	--	
$PM_{2.5}$	43.34 lb/blast	--	5.13 lb/blast	--	
CO	17.8 L/kg	8,812.17 lb/blast	17.8 L/kg	2,489.17 lb/blast	*Factors Affecting ANFO Fumes Production* from NIOSH (2001)
NO_X	0.9 kg/metric ton	390.26 lb/blast	0.9 kg/metric ton	110.24 lb/blast	*NO_X Emissions from Blasting Operations in Open-Cut Coal Mining* from Atmospheric Environment 42 (2008)
SO_2	--	3.14 lb/blast	--	0.89 lb/blast	Complete Sulfur Conversion Using a Diesel Sulphur Content of 15 ppm, and an Animal Fat Sulfur Content of 500 ppm (worst case assumption based on a 03/2003 EPA document that says biofuels reduce SO_2 emissions compared to No. 2 diesel)
CO_2	73.96 kg/MMBtu 71.06 kg/MMBtu	88,184.47 lb/blast	73.96 kg/MMBtu 71.06 kg/MMBtu	24,909.40 lb/blast	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and Rendered Animal Fat
CH_4	3.00E-03 kg/MMBtu 1.10E-03 kg/MMBtu	3.42 lb/blast	3.00E-03 kg/MMBtu 1.10E-03 kg/MMBtu	0.97 lb/blast	

Table E.5 Emission Factors for Blasting

Pollutant	Hourly Emission Factor		Annual Emission Factor		Reference
	As Presented in Reference	Unit Conversion	As Presented in Reference	Unit Conversion	
N_2O	6.00E-04 kg/MMBtu 1.10E-04 kg/MMBtu	0.67 lb/blast	6.00E-04 kg/MMBtu 1.10E-04 kg/MMBtu	0.19 lb/blast	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and Rendered Animal Fat
Lead	varies	0.054 lb/blast	varies	0.007 lb/blast	AP-42 Table 1.3-10 (05/10), 137,000 Btu/gal, 0.125 MMBtu/gal Animal Fat, and 7.34 lb/gal Animal Fat, PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	varies	0.57 lb/blast	varies	0.11 lb/blast	AP-42 Tables 1.3-8 and 1.3-10 (05/10), 137,000 Btu/gal, 0.125 MMBtu/gal Animal Fat, and 7.34 lb/gal Animal Fat, PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.6 Vehicle Travel on Unpaved Roads

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Time Operated Per Vehicle (hours)			Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Daily	Annual	Hourly	Annual	Hourly	Annual
793B Haul Trucks	66	180.33	445.33	312.83	10	1	24	8,760	660	5,781,600	206,470.44	1,808,681,054
793C Haul Trucks	30	125.12	415.01	270.07	10	1	24	8,760	300	2,628,000	81,019.80	709,733,448
793D Haul Trucks	57	175.63	423.00	299.31	10	1	24	8,760	570	4,993,200	170,609.27	1,494,537,161
Water/Lube Trucks	21	98.10	181.50	139.80	8	1	24	8,760	168	1,471,680	23,486.40	205,740,864
992 Front-end Loaders	1	--	116.72	116.72	5	1	24	8,760	5	43,800	583.58	5,112,117
988 Front-end Loaders	3	--	56.29	56.29	5	1	24	8,760	15	131,400	844.31	7,396,112
994 Front-end Loaders	2	--	267.43	267.43	5	1	24	8,760	10	87,600	2,674.26	23,426,518
966 Front-end Loaders	1	--	25.56	25.56	5	1	24	8,760	5	43,800	127.81	1,119,616
918 Front-end Loaders	2	--	10.46	10.46	5	1	24	8,760	10	87,600	104.59	916,165
930 Front-end Loaders	2	--	15.69	15.69	5	1	24	8,760	10	87,600	156.91	1,374,532
24 Blades	5	--	69.00	69.00	4	1	24	8,760	20	175,200	1,380.00	12,088,800
16 Blades	3	--	39.50	39.50	4	1	24	8,760	12	105,120	474.00	4,152,240
789 Low Boys	2	--	134.50	134.50	15	1	24	8,760	30	262,800	4,035.00	35,346,600

Table E.6 Vehicle Travel on Unpaved Roads

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Time Operated Per Vehicle (hours)			Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Daily	Annual	Hourly	Annual	Hourly	Annual
Tire Handler 988	3	--	67.80	67.80	2	1	24	8,760	6	52,560	406.81	3,563,621
390 Trackhoe	2	--	95.10	95.10	0.5	1	12	4,380	1.00	4,380	95.10	416,547
336 Trackhoe	1	--	40.60	40.60	0.5	1	12	4,380	0.50	2,190	20.30	88,914
395 Trackhoe	1	--	103.65	103.65	0.5	1	12	4,380	0.50	2,190	51.83	226,994
420 Backhoe	2	--	12.13	12.13	0.5	1	12	4,380	1.00	4,380	12.13	53,110
Skid Steer	2	--	5.05	5.05	2.25	1	12	4,380	4.50	19,710	22.71	99,486
Road Compactors	2	--	20.61	20.61	5	1	12	4,380	10	43,800	206.07	902,587
Delivery/Medium-Heavy Duty On-road Vehicles	--	--	--	25.00	--	--	--	--	78	567,860	1,944.73	14,196,498
Passenger/Light-Duty On-road Vehicles	--	--	--	5.00	--	--	--	--	700	5,110,739	3,500.51	25,553,696
Total									**2,616.39**	**21,707,209**	**498,226.52**	**4,354,726,676**
Average Vehicle Weighted Average (tons)											**190.43**	**200.61**

Table E.7 Emission Factors for Vehicle Travel on Unpaved Roads

Pollutant	Emission Factor on an Hourly Basis	Emission Factor on an Annual Basis	Reference
PM	17.19 lb/VMT	15.05 lb/VMT	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
PM_{10}	4.42 lb/VMT	3.87 lb/VMT	
$PM_{2.5}$	0.44 lb/VMT	0.39 lb/VMT	
Lead	2.90E-04 lb/VMT	2.54E-04 lb/VMT	PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	1.67E-03 lb/VMT	1.47E-03 lb/VMT	PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.8 Process Rate Information for the Dozers and Graders

Vehicle Description	Quantity of Vehicles	Average Speed (mph)	Time Operated Per Vehicle (hours)		Total Hours Operated (hours)		Vehicle Miles Traveled (VMT)	
			Annual	Hourly	Annual	Hourly	Annual	Hourly
Dozers (Process #001-001b)								
D11 Dozer	17	--	8,760	1	148,920	17	--	--
D10 Dozer	19	--	8,760	1	166,440	19	--	--
824 Dozer	15	--	8,760	1	131,400	15	--	--
Total for Dozers					**446,760**	**51**	**--**	**--**
Graders (Process #001-001c)								
Graders	12	4	8,760	1	--	--	420,480	48
Total for Graders					**--**	**--**	**420,480**	**48**

Table E.9 Emission Factors for Dozer Operations

Pollutant	Emission Factor	Reference
PM	6.63 lb/hr	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
PM_{10}	1.18 lb/hr	
$PM_{2.5}$	0.70 lb/hr	
Lead	7.74E-05 lb/hr	PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	4.46E-04 lb/hr	PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.10 Emission Factors for Road Grader Operations

Pollutant	Emission Factor	Reference
PM	1.28 lb/VMT	AP-42 Table 11.9-1 (10/98), Grading
PM_{10}	0.49 lb/VMT	
$PM_{2.5}$	0.04 lb/VMT	
Lead	3.22E-05 lb/VMT	PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	1.86E-04 lb/VMT	PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
Operation 001: Mining Operations					
001-002a	Loading Ore into Haul Trucks	55,000	Calculated assuming a 20% increase over the average hourly rate.	401,500,000	Equal to the maximum daily mining rate of 1.1 MM tons/day and operation of 365 days/year.
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	14,250	Sum of the process rates for transfers to the In-Pit Crushers.	124,830,000	Sum of the process rates for transfers to the In-Pit Crushers.
001-002c	Haul Truck Unloading to Leaching/Storage Areas	40,750	Difference between the amount of ore loaded into the haul trucks and the amount of ore transferred to the In-Pit Crushers.	276,670,000	Difference between the amount of ore loaded into the haul trucks and the amount of ore transferred to the In-Pit Crushers.
001-187	Apron Feeder AF2 to In-Pit Crusher 2	7,500	Equal to the maximum capacity of In-Pit Crusher 2.	65,700,000	Equal to the maximum hourly capacity of In-Pit Crusher 2 at continuous operation.
001-249	Apron Feeder AF3 to In-Pit Crusher 3	6,750	Equal to the maximum capacity of In-Pit Crusher 3.	59,130,000	Equal to the maximum hourly capacity of In-Pit Crusher 3 at continuous operation.
001-344	Conveyor Belt P12 to Conveyor Belt P10	7,000	Equal to the maximum capacity of the transfer.	61,320,000	Equal to the maximum hourly capacity of the transfer at continuous operation.
001-016	Conveyor Belt P6 (transfer to Mill IOS)	9,100	Equal to the maximum capacity of Conveyor Belt P6.	79,716,000	Equal to the maximum hourly capacity of Conveyor Belt P6 at continuous operation.
001-226	Conveyor Belt P10 (transfer to MFL IOS)	7,000	Equal to the maximum capacity of Conveyor Belt P10.	61,320,000	Equal to the maximum hourly capacity of Conveyor Belt P10 at continuous operation.
001-323a	Loading to the Portable Cleanup Conveyor	50.00	Equal to the maximum capacity of the transfer.	438,000	Equal to the maximum hourly capacity of the transfer at continuous operation.
001-323b	Unloading from the Portable Cleanup Conveyor	50.00	Equal to the maximum capacity of the transfer.	438,000	Equal to the maximum hourly capacity of the transfer at continuous operation.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
Operation 003: MFL Fine Crushing Plant					
003-199	Conveyor Belt S11 (transfer to FOIS)	6,000	Equal to the maximum capacity of Conveyor Belt S11.	52,560,000	Equal to the maximum hourly capacity of Conveyor Belt S11 at continuous operation.
Operation 004: Lime Slaking Plants and Lime Transloading					
004-231	Transfer of Quicklime to the Lime Silo 1	25.00	Equal to the maximum lime delivery rate.	54,750	Equal to the maximum hourly capacity of Lime Slaker 1 at continuous operation.
004-232	Transfer of Quicklime to the Lime Silo 2	25.00	Equal to the maximum lime delivery rate.	54,750	Equal to the maximum hourly capacity of Lime Slaker 2 at continuous operation.
004-233	Lime Slaker 1	6.25	Equal to the maximum capacity of Lime Slaker 1.	54,750	Equal to the maximum hourly capacity of Lime Slaker 1 at continuous operation.
004-234	Lime Slaker 2	6.25	Equal to the maximum capacity of Lime Slaker 2.	54,750	Equal to the maximum hourly capacity of Lime Slaker 2 at continuous operation.
004-275	Transfer of Quicklime to Metcalf Lime Silo	25.00	Equal to the maximum lime delivery rate.	109,500	Equal to the maximum hourly capacity of the Metcalf Lime Slaker at continuous operation.
004-276	Metcalf Lime Slaker	12.50	Equal to the maximum capacity of the Metcalf Lime Slaker.	109,500	Equal to the maximum hourly capacity of the Metcalf Lime Slaker at continuous operation.
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	50.00	Equal to the maximum capacity of the transfer.	220,752	Equal to the annual quantity of quicklime delivered to FMMI's lime silos. Lime transloading won't process more lime than what is needed by the facility.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	50.00	Equal to the maximum capacity of the transfer.	220,752	Equal to the annual quantity of quicklime delivered to FMMI's lime silos. Lime transloading won't process more lime than what is needed by the facility.
Operation 006: Copper Concentrate Processing Operations					
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-044d	Conveyor Belt BA to Conveyor Belt BB	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-044e	Conveyor Belt BB to Conveyor Belt BC	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	500	Equal to the maximum capacity of the Copper Concentrate Processing Operations.	4,380,000	Equal to the maximum hourly capacity of the Copper Concentrate Processing Operations at continuous operation.
Operation 010: Concrete Batch Plant					
010-144a	Unloading Aggregate to the Aggregate Stockpiles	143.53	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for rock, sand, and gravel.	95,445	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for rock, sand, and gravel. [a]
010-144c	Loading Aggregate to the Feed Hopper	143.53	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for rock, sand, and gravel.	95,445	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for rock, sand, and gravel. [a]
010-145	Feed Hopper to Aggregate Conveyor Belt	143.53	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for rock, sand, and gravel.	95,445	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for rock, sand, and gravel. [a]

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	5.29	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for fly ash.	3,516	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for fly ash. [a]
010-147	Pneumatic Transfer of Cement to the Cement Silo	26.48	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for cement.	17,613	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for cement. [a]
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	5.29	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for fly ash.	3,516	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for fly ash. [a]
010-148b	Cement Screw Conveyor to Weigh Hopper	26.48	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for cement.	17,613	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for cement. [a]
010-148c	Aggregate Conveyor Belt to Weigh Hopper	143.53	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for rock, sand, and gravel.	95,445	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for rock, sand, and gravel. [a]
010-148d	Weigh Hopper to Concrete Mixing Truck	31.77	Based on a maximum plant capacity of 100 yd^3/hr of concrete and the distribution for cement and fly ash. The emission factor is in units of cement and cement supplement.	21,129	Based on a reasonable upper bound production rate of 66,500 yd^3/year of concrete and the distribution for cement and fly ash. The emission factor is in units of cement and cement supplement. [a]
Operation 013: Grizzly Operations					
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	60	Equal to the maximum capacity of the Concentrate Grizzly.	525,600	Equal to the maximum hourly capacity of the Concentrate Grizzly at continuous operation.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	60	Equal to the maximum capacity of the Concentrate Grizzly.	525,600	Equal to the maximum hourly capacity of the Concentrate Grizzly at continuous operation.
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	500	Equal to the maximum capacity of Construction Grizzly 1.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 1 at continuous operation.
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	500	Equal to the maximum capacity of Construction Grizzly 1.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 1 at continuous operation.
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	500	Equal to the maximum capacity of Construction Grizzly 2.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 2 at continuous operation.
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	500	Equal to the maximum capacity of Construction Grizzly 2.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 2 at continuous operation.
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	500	Equal to the maximum capacity of Construction Grizzly 3.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 3 at continuous operation.
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	500	Equal to the maximum capacity of Construction Grizzly 3.	4,380,000	Equal to the maximum hourly capacity of Construction Grizzly 3 at continuous operation.
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	500	Equal to the maximum capacity of Stockpile Grizzly 1.	4,380,000	Equal to the maximum hourly capacity of Stockpile Grizzly 1 at continuous operation.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	500	Equal to the maximum capacity of Stockpile Grizzly 1.	4,380,000	Equal to the maximum hourly capacity of Stockpile Grizzly 1 at continuous operation.
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	500	Equal to the maximum capacity of Stockpile Grizzly 2.	4,380,000	Equal to the maximum hourly capacity of Stockpile Grizzly 2 at continuous operation.
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	500	Equal to the maximum capacity of Stockpile Grizzly 2.	4,380,000	Equal to the maximum hourly capacity of Stockpile Grizzly 2 at continuous operation.
Operation 014: Concentrate Leach Plant					
014-348	Transfer of Flocculant to the Flocculant Bin	25.00	Equal to the maximum flocculant delivery rate.	4,380	Equal to the maximum expected flocculant usage rate.
014-254	Transfer of Lime to the Lime Silo	25.00	Equal to the maximum lime delivery rate.	1,752	Equal to the maximum expected lime usage rate.
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	25.00	Equal to the maximum diatomaceous earth delivery rate.	350	Equal to the maximum expected diatomaceous earth usage rate.
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations					
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	6.93	Equal to the maximum capacity of the filtering process.	60,707	Equal to the maximum hourly capacity of the filtering process at continuous operation.
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	6.93	Equal to the maximum capacity of the transfer.	60,707	Equal to the maximum hourly capacity of the transfer at continuous operation.

Table E.11 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking Operations

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tons/hr)	Description	Quantity (tons/yr)	Description
Operation 022: Prill Bins					
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	128.75	Calculated based on 5 filling ports each at 25.75 tons/hour.	81,264	Equal to the annual ammonium nitrate prill usage rate, assume contractor usage is 100% prill.
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	175.00	Based on 7 trucks loaded per hour each at 25 tons.	81,264	Equal to the annual ammonium nitrate prill usage rate, assume contractor usage is 100% prill.

[a] EPA issued a memo on November 14, 1995 titled “Calculating Potential to Emit (PTE) and Other Guidance for Grain Handling Facilities,” which addressed the determination of PTE for sources in which continuous use of equipment would never occur in actual practice (e.g., the material transfer points associated with FMMI’s Concrete Batch Plant). The memo stated that a reasonable upper bound estimate of throughput or production, determined by multiplying the greatest throughput or production rate in the last five years by an adjustment factor of 1.2, can be used to calculate PTE. To be conservative, FMMI went back 10 years and found production from the Concrete Batch Plant was greatest in 2013 at a value of 55,347.25 yd^3. Multiplying by the adjustment factor of 1.2 results in a reasonable upper bound process rate of approximately 66,500 yd^3/year.

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
Operation 001: Mining Operations						
001-002a	Loading Ore into Haul Trucks	Material Transfer Point	All Mined Material	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Material Transfer Point	Combination of ROM Leach and Waste Material	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-344	Conveyor Belt P12 to Conveyor Belt P10	Material Transfer Point	MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Protected	See Section E.9.2.1

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Material Transfer Point	MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-323a	Loading to the Portable Cleanup Conveyor	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
001-323b	Unloading from the Portable Cleanup Conveyor	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
Operation 003: MFL Fine Crushing Plant						
003-199	Conveyor Belt S11 (transfer to FOIS)	Material Transfer Point	MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
Operation 004: Lime Slaking Plants and Lime Transloading						
004-231	Transfer of Quicklime to the Lime Silo 1	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2
004-232	Transfer of Quicklime to the Lime Silo 2	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
004-233	Lime Slaker 1	Lime Slaking Operation	Lime Used in the Morenci Concentrator	N/A	N/A	See Section E.11.2.1
004-234	Lime Slaker 2	Lime Slaking Operation	Lime Used in the Morenci Concentrator	N/A	N/A	See Section E.11.2.1
004-275	Transfer of Quicklime to Metcalf Lime Silo	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2
004-276	Metcalf Lime Slaker	Lime Slaking Operation	Lime Used in the Metcalf Concentrator	N/A	N/A	See Section E.11.2.2
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2
Operation 006: Copper Concentrate Processing Operations						
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-044d	Conveyor Belt BA to Conveyor Belt BB	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-044e	Conveyor Belt BB to Conveyor Belt BC	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Protected	See Section E.9.2.1
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	Material Transfer Point	Copper Concentrate	9.5% (site-specific)	Unprotected	See Section E.9.2.1
Operation 010: Concrete Batch Plant						
010-144a	Unloading Aggregate to the Aggregate Stockpiles	Material Transfer Point	Aggregate (waste rock)	1.77% (footnote “b” of AP-42 Table 11.12-2)	Unprotected	See Section E.9.2.1

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
010-144c	Loading Aggregate to the Feed Hopper	Material Transfer Point	Aggregate (waste rock)	1.77% (footnote “b” of AP-42 Table 11.12-2)	Unprotected	See Section E.9.2.1
010-145	Feed Hopper to Aggregate Conveyor Belt	Material Transfer Point	Aggregate (waste rock)	1.77% (footnote “b” of AP-42 Table 11.12-2)	Unprotected	See Section E.9.2.1
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Material Transfer Point	Fly Ash	N/A	N/A	See Section E.9.2.5
010-147	Pneumatic Transfer of Cement to the Cement Silo	Material Transfer Point	Cement	N/A	N/A	See Section E.9.2.4
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	Material Transfer Point	Fly Ash	N/A	N/A	See Section E.9.2.5
010-148b	Cement Screw Conveyor to Weigh Hopper	Material Transfer Point	Cement	N/A	N/A	See Section E.9.2.4
010-148c	Aggregate Conveyor Belt to Weigh Hopper	Material Transfer Point	Aggregate (waste rock)	1.77% (footnote “b” of AP-42 Table 11.12-2)	Unprotected	See Section E.9.2.1
010-148d	Weigh Hopper to Concrete Mixing Truck	Material Transfer Point	Concrete	N/A	N/A	See Section E.9.2.6

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
Operation 013: Grizzly Operations						
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	Screening Operation	Combination of Copper and Molybdenum Concentrate	3.2% (good operating practices)	N/A	See Section E.10.2
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	Material Transfer Point	Combination of Copper and Molybdenum Concentrate	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	Screening Operation	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	N/A	See Section E.10.2
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	Material Transfer Point	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	Screening Operation	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	N/A	See Section E.10.2
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	Material Transfer Point	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	Screening Operation	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	N/A	See Section E.10.2

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	Material Transfer Point	Nonmetallic Minerals (waste rock)	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	Screening Operation	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	N/A	See Section E.10.2
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	Screening Operation	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	N/A	See Section E.10.2
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	See Section E.9.2.1
Operation 014: Concentrate Leach Plant						
014-348	Transfer of Flocculant to the Flocculant Bin	Material Transfer Point	Flocculant	N/A	N/A	See Section E.9.2.2
014-254	Transfer of Lime to the Lime Silo	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.2

Table E.12 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, and Lime Slaking

Process Number	Process/Emission Unit Description	Emission Factor				
		Type of Emission Unit	Type of Material Processed	Moisture Content of Material Processed	Protected or Unprotected Transfer Point	Reference
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	Material Transfer Point	Diatomaceous Earth	N/A	N/A	See Section E.9.2.2
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations						
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	Material Transfer Point	Molybdenum Concentrate	8.5% (site-specific)	Protected	See Section E.9.2.1
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	Material Transfer Point	Molybdenum Concentrate	8.5% (site-specific)	Protected	See Section E.9.2.1
Operation 022: Prill Bins						
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.3
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.3

Table E.13 Emission Factors for the Material Transfer Points Associated with Mined Materials, Concentrate, Nonmetallic Minerals, and Aggregate

Material	Moisture Content (%)	Protected/ Unprotected	Wind Speed (mph)	Particulate Matter Emission Factors (lb/ton)				
				PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
All Mined Material	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	5.78E-08	3.33E-07
Morenci Concentrator Ore	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	6.68E-08	1.17E-07
MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Protected	1.30	0.00021	0.00010	0.000015	7.65E-09	1.50E-08
MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	6.68E-08	1.31E-07
Combination of Morenci Concentrator and Metcalf Concentrator Ore	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	6.68E-08	1.31E-07
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	6.68E-08	1.31E-07
Combination of ROM Leach and Waste Material	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	5.37E-08	4.25E-07
Molybdenum Concentrate	8.5% (site-specific)	Protected	1.30	0.000054	0.000026	0.0000039	4.87E-10	2.22E-08
Copper Concentrate	9.5% (site-specific)	Protected	1.30	0.000046	0.000022	0.0000033	4.32E-09	1.56E-08
Copper Concentrate	9.5% (site-specific)	Unprotected	6.88	0.00041	0.00019	0.000029	3.78E-08	1.36E-07

Table E.13 Emission Factors for the Material Transfer Points Associated with Mined Materials, Concentrate, Nonmetallic Minerals, and Aggregate

Material	Moisture Content (%)	Protected/ Unprotected	Wind Speed (mph)	Particulate Matter Emission Factors (lb/ton)				
				PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
Combination of Copper and Molybdenum Concentrate (in grizzly operations)	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	1.71E-07	6.27E-07
Nonmetallic Minerals (waste rock in grizzly operations)	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	1.21E-08	1.36E-06
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore (in grizzly operations)	3.2% (good operating practices)	Unprotected	6.88	0.0019	0.00088	0.00013	6.68E-08	1.31E-07
Aggregate (waste rock)	1.77% (footnote “b” of AP-42 Table 11.12-2)	Unprotected	6.88	0.0043	0.0020	0.00031	2.77E-08	3.12E-06

Table E.14 Emission Factors for the Material Transfer Points Associated with Flocculant, Lime, and Diatomaceous Earth

Pollutant	Emission Factor	Reference
PM	0.61 lb/ton	AP-42 Table 11.17-4 (02/98), Product Loading Enclosed Truck
PM_{10}	0.21 lb/ton	35% of the PM Emission Factor Based on the PM_{10} Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes
$PM_{2.5}$	0.032 lb/ton	5.3% of the PM Emission Factor Based on the $PM_{2.5}$ Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes

Table E.15 Emission Factors for the Material Transfer Points Associated with Ammonium Nitrate Prill

Pollutant	Emission Factor	Reference
PM	0.020 lb/ton	AP-42 Table 8.3-2 (07/93), Bulk Loading Operations
PM_{10}	0.0070 lb/ton	35% of the PM Emission Factor Based on the PM_{10} Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes
$PM_{2.5}$	0.0011 lb/ton	5.3% of the PM Emission Factor Based on the $PM_{2.5}$ Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes

Table E.16 Emission Factors for the Material Transfer Points Associated with Cement

Pollutant	Emission Factor	Reference
PM	0.73 lb/ton	AP-42 Table 11.12-2 (06/06), Cement Unloading to Elevated Storage Silo (pneumatic)
PM_{10}	0.47 lb/ton	
$PM_{2.5}$	0.039 lb/ton	5.3% of the PM Emission Factor Based on the $PM_{2.5}$ Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes
Lead	7.36E-07 lb/ton	AP-42 Table 11.12-8 (06/06), Cement Silo Filling (uncontrolled)
Total HAPs	2.23E-04 lb/ton	

Table E.17 Emission Factors for the Material Transfer Points Associated with Fly Ash

Pollutant	Emission Factor	Reference
PM	3.14 lb/ton	AP-42 Table 11.12-2 (06/06), Cement Supplement Unloading to Elevated Storage Silo (pneumatic)
PM_{10}	1.10 lb/ton	
$PM_{2.5}$	0.17 lb/ton	5.3% of the PM Emission Factor Based on the $PM_{2.5}$ Particle Size Multiplier from AP-42 Section 13.2.4.3 (11/06) for Aggregate Drop Processes
Lead	2.60E-05 lb/ton	AP-42 Table 11.12-8 (06/06), Cement Supplement Silo Filling (with fabric filter control), Uncontrolled Emission Factors Determined Using a 98% control efficiency (see AP-42 Table 11.12-8 (06/06), footnote "b")
Total HAPs	2.72E-04 lb/ton	

Table E.18 Emission Factors for the Material Transfer Points Associated with Concrete

Pollutant	Emission Factor	Reference
PM	1.12 lb/ton	AP-42 Tables 11.12-2 and 11.12-3 (06/06), Truck Loading (truck mix)
PM_{10}	0.31 lb/ton	
$PM_{2.5}$	0.050 lb/ton	
Lead	3.62E-06 lb/ton	AP-42 Table 11.12-8 (06/06), Truck Loading (uncontrolled)
Total HAPs	1.03E-04 lb/ton	

Table E.19 Emission Factors for the Screening Operations

Pollutant	Emission Factor			Reference
	Concentrate Grizzly Screening	Construction Grizzly Screening	Stockpile Grizzly Screening	
PM	0.0022 lb/ton	0.0022 lb/ton	0.0022 lb/ton	AP-42 Table 11.19.2-2 (08/04), Screening (controlled)
PM_{10}	0.00074 lb/ton	0.00074 lb/ton	0.00074 lb/ton	
$PM_{2.5}$	0.000050 lb/ton	0.000050 lb/ton	0.000050 lb/ton	
Lead	1.44E-07 lb/ton	1.02E-08 lb/ton	5.62E-08 lb/ton	PM_{10} emission factor multiplied by the concentration of lead (see Table E.67)
Total HAPs	5.28E-07 lb/ton	1.15E-06 lb/ton	1.10E-07 lb/ton	PM_{10} emission factor multiplied by the concentration of the HAPs (see Table E.67)

Table E.20 Emission Factors for Lime Slaking

Type of Lime Slaker	Particulate Matter Emission Factors (lb/ton)				Reference
	PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$	
Lime Slaking Associated with the Morenci Concentrator	0.068	0.011	0.068	0.068	Stack Test of a Lime Slaker at the Western Sugar Company, Assume $PM=PM_{10}=PM_{2.5}$
Lime Slaking Associated with the Metcalf Concentrator	0.0012	0.00020	0.0012	0.0012	Manufacturer's Information with a 20% Safety Factor, Assume $PM=PM_{10}=PM_{2.5}$

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 001: Mining Operations					
001-017	Wind Erosion of Mill IOS	Hourly/Annual Process Rate		4.00	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Combination of Morenci Concentrator and Metcalf Concentrator Ore	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	1.39E-05	lb/acre-hr
			Total HAPs	2.72E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	1.22E-01	lb/acre-yr
			Total HAPs	2.38E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
001-227	Wind Erosion of MFL IOS	Hourly/Annual Process Rate		4.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		MFL Fine Crushing Plant Ore	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	1.39E-05	lb/acre-hr
			Total HAPs	2.72E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	1.22E-01	lb/acre-yr
			Total HAPs	2.38E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 003: MFL Fine Crushing Plant					
003-200	Wind Erosion of the FOIS	Hourly/Annual Process Rate		1.00	acre-yr
		Surface Material Silt Content		15.00	%, estimated value.
		Type of Material Stored		MFL Fine Crushing Plant Ore	
		Emission Factors on an Hourly Basis	PM	0.74	lb/acre-hr
			PM_{10}	0.37	lb/acre-hr
			$PM_{2.5}$	0.056	lb/acre-hr
			Lead	2.81E-05	lb/acre-hr
			Total HAPs	5.50E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	6,488.29	lb/acre-yr
			PM_{10}	3,244.14	lb/acre-yr
			$PM_{2.5}$	486.62	lb/acre-yr
			Lead	2.47E-01	lb/acre-yr
			Total HAPs	4.82E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 006: Copper Concentrate Processing Operations					
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	Hourly/Annual Process Rate		0.25	acre-yr
		Surface Material Silt Content		96.00	%, site-specific information.
		Type of Material Stored		Copper Concentrate	
		Emission Factors on an Hourly Basis	PM	4.74	lb/acre-hr
			PM_{10}	2.37	lb/acre-hr
			$PM_{2.5}$	0.36	lb/acre-hr
			Lead	4.67E-04	lb/acre-hr
			Total HAPs	1.68E-03	lb/acre-hr
		Emission Factors on an Annual Basis	PM	41,525.03	lb/acre-yr
			PM_{10}	20,762.51	lb/acre-yr
			$PM_{2.5}$	3,114.38	lb/acre-yr
			Lead	4.09E+00	lb/acre-yr
			Total HAPs	1.48E+01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 010: Concrete Batch Plant					
010-144b	Wind Erosion of the Aggregate Stockpiles	Hourly/Annual Process Rate		1.00	acre-yr
		Surface Material Silt Content		2.60	%, equal to value in AP-42 Table 13.2.4-1 for sand.
		Type of Material Stored		Aggregate (waste rock)	
		Emission Factors on an Hourly Basis	PM	0.13	lb/acre-hr
			PM_{10}	0.064	lb/acre-hr
			$PM_{2.5}$	0.0096	lb/acre-hr
			Lead	8.81E-07	lb/acre-hr
			Total HAPs	9.94E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	1,124.64	lb/acre-yr
			PM_{10}	562.32	lb/acre-yr
			$PM_{2.5}$	84.35	lb/acre-yr
			Lead	7.72E-03	lb/acre-yr
			Total HAPs	8.71E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 013: Grizzly Operations					
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Combination of Copper and Molybdenum Concentrate	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	3.55E-05	lb/acre-hr
			Total HAPs	1.30E-04	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	3.11E-01	lb/acre-yr
			Total HAPs	1.14E+00	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Waste Rock	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	2.51E-06	lb/acre-hr
			Total HAPs	2.83E-04	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	2.20E-02	lb/acre-yr
			Total HAPs	2.48E+00	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Waste Rock	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	2.51E-06	lb/acre-hr
			Total HAPs	2.83E-04	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	2.20E-02	lb/acre-yr
			Total HAPs	2.48E+00	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Waste Rock	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	2.51E-06	lb/acre-hr
			Total HAPs	2.83E-04	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	2.20E-02	lb/acre-yr
			Total HAPs	2.48E+00	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	1.39E-05	lb/acre-hr
			Total HAPs	2.72E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	1.22E-01	lb/acre-yr
			Total HAPs	2.38E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		7.40	%, value used at comparable copper mines, similar to AP-42 Table 13.2.4-1 for overburden.
		Type of Material Stored		Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	
		Emission Factors on an Hourly Basis	PM	0.37	lb/acre-hr
			PM_{10}	0.18	lb/acre-hr
			$PM_{2.5}$	0.027	lb/acre-hr
			Lead	1.39E-05	lb/acre-hr
			Total HAPs	2.72E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,200.89	lb/acre-yr
			PM_{10}	1,600.44	lb/acre-yr
			$PM_{2.5}$	240.07	lb/acre-yr
			Lead	1.22E-01	lb/acre-yr
			Total HAPs	2.38E-01	lb/acre-yr

Table E.21 Process Rate and Emission Factor Information for Stockpiles, Storage Piles, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Operation 023: Tailings Operations					
023-418	Wind Erosion of Tailings	Hourly/Annual Process Rate		2,645	acre-yr
		Number of Annual Disturbances		1	disturbances/year
		Type of Material Stored		Tailings	
		Emission Factors on an Hourly Basis	PM	0.039	lb/acre-hr
			PM_{10}	0.020	lb/acre-hr
			$PM_{2.5}$	0.0029	lb/acre-hr
			Lead	2.42E-07	lb/acre-hr
			Total HAPs	4.24E-06	lb/acre-hr
		Emission Factors on an Annual Basis	PM	344.42	lb/acre-yr
			PM_{10}	172.21	lb/acre-yr
			$PM_{2.5}$	25.83	lb/acre-yr
			Lead	2.12E-03	lb/acre-yr
			Total HAPs	3.71E-02	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for the Cooling Towers and the Dust Suppression Fan

Process Number	Process/Emission Unit Description	Water Circulation Rate (gpm)	Process Rates			Emission Factor Inputs		Emission Factors (lb/1,000 gal)				
			Hourly (1,000 gal/hr)	Annual (1,000 gal/yr)	Description	TDS (ppm)	Maximum Liquid Drift Rate (%)	PM	PM_{10}	$PM_{2.5}$	Lead	Total HAPs
Operation 003: MFL Fine Crushing Plant												
003-441	Dust Suppression Fan	400	24	210,240	Assume continuous operation (60 min/hr and 8,760 hr/yr).	1,100	0.02	0.0018	0.0018	0.0018	--	8.46E-11
Operation 014: Concentrate Leach Plant												
014-240	PLV Cooling Tower	10,000	600	5,256,000	Assume continuous operation (60 min/hr and 8,760 hr/yr).	1,500	0.004	0.00050	0.00036	1.11E-06	3.63E-12	1.85E-10
014-241	Oxygen Plant Cooling Tower 1	5,150	309	2,706,840	Assume continuous operation (60 min/hr and 8,760 hr/yr).	1,500	0.002	0.00025	0.00018	5.53E-07	1.82E-12	9.24E-11
AOS2: Concentrate Leach Plant Upgrades												
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	3,600	216	1,892,160	Assume continuous operation (60 min/hr and 8,760 hr/yr).	1,500	0.010	0.0013	0.00091	2.77E-06	9.08E-12	4.62E-10

Table E.23 Process Rate and Emission Factor Information for External Combustion Equipment and Turbines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/year	Description	
Operation 005: Metcalf Power Plant							
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Natural Gas	204.89	Equal to the maximum capacity of Natural Gas Turbine 1.	268,570	Equal to the annual natural gas limitation of 537,140 MMBtu/yr for Natural Gas Turbines 1/2. The process rate is distributed 50% to each turbine for calculation purposes only.	See Section E.16.2.3
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Natural Gas	204.89	Equal to the maximum capacity of Natural Gas Turbine 2.	268,570		See Section E.16.2.3
Operation 009: Solution Extraction/Electrowinning Operations							
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Natural Gas	17.56	Equal to the maximum capacity of Small Industrial Natural Gas Boiler 1.	125,000	Equal to the annual natural gas limitation of 625,000 MMBtu/yr for Small Industrial Natural Gas Boilers 1/5 (as requested in the application for SPR #99132). The process rate is distributed 20% to each boiler for calculation purposes only.	See Section E.16.2.1
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Natural Gas	17.56	Equal to the maximum capacity of Small Industrial Natural Gas Boiler 2.	125,000		See Section E.16.2.1
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Natural Gas	17.56	Equal to the maximum capacity of Small Industrial Natural Gas Boiler 3.	125,000		See Section E.16.2.1
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Natural Gas	17.56	Equal to the maximum capacity of Small Industrial Natural Gas Boiler 4.	125,000		See Section E.16.2.1
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Natural Gas	17.56	Equal to the maximum capacity of Small Industrial Natural Gas Boiler 5.	125,000		See Section E.16.2.1

Table E.23 Process Rate and Emission Factor Information for External Combustion Equipment and Turbines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/year	Description	
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Diesel	0.55	Equal to the maximum capacity of Diesel Hot Water Pressure Cleaner 1.	4,818	Equal to the maximum hourly capacity of Diesel Hot Water Pressure Cleaner 1 at continuous operation.	See Section E.17.2
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Diesel	0.55	Equal to the maximum capacity of Diesel Hot Water Pressure Cleaner 2.	4,818	Equal to the maximum hourly capacity of Diesel Hot Water Pressure Cleaner 2 at continuous operation.	See Section E.17.2
Operation 010: Concrete Batch Plant							
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Propane	1.01	Equal to the maximum capacity of Propane Hot Water Heater 1.	8,847.60	Equal to the maximum hourly capacity of Propane Hot Water Heater 1 at continuous operation.	See Section E.18.2
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Propane	1.01	Equal to the maximum capacity of Propane Hot Water Heater 2.	8,847.60	Equal to the maximum hourly capacity of Propane Hot Water Heater 2 at continuous operation.	See Section E.18.2
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Propane	1.01	Equal to the maximum capacity of Propane Hot Water Heater 3.	8,847.60	Equal to the maximum hourly capacity of Propane Hot Water Heater 3 at continuous operation.	See Section E.18.2
Operation 014: Concentrate Leach Plant							
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Natural Gas	17.64	Equal to the maximum capacity of the Natural Gas Startup Boiler.	61,320	Equal to the annual natural gas limitation of 61,320 MMBtu/yr	See Section E.16.2.2
Operation 024: Miscellaneous Fuel Burning Equipment							
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Propane	0.318	Equal to the maximum capacity of the Light Vehicle Propane Pressure Washer.	2,785.68	Equal to the maximum hourly capacity of the Light Vehicle Propane Pressure Washer at continuous operation.	See Section E.18.2

Table E.23 Process Rate and Emission Factor Information for External Combustion Equipment and Turbines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/year	Description	
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Natural Gas	0.504	Equal to the maximum capacity of the Locomotive Area Machine Shop Natural Gas Parts Washer.	4,415.04	Equal to the maximum hourly capacity of the Locomotive Area Machine Shop Natural Gas Parts Washer at continuous operation.	See Section E.16.2.1
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Natural Gas	20.25	Equal to the maximum capacity of the Natural Gas Small Space Heaters.	177,354.96	Equal to the maximum hourly capacity of the Natural Gas Small Space Heaters at continuous operation.	See Section E.16.2.1
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Natural Gas	5.95	Equal to the maximum capacity of the Natural Gas Small Boilers.	52,091.16	Equal to the maximum hourly capacity of the Natural Gas Small Boilers at continuous operation.	See Section E.16.2.1
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Propane	4.21	Equal to the maximum capacity of the Propane Small Space Heaters.	36,897.12	Equal to the maximum hourly capacity of the Propane Small Space Heaters at continuous operation.	See Section E.18.2
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Propane	0.469	Equal to the maximum capacity of the Propane Small Boilers.	4,108.44	Equal to the maximum hourly capacity of the Propane Small Boilers at continuous operation.	See Section E.18.2

Table E.24 Emission Factors for General Uncontrolled Natural Gas Combustion $0.3 \leq$ MMBtu/hr < 100

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	7.60 lb/MMscf	0.0075 lb/MMBtu	AP-42 Table 1.4-2 for Natural Gas Combustion (07/98), 1,020 Btu/scf, Assume PM=PM_{10}=$PM_{2.5}$
CPM	5.70 lb/MMscf	0.0056 lb/MMBtu	
PM_{10}	7.60 lb/MMscf	0.0075 lb/MMBtu	
$PM_{2.5}$	7.60 lb/MMscf	0.0075 lb/MMBtu	
SO_2	0.60 lb/MMscf	0.00059 lb/MMBtu	
VOC	5.50 lb/MMscf	0.0054 lb/MMBtu	
CO	84.00 lb/MMscf	0.082 lb/MMBtu	AP-42 Tables 1.4-1 and 1.4-2 for Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100 (07/98) and 1,020 Btu/scf
NO_X	100.00 lb/MMscf	0.098 lb/MMBtu	
CO_2	53.06 kg/MMBtu	116.98 lb/MMBtu	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas
CH_4	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N_2O	1.00E-04 kg/MMBtu	0.00022 lb/MMBtu	
Lead	0.00050 lb/MMscf	4.90E-07 lb/MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf
Total HAPs	1.89 lb/MMscf	1.85E-03 lb/MMBtu	

Table E.25 Emission Factors for the Natural Gas Startup Boiler

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	7.60 lb/MMscf	0.0075 lb/MMBtu	AP-42 Table 1.4-2 for Natural Gas Combustion (07/98), 1,020 Btu/scf, Assume PM=PM_{10}=$PM_{2.5}$
CPM	5.70 lb/MMscf	0.0056 lb/MMBtu	
PM_{10}	7.60 lb/MMscf	0.0075 lb/MMBtu	
$PM_{2.5}$	7.60 lb/MMscf	0.0075 lb/MMBtu	
SO_2	0.60 lb/MMscf	0.00059 lb/MMBtu	
VOC	5.50 lb/MMscf	0.0054 lb/MMBtu	
CO	84.00 lb/MMscf	0.082 lb/MMBtu	AP-42 Table 1.4-1 for Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100 (07/98) and 1,020 Btu/scf
NO_X	0.050 lb/MMBtu	--	Manufacturer Specifications
CO_2	53.06 kg/MMBtu	116.98 lb/MMBtu	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas
CH_4	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N_2O	1.00E-04 kg/MMBtu	0.00022 lb/MMBtu	
Lead	0.00050 lb/MMscf	4.90E-07 lb/MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf
Total HAPs	1.89 lb/MMscf	1.85E-03 lb/MMBtu	

Table E.26 Emission Factors for the Natural Gas Turbines Associated with the Metcalf Power Plant

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.0066 lb/MMBtu	--	AP-42 Table 3.1-2a (04/00) for Stationary Natural Gas-Fired Turbines, 0.0008% Natural Gas Sulfur Content, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0047 lb/MMBtu	--	
PM_{10}	0.0066 lb/MMBtu	--	
$PM_{2.5}$	0.0066 lb/MMBtu	--	
SO_2	0.00075 lb/MMBtu	--	
VOC	0.0021 lb/MMBtu	--	
CO	--	0.082 lb/MMBtu	Emission Limits
NO_X	--	0.59 lb/MMBtu	
CO_2	53.06 kg/MMBtu	116.98 lb/MMBtu	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas
CH_4	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N_2O	1.00E-04 kg/MMBtu	0.00022 lb/MMBtu	
Greatest Single HAP	6.40E-05 lb/MMBtu	--	AP-42 Table 3.1-3 (04/00) for Stationary Natural Gas-Fired Turbines
Total HAPs	1.03E-03 lb/MMBtu	--	

Table E.27 Emission Factors for the Diesel External Combustion Equipment < 100 MMBtu/hr

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	3.30 lb/1,000 gallon	0.024 lb/MMBtu	AP-42 Tables 1.3-1, 1.3-2, 1.3-3, and 1.3-6 (05/10) for either Distillate Fuel Oil < 100 MMBtu/hr or No. 2 Fuel Oil, Diesel Sulfur Content of 0.0015%, and 137,000 Btu/gallon
CPM	1.30 lb/1,000 gallon	0.0095 lb/MMBtu	
PM_{10}	2.30 lb/1,000 gallon	0.017 lb/MMBtu	
$PM_{2.5}$	1.54 lb/1,000 gallon	0.011 lb/MMBtu	
CO	5.00 lb/1,000 gallon	0.036 lb/MMBtu	
NO_X	20.00 lb/1,000 gallon	0.15 lb/MMBtu	
SO_2	0.21 lb/1,000 gallon	0.0016 lb/MMBtu	
VOC	0.20 lb/1,000 gallon	0.0015 lb/MMBtu	
CO_2	73.96 kg/MMBtu	163.05 lb/MMBtu	40 CFR Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.0066 lb/MMBtu	
N_2O	6.00E-04 kg/MMBtu	0.0013 lb/MMBtu	
Lead	9.00 lb/1012 Btu	9.00E-06 lb/MMBtu	AP-42 Tables 1.3-8 and 1.3-10 (05/10) and 137,000 Btu/gallon
Total HAPs	varies	5.18E-04 lb/MMBtu	

Table E.28 Emission Factors for Propane External Combustion Equipment

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.70 lb/1,000 gallon	0.0077 lb/MMBtu	AP-42 Table 1.5-1 (07/08) for Industrial Propane Boilers, 91.5 MMBtu/10^3 gallon, Propane Sulfur Content of 15 gr/100 ft^3, Assume PM=PM_{10}=$PM_{2.5}$
CPM	0.50 lb/1,000 gallon	0.0055 lb/MMBtu	
PM_{10}	0.70 lb/1,000 gallon	0.0077 lb/MMBtu	
$PM_{2.5}$	0.70 lb/1,000 gallon	0.0077 lb/MMBtu	
CO	7.50 lb/1,000 gallon	0.082 lb/MMBtu	
NO_X	13.00 lb/1,000 gallon	0.14 lb/MMBtu	
SO_2	1.50 lb/1,000 gallon	0.016 lb/MMBtu	
VOC	5.50 lb/MMscf	0.0054 lb/MMBtu	AP-42 Table 1.4-2 (07/98) for Natural Gas Combustion (07/98), a Natural Gas Heating Value of 1,020 Btu/scf
CO_2	62.87 kg/MMBtu	138.60 lb/MMBtu	40 CFR Part 98 Tables C-1 and C-2 for Propane
CH_4	3.00E-03 kg/MMBtu	0.0066 lb/MMBtu	
N_2O	6.00E-04 kg/MMBtu	0.0013 lb/MMBtu	
Lead	0.00050 lb/MMscf	4.90E-07 lb/MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98), a Propane Heating value of 91.5 MMBtu/10^3 gallons, a Natural Gas Heating Value of 1,020 Btu/scf
Total HAPs	1.89 lb/MMscf	1.85E-03 lb/MMBtu	

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
Operation 004: Lime Slaking Plants and Lime Transloading							
004-446	Lime Transloading Engine (47.6 hp engine)	Diesel	47.60	Equal to the maximum capacity of the Lime Transloading Engine.	416,976	Equal to the maximum hourly capacity of the Lime Transloading Engine at 8,760 hr/yr (continuous operation).	See Section E.18.2.4
Operation 005: Metcalf Power Plant							
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Diesel	300	Equal to the maximum capacity of Diesel Black Start Turbine Engine 1.	150,000	Equal to the maximum hourly capacity of Diesel Black Start Turbine Engine 1 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines. Black start engines do not operate more than emergency engines.	See Section E.18.2.1
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Diesel	300	Equal to the maximum capacity of Diesel Black Start Turbine Engine 2.	150,000	Equal to the maximum hourly capacity of Diesel Black Start Turbine Engine 2 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines. Black start engines do not operate more than emergency engines.	See Section E.18.2.1
Operation 015: Diesel Emergency Engines							
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Diesel	809.00	Equal to the maximum capacity of the GO Diesel Emergency Generator GNO37A.	242,700	Equal to the maximum hourly capacity of the GO Diesel Emergency Generator GNO37A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.5

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Diesel	810	Equal to the maximum capacity of the Metcalf Concentrator Diesel Emergency Generator GNO38A.	405,000	Equal to the maximum hourly capacity of the Metcalf Concentrator Diesel Emergency Generator GNO38A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.6
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Diesel	324	Equal to the maximum capacity of the ETPS Diesel Emergency Generator GNO36A.	162,000	Equal to the maximum hourly capacity of the ETPS Diesel Emergency Generator GNO36A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.7
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Diesel	220	Equal to the maximum capacity of the NTPS Diesel Emergency Generator GNO46A.	110,000	Equal to the maximum hourly capacity of the NTPS Diesel Emergency Generator GNO46A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.8
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Diesel	66	Equal to the maximum capacity of the Central SX Diesel Emergency Generator GNO95A.	33,000	Equal to the maximum hourly capacity of the Central SX Diesel Emergency Generator GNO95A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.9
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Diesel	225	Equal to the maximum capacity of the Stargo MFL Emergency Diesel Pump Engine LS-234.	112,500	Equal to the maximum hourly capacity of the Stargo MFL Emergency Diesel Pump Engine LS-234 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.2

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Diesel	350	Equal to the maximum capacity of the Metcalf Diesel Fire Pump Engine.	175,000	Equal to the maximum hourly capacity of the Metcalf Diesel Fire Pump Engine at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.10
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Diesel	1,141	Equal to the maximum capacity of Emergency Diesel Generator WWTP GNO61A.	570,500	Equal to the maximum hourly capacity of Emergency Diesel Generator WWTP GNO61A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.11
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Diesel	69	Equal to the maximum capacity of the Metcalf Clean Room Diesel Emergency Generator.	34,500	Equal to the maximum hourly capacity of the Metcalf Clean Room Diesel Emergency Generator at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.12
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Diesel	539	Equal to the maximum capacity of the Metcalf Mill Diesel Emergency Generator.	269,500	Equal to the maximum hourly capacity of the Metcalf Mill Diesel Emergency Generator at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.18.2.3
Operation 021: Propane and Natural Gas Emergency Engines							
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Propane	12.65	Equal to the maximum capacity of Western King Site 1 Propane Emergency Generator GNO21A.	6,325	Equal to the maximum hourly capacity of Western King Site 1 Propane Emergency Generator GNO21A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.3

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Propane	97.70	Equal to the maximum capacity of Western King Site 2 Propane Emergency Generator GNO20A.	48,850	Equal to the maximum hourly capacity of Western King Site 2 Propane Emergency Generator GNO20A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.5
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Propane	97.70	Equal to the maximum capacity of Engineering Yard Propane Emergency Generator GNO19A.	48,850	Equal to the maximum hourly capacity of Engineering Yard Propane Emergency Generator GNO19A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.6
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Propane	97.70	Equal to the maximum capacity of Hoopes Hill Site 2 Propane Emergency Generator GNO18A.	48,850	Equal to the maximum hourly capacity of Hoopes Hill Site 2 Propane Emergency Generator GNO18A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.5
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Propane	97.70	Equal to the maximum capacity of Silver Basin Site 2 Propane Emergency Generator GNO17A.	48,850	Equal to the maximum hourly capacity of Silver Basin Site 2 Propane Emergency Generator GNO17A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.6
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Propane	36.14	Equal to the maximum capacity of the Flagpole Propane Emergency Generator GNO22A.	18,070	Equal to the maximum hourly capacity of the Flagpole Propane Emergency Generator GNO22A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.1

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Propane	12.65	Equal to the maximum capacity of the Hoopes Hill Site 1 Propane Emergency Generator GNO47A.	6,325	Equal to the maximum hourly capacity of the Hoopes Hill Site 1 Propane Emergency Generator GNO47A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.3
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Propane	12.65	Equal to the maximum capacity of the Garfield Connex Propane Emergency Generator GNO48A.	6,325	Equal to the maximum hourly capacity of the Garfield Connex Propane Emergency Generator GNO48A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.2
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Propane	12.65	Equal to the maximum capacity of the Mine Gate Guard Shack Propane Emergency Generator GNO26A.	6,325	Equal to the maximum hourly capacity of the Mine Gate Guard Shack Propane Emergency Generator GNO26A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.4
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Propane	37	Equal to the maximum capacity of the GSC Propane Emergency Generator GNO23A.	18,500	Equal to the maximum hourly capacity of the GSC Propane Emergency Generator GNO23A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.1
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Propane	37	Equal to the maximum capacity of the Metcalf Mine Office Propane Emergency Generator GNO24A.	18,500	Equal to the maximum hourly capacity of the Metcalf Mine Office Propane Emergency Generator GNO24A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.1

Table E.29 Process Rate and Emission Factor Information for Engines

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			hp-hr/hr	Description	hp-hr/yr	Description	
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Propane	147	Equal to the maximum capacity of the Sunridge Propane Emergency Generator GNO85A.	73,500	Equal to the maximum hourly capacity of the Sunridge Propane Emergency Generator GNO85A at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.7
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Natural Gas	460	Equal to the maximum capacity of the GSC Natural Gas Emergency Generator.	230,000	Equal to the maximum hourly capacity of the GSC Natural Gas Emergency Generator at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Propane	147	Equal to the maximum capacity of the Metcalf Mine Office Propane Emergency Generator GNO24B.	73,500	Equal to the maximum hourly capacity of the Metcalf Mine Office Propane Emergency Generator GNO24B at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.19.2.8
Operation 025: Diesel Non-Emergency Engines							
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Diesel	173.80	Equal to the maximum capacity of West Rail Cut Non-Emergency Diesel Pump Engine LS-233.	1,522,488	Equal to the maximum hourly capacity of West Rail Cut Non-Emergency Diesel Pump Engine LS-233 at 8,760 hr/yr (continuous operation).	See Section E.21.2.1
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Diesel	74.00	Equal to the maximum capacity of the Non-Emergency Diesel S12/A1A Sump Pump Engine.	648,240	Equal to the maximum hourly capacity of the Non-Emergency Diesel S12/A1A Sump Pump Engine at 8,760 hr/yr (continuous operation).	See Section E.21.2.2

Table E.30 Emission Factors for Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)

Pollutant	Emission Factor: As Presented in Reference	Emission Factor: Unit Conversion	Reference
PM (w/ CPM)	0.0022 lb/hp-hr	--	AP-42 Table 3.3-1 (10/96), Diesel Fuel Industrial Engine, Assume $PM=PM_{10}=PM_{2.5}$
CPM	11.05% of total PM	0.00024 lb/hp-hr	
PM_{10}	0.0022 lb/hp-hr	--	
$PM_{2.5}$	0.0022 lb/hp-hr	--	
CO	0.00668 lb/hp-hr	--	
NO_X	0.031 lb/hp-hr	--	
VOC	0.0025 lb/hp-hr	--	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.31 Emission Factors for Tier 3 Diesel Engines (130 ≤ kW < 225)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.20 g/kW-hr	0.00033 lb/hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 130 ≤ kW < 225, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000036 lb/hp-hr	
PM_{10}	0.20 g/kW-hr	0.00033 lb/hp-hr	
$PM_{2.5}$	0.20 g/kW-hr	0.00033 lb/hp-hr	
CO	3.50 g/kW-hr	0.0058 lb/hp-hr	
NO_X	4.00 g/kW-hr	0.0061 lb/hp-hr	
VOC		0.00044 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.32 Emission Factors for Tier 3 Diesel Engines (225 ≤ kW < 450)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.20 g/kW-hr	0.00033 lb/hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 225 ≤ kW < 450, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000036 lb/hp-hr	
PM_{10}	0.20 g/kW-hr	0.00033 lb/hp-hr	
$PM_{2.5}$	0.20 g/kW-hr	0.00033 lb/hp-hr	
CO	3.50 g/kW-hr	0.0058 lb/hp-hr	
NO_X	4.00 g/kW-hr	0.0061 lb/hp-hr	
VOC		0.00044 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.33 Emission Factors for Tier 4 Diesel Engines (19 ≤ kW < 37)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.03 g/kW-hr	0.000049 lb/hp-hr	Tier 4 Final Emission Standards from 40 CFR 1039.101 for Engines Rated 19 ≤ kW < 37, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.0000054 lb/hp-hr	
PM_{10}	0.03 g/kW-hr	0.000049 lb/hp-hr	
$PM_{2.5}$	0.03 g/kW-hr	0.000049 lb/hp-hr	
CO	5.50 g/kW-hr	0.0090 lb/hp-hr	
NO_X	4.70 g/kW-hr	0.0073 lb/hp-hr	
VOC		0.00044 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.34 Emission Factors for the GO Diesel Emergency Generator GNO37A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.11 g/kW-hr	0.00017 lb/hp-hr	Certification Values for EPA Engine Family 8VPXL16.1ACB, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.00002 lb/hp-hr	
PM_{10}	0.11 g/kW-hr	0.00017 lb/hp-hr	
$PM_{2.5}$	0.11 g/kW-hr	0.00017 lb/hp-hr	
CO	0.70 g/kW-hr	0.0012 lb/hp-hr	
NO_X	5.86 g/kW-hr	0.0090 lb/hp-hr	
VOC		0.00060 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	1.93E-04 lb/MMBtu	1.35E-06 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	

Table E.35 Emission Factors for the Metcalf Concentrator Diesel Emergency Generator GNO38A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.11 g/kW-hr	0.00017 lb/hp-hr	Certification Values for EPA Engine Family AVPXL16.1ACB, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000019 lb/hp-hr	
PM_{10}	0.11 g/kW-hr	0.00017 lb/hp-hr	
$PM_{2.5}$	0.11 g/kW-hr	0.00017 lb/hp-hr	
CO	0.70 g/kW-hr	0.0012 lb/hp-hr	
NO_X	5.86 g/kW-hr	0.0090 lb/hp-hr	
VOC		0.00060 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	1.93E-04 lb/MMBtu	1.35E-06 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	

Table E.36 Emission Factors for the ETPS Diesel Emergency Generator GNO36A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.11 g/kW-hr	0.00018 lb/hp-hr	Certification Values for EPA Engine Family FCEXL0409AAD, Assume $PM=PM_{10}=PM_{2.5}$
CPM	11.05% of total PM	0.000020 lb/hp-hr	
PM_{10}	0.11 g/kW-hr	0.00018 lb/hp-hr	
$PM_{2.5}$	0.11 g/kW-hr	0.00018 lb/hp-hr	
CO	1.00 g/kW-hr	0.0016 lb/hp-hr	
NO_X	3.86 g/kW-hr	0.0063 lb/hp-hr	
VOC	0.15 g/kW-hr	0.00025 lb/hp-hr	
CO_2	725.00 g/kW-hr	1.19 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.37 Emission Factors for NTPS Diesel Emergency Generator GNO46A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.19 g/kW-hr	0.00031 lb/hp-hr	Certification Values for EPA Engine Family 5JDXL06.8038, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000034 lb/hp-hr	
PM_{10}	0.19 g/kW-hr	0.00031 lb/hp-hr	
$PM_{2.5}$	0.19 g/kW-hr	0.00031 lb/hp-hr	
CO	0.61 g/kW-hr	0.0010 lb/hp-hr	
NO_X	5.96 g/kW-hr	0.0090 lb/hp-hr	
VOC		0.00080 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.38 Emission Factors for the Central SX Diesel Emergency Generator GNO95A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.020 g/kW-hr	0.000033 lb/hp-hr	Certification Values for EPA Engine Family KSZXL02.2PXB, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.0000036 lb/hp-hr	
PM_{10}	0.020 g/kW-hr	0.000033 lb/hp-hr	
$PM_{2.5}$	0.020 g/kW-hr	0.000033 lb/hp-hr	
CO	0.010 g/kW-hr	0.000016 lb/hp-hr	
NO_X	3.19 g/kW-hr	0.0052 lb/hp-hr	
VOC	0.010 g/kW-hr	0.000016 lb/hp-hr	
CO_2	725.00 g/kW-hr	1.19 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	1.73E-04 lb/MMBtu	1.21E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	2.35E-03 lb/MMBtu	1.64E-05 lb/hp-hr	

Table E.39 Emission Factors for Metcalf Diesel Fire Pump Engine

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.14 g/kW-hr	0.00023 lb/hp-hr	Certification Values for EPA Engine Family EJDXL09.0114, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000025 lb/hp-hr	
PM_{10}	0.14 g/kW-hr	0.00023 lb/hp-hr	
$PM_{2.5}$	0.14 g/kW-hr	0.00023 lb/hp-hr	
CO	0.90 g/kW-hr	0.0015 lb/hp-hr	
NO_X	3.80 g/kW-hr	0.0062 lb/hp-hr	
VOC	0.090 g/kW-hr	0.00015 lb/hp-hr	
CO_2	712.79 g/kW-hr	1.17 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.40 Emission Factors for Emergency Diesel Generator WWTP GNO61A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.13 g/kW-hr	0.00021 lb/hp-hr	Certification Values for EPA Engine Family HCPXL27.0NZS, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000024 lb/hp-hr	
PM_{10}	0.13 g/kW-hr	0.00021 lb/hp-hr	
$PM_{2.5}$	0.13 g/kW-hr	0.00021 lb/hp-hr	
CO	1.30 g/kW-hr	0.0021 lb/hp-hr	
NO_X	5.29 g/kW-hr	0.0087 lb/hp-hr	
VOC	0.10 g/kW-hr	0.00016 lb/hp-hr	
CO_2	696.64 g/kW-hr	1.15 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	1.93E-04 lb/MMBtu	1.35E-06 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	

Table E.41 Emission Factors for Metcalf Clean Room Diesel Emergency Generator

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.29 g/kW-hr	0.00048 lb/hp-hr	Certification Values for EPA Engine Family HCEXL03.3BAA, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000053 lb/hp-hr	
PM_{10}	0.29 g/kW-hr	0.00048 lb/hp-hr	
$PM_{2.5}$	0.29 g/kW-hr	0.00048 lb/hp-hr	
CO	2.00 g/kW-hr	0.0033 lb/hp-hr	
NO_X	3.71 g/kW-hr	0.0061 lb/hp-hr	
VOC	0.70 g/kW-hr	0.0012 lb/hp-hr	
CO_2	814 g/kW-hr	1.34 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.42 Emission Factors for Propane 4-Stroke Rich Burn Phase 1 Class II Engines

<table>
<tr><th rowspan="2">Pollutant</th><th colspan="2">Emission Factor</th><th rowspan="2">Reference</th></tr>
<tr><th>As Presented in Reference</th><th>Unit Conversion</th></tr>
<tr><td>PM (w/ CPM)</td><td>0.019 lb/MMBtu</td><td>0.00020 lb/hp-hr</td><td rowspan="4">AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$</td></tr>
<tr><td>CPM</td><td>0.0099 lb/MMBtu</td><td>0.00010 lb/hp-hr</td></tr>
<tr><td>PM_{10}</td><td>0.019 lb/MMBtu</td><td>0.00020 lb/hp-hr</td></tr>
<tr><td>$PM_{2.5}$</td><td>0.019 lb/MMBtu</td><td>0.00020 lb/hp-hr</td></tr>
<tr><td>CO</td><td>519 g/kW-hr</td><td>0.85 lb/hp-hr</td><td rowspan="3">Phase 1 Class II Emission Standards from 40 CFR 1054 Appendix A Table 3</td></tr>
<tr><td>NO_X</td><td rowspan="2">13.40 g/kW-hr</td><td>0.020 lb/hp-hr</td></tr>
<tr><td>VOC</td><td>0.0023 lb/hp-hr</td></tr>
<tr><td>SO_2</td><td>--</td><td>0.00018 lb/hp-hr</td><td>Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr</td></tr>
<tr><td>CO_2</td><td>62.87 kg/MMBtu</td><td>1.46 lb/hp-hr</td><td rowspan="3">40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr</td></tr>
<tr><td>CH_4</td><td>3.00E-03 kg/MMBtu</td><td>0.000069 lb/hp-hr</td></tr>
<tr><td>N_2O</td><td>6.00E-04 kg/MMBtu</td><td>0.000014 lb/hp-hr</td></tr>
<tr><td>Greatest Single HAP</td><td>1.95E-04 lb/MMBtu</td><td>2.05E-06 lb/hp-hr</td><td rowspan="2">AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr</td></tr>
<tr><td>Total HAPs</td><td>3.25E-02 lb/MMBtu</td><td>3.41E-04 lb/hp-hr</td></tr>
</table>

Table E.43 Emission Factors for Generac Propane Emergency Generators with Engine Family Number 7GNXS.4072DA

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	109.13 g/kW-hr	0.18 lb/hp-hr	Certification Values for EPA Engine Family 7GNXS.4072DA
NO_X	10.68 g/kW-hr	0.016 lb/hp-hr	
VOC		0.0018 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CO_2	62.87 kg/MMBtu	1.46 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.44 Emission Factors for Generac Propane Emergency Generators with Engine Family Number 8GNXS.4072DA

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume PM=PM_{10}=$PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	295.98 g/kW-hr	0.49 lb/hp-hr	Certification Values for EPA Engine Family 8GNXS.4072DA
NO_X	11.86 g/kW-hr	0.017 lb/hp-hr	
VOC		0.0021 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CO_2	62.87 kg/MMBtu	1.46 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.45 Emission Factors for Generac Propane Emergency Generators with Engine Family Number CGNXS.4072DC

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	226 g/kW-hr	0.37 lb/hp-hr	Certification Values for EPA Engine Family CGNXS.4072DC
NO_X	4.60 g/kW-hr	0.0068 lb/hp-hr	
VOC		0.00080 lb/hp-hr	
CO_2	970 g/kW-hr	1.59 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.46 Emission Factors for Cummins Propane Emergency Generators with Manufacturer's Information

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	74.60 g/hp-hr	0.16 lb/hp-hr	Manufacturer's Information
NO_X	5.40 g/hp-hr	0.012 lb/hp-hr	
VOC	1.00 g/hp-hr	0.0022 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CO_2	62.87 kg/MMBtu	1.46 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.47 Emission Factors for Cummins Propane Emergency Generators with Engine Family Number CCEXB06.8GDC

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	83.57 g/kW-hr	0.14 lb/hp-hr	Certification Values for EPA Engine Family CCEXB06.8GDC
NO_X	7.47 g/kW-hr	0.012 lb/hp-hr	
VOC	1.82 g/kW-hr	0.0030 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CO_2	62.87 kg/MMBtu	1.46 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.48 Emission Factors for Sunridge Propane Emergency Generator GNO85A

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	39.68 g/kW-hr	0.07 lb/hp-hr	Certification Values for EPA Engine Family KPSIB5.702ED
NO_X	8.46 g/kW-hr	0.014 lb/hp-hr	
VOC	1.65 g/kW-hr	0.0027 lb/hp-hr	
CO_2	915.75 g/kW-hr	1.51 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	40 CFR 98 Table C-2 for Propane and 10,500 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.49 Emission Factors for Metcalf Mine Office Propane Emergency Generator GNO24B

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume PM=PM_{10}=$PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	39.68 g/kW-hr	0.07 lb/hp-hr	Certification Values for EPA Engine Family NPSIB5.702ED
NO_X	8.46 g/kW-hr	0.014 lb/hp-hr	
VOC	1.65 g/kW-hr	0.0027 lb/hp-hr	
CO_2	915.75 g/kW-hr	1.51 lb/hp-hr	
SO_2	--	0.00018 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 gr/scf, 2,520 Btu/scf, and 10,500 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000069 lb/hp-hr	40 CFR 98 Table C-2 for Propane and 10,500 Btu/hp-hr
N_2O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Greatest Single HAP	1.95E-04 lb/MMBtu	2.05E-06 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	

Table E.50 Emission Factors for the GSC Natural Gas Emergency Generator

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00020 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 10,500 Btu/hp-hr, Assume $PM=PM_{10}=PM_{2.5}$
CPM	0.0099 lb/MMBtu	0.00010 lb/hp-hr	
PM_{10}	0.019 lb/MMBtu	0.00020 lb/hp-hr	
$PM_{2.5}$	0.019 lb/MMBtu	0.00020 lb/hp-hr	
CO	0.78 g/hp-hr	0.0017 lb/hp-hr	Certification Values for EPA Engine Family NGNXB14.22C1
NO_X	0.10 g/hp-hr	0.00022 lb/hp-hr	
VOC	0.01 g/hp-hr	0.000016 lb/hp-hr	
CO_2	38.85 kg/MMBtu	0.90 lb/hp-hr	
CH_4	9.23E-03 kg/MMBtu	0.00021 lb/hp-hr	
N_2O	3.55E-03 kg/MMBtu	0.000082 lb/hp-hr	
SO_2	--	0.0000059 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 1,020 Btu/scf, and 10,500 Btu/hp-hr
Greatest Single HAP	9.41E-06 lb/MMBtu	9.88E-08 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
Total HAPs	1.57E-03 lb/MMBtu	1.64E-05 lb/hp-hr	

Table E.51 Emission Factors for Tier 3 Diesel Engines (75 ≤ kW < 130)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.30 g/kW-hr	0.00049 lb/hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 75 ≤ kW < 130, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.000054 lb/hp-hr	
PM_{10}	0.30 g/kW-hr	0.00049 lb/hp-hr	
$PM_{2.5}$	0.30 g/kW-hr	0.00049 lb/hp-hr	
CO	5.00 g/kW-hr	0.0082 lb/hp-hr	
NO_X	4.00 g/kW-hr	0.006 lb/hp-hr	
VOC		0.00044 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
CO_2	73.96 kg/MMBtu	1.14 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
CH_4	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Greatest Single HAP	2.85E-04 lb/MMBtu	2.00E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	

Table E.52 Emission Factors for the Non-Emergency Diesel S12/A1A Sump Pump Engine

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.010 g/kW-hr	0.000016 lb/hp-hr	Certification Values for EPA Engine Family NDZXL02.9020, Assume PM=PM_{10}=$PM_{2.5}$
CPM	11.05% of total PM	0.0000018 lb/hp-hr	
PM_{10}	0.010 g/kW-hr	0.000016 lb/hp-hr	
$PM_{2.5}$	0.010 g/kW-hr	0.000016 lb/hp-hr	
CO	0.010 g/kW-hr	0.000016 lb/hp-hr	
NO_X	3.90 g/kW-hr	0.0064 lb/hp-hr	
VOC	0.010 g/kW-hr	0.000016 lb/hp-hr	
CO_2	778.00 g/kW-hr	1.28 lb/hp-hr	
CH_4	0.05 g/kW-hr	0.000082 lb/hp-hr	
SO_2	--	0.000011 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
N_2O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	40 CFR 98 Table C-2 for Distillate Fuel Oil No. 2 and 7,000 Btu/hp-hr
Greatest Single HAP	1.73E-04 lb/MMBtu	1.21E-06 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr
Total HAPs	2.35E-03 lb/MMBtu	1.64E-05 lb/hp-hr	

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft²)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
Operation 009: Solution Extraction/Electrowinning Operations										
009-117	Central SX (21,175 ft²)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	S1C Stripper	5,293.75	95%	0.92	0.12	0.23
					E1C Extractor	5,293.75				
					E2C Extractor	5,293.75				
					CP Extractor	5,293.75				
009-462	Central Backwash Bleed Tank (33,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	201.06	0%	0.024	0.0031	0.0060
009-463	Central Barren Organic Tank (60,900 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	452.39	100%	0.018	0.0023	0.0045
009-464	Central Bead Separator Tank (5,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0023
009-465	Central High Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0023
009-466	Central Low Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0023
009-467	Central Gunk Tank 1 (7,600 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0023

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-468	Central Gunk Tank 2 (7,600 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0023
009-469	Central Gunk Tank 3 (23,800 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	132.73	0%	0.016	0.0020	0.0040
009-470	Central Organic Recovery Tank (306,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	2,827.43	0%	0.33	0.044	0.084
009-471	Central Raffinate Pond (9,905 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	9,905.00	0%	1.17	0.15	0.29
009-118	Metcalf SX (40,585.41 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	E2A Extractor	5,293.75	95%	1.77	0.24	0.46
					E1A Extractor	5,293.75				
					W1A Wash Stage	5,293.75				
					S1A Stripper	8,822.92				
					E2B Extractor	5,293.75				
					E1B Extractor	5,293.75				
					S1B Stripper	5,293.75				

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-472	Metcalf Barren Organic Tank (82,900 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	615.75	100%	0.024	0.0033	0.0063
009-473	Metcalf High A Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0024
009-474	Metcalf High B Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0024
009-475	Metcalf Low A Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0024
009-476	Metcalf Low B Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0024
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	380.13	100%	0.015	0.0020	0.0039
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	113.10	0%	0.013	0.0018	0.0035
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0093	0.0012	0.0024
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	132.73	0%	0.016	0.0021	0.0041
009-481	Metcalf Holding Tank (122,200 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	907.92	100%	0.036	0.0048	0.0093

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	2,827.43	0%	0.34	0.045	0.087
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	2,827.43	0%	0.34	0.045	0.087
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	907.92	100%	0.036	0.0048	0.0093
009-485	Metcalf Raffinate Pond (10,236 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	10,236.00	0%	1.22	0.16	0.31
009-119	Modoc SX (88,229.16 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	W1F Wash Stage	8,822.92	95%	3.03	0.045	0.16
					E1F Extractor	8,822.92				
					E2F Extractor	8,822.92				
					FP Extractor	8,822.92				
					S1F Stripper	8,822.92				
					W1G Wash Stage	8,822.92				

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-119 (cont'd)	Modoc SX (88,229.16 ft^2) (cont'd)	See Above	See Above	See Above	E1G Extractor	8,822.92	See Above	See Above	See Above	See Above
					E2G Extractor	8,822.92				
					GP Extractor	8,822.92				
					S1G Stripper	8,822.92				
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	706.86	100%	0.022	0.00033	0.0012
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	706.86	100%	0.022	0.00033	0.0012
009-488	Modoc High A Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0074	0.00011	0.00038
009-489	Modoc High B Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0074	0.00011	0.00038
009-490	Modoc Low A Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0074	0.00011	0.00038
009-491	Modoc Low B Decant Tank (4,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0074	0.00011	0.00038
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	380.13	100%	0.012	0.00018	0.00062

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-493	Modoc Gunk Tank 1 (15,400 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	132.73	0%	0.012	0.00018	0.00065
009-494	Modoc Gunk Tank 2 (7,600 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	78.54	0%	0.0074	0.00011	0.00038
009-495	Modoc Gunk Tank 3 (21,700 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	132.73	0%	0.012	0.00018	0.00065
009-496	Modoc Holding Tank (118,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	1,017.88	100%	0.032	0.00047	0.0017
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	2,827.43	0%	0.26	0.0039	0.014
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	2,827.43	0%	0.26	0.0039	0.014
009-499	Modoc Raffinate Pond (15,678 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	15,678.00	0%	1.47	0.022	0.077
009-349	Stargo SX (48,846.87 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	H1S Stripper	9,769.37	95%	2.12	0.28	0.54
					HP Extractor	9,769.37				
					E2H Extractor	9,769.37				

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft²)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-349 (cont'd)	Stargo SX (48,846.87 ft²) (cont'd)	See Above	See Above	See Above	E1H Extractor	9,769.37	See Above	See Above	See Above	See Above
					W1H Wash Stage	9,769.37				
009-500	Stargo Recovered Solution Tank (5,920 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	113.10	0%	0.013	0.0018	0.0034
009-501	Stargo Gunk Tank 1 (16,955 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	176.71	0%	0.021	0.0028	0.0053
009-502	Stargo Gunk Tank 2 (16,955 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	176.71	0%	0.021	0.0028	0.0053
009-503	Stargo Gunk Tank 3 (16,955 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	176.71	0%	0.021	0.0028	0.0053
009-504	Stargo Loaded Organic Tank (98,515 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	572.56	100%	0.023	0.0030	0.0058
009-505	Stargo Holding Tank (108,900 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	660.52	100%	0.026	0.0034	0.0066
009-506	Stargo Stormwater Tank (772,190 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	4,300.84	0%	0.51	0.067	0.13
009-507	Stargo Tricanter Feed Tank (250 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	16.00	0%	0.0019	0.00025	0.00048

Table E.53 Process Rate and Emission Factor Information for Solution Extraction, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Total Surface Area (ft^2)	Percent Covered	Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description				VOC	Greatest Single HAP	Total HAPs
009-508	Stargo Slurry Tank (500 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	19.63	69%	0.0012	0.00016	0.00032
009-422	Modoc Test Facility SX (1,418.72 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Mixers	432.88	31%	0.11	0.0016	0.0055
					Settlers	985.84				
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	52.55	0%	0.0049	0.000073	0.00026
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	52.55	0%	0.0049	0.000073	0.00026
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	28.27	0%	0.0026	0.000039	0.00014

Table E.54 Data for Calculation of VOC and HAP Emissions from Central SX and Organic Tanks

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	5.29	84.49	389.64	508.51	1,624.95	706.74	692.50	--
C_i^0 (g/m^3)	0.02	0.32	1.69	2.21	7.99	3.47	3.18	--
C_i^H (ppmv)	0.0004	0.0161	0.0158	0.0099	0.0971	0.0185	4.6871	--
C_i^H (g/m^3)	1.22E-06	6.08E-05	6.86E-05	4.28E-05	4.77E-04	9.11E-05	2.15E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.94E-07	3.29E-06	1.60E-05	2.09E-05	6.62E-05	2.88E-05	2.46E-05	1.60E-04
$F_{i,UC}$ (lb/ft^2-hr)	1.43E-07	2.43E-06	1.18E-05	1.54E-05	4.88E-05	2.12E-05	1.82E-05	1.18E-04
$F_{i,C}$ (lb/ft^2-hr)	4.78E-08	8.09E-07	3.93E-06	5.13E-06	1.63E-05	7.08E-06	6.05E-06	3.93E-05

Table E.55 Data for Calculation of VOC and HAP Emissions from the Central Raffinate Pond

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	5.29	84.49	389.64	508.51	1,624.95	706.74	692.50	--
C_i^0 (g/m^3)	0.02	0.32	1.69	2.21	7.99	3.47	3.18	--
C_i^H (ppmv)	0.0002	0.0016	0.0003	0.0005	0.0093	0.0019	1.1033	--
C_i^H (g/m^3)	7.43E-07	5.87E-06	1.21E-06	2.29E-06	4.56E-05	9.29E-06	5.07E-03	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.94E-07	3.29E-06	1.60E-05	2.09E-05	6.63E-05	2.88E-05	2.48E-05	1.60E-04
$F_{i,UC}$ (lb/ft^2-hr) [a]	1.43E-07	2.43E-06	1.18E-05	1.54E-05	4.88E-05	2.12E-05	1.83E-05	1.18E-04
$F_{i,C}$ (lb/ft^2-hr)	4.78E-08	8.09E-07	3.93E-06	5.13E-06	1.63E-05	7.08E-06	6.09E-06	3.94E-05

[a] This may be an overstatement of the raffinate pond emissions because it assumes the diluent in the raffinate pond has the same composition as fresh diluent.

Table E.56 Data for Calculation of VOC and HAP Emissions from Metcalf SX and Organic Tanks

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	5.30	86.61	401.30	523.58	1,664.39	716.97	635.00	--
C_i^0 (g/m^3)	0.02	0.33	1.74	2.27	8.18	3.52	2.92	--
C_i^H (ppmv)	0.0004	0.0165	0.0163	0.0102	0.0994	0.0188	4.2979	--
C_i^H (g/m^3)	1.22E-06	6.23E-05	7.07E-05	4.41E-05	4.89E-04	9.25E-05	1.97E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.95E-07	3.37E-06	1.65E-05	2.15E-05	6.79E-05	2.92E-05	2.26E-05	1.61E-04
$F_{i,UC}$ (lb/ft^2-hr)	1.44E-07	2.49E-06	1.22E-05	1.59E-05	5.00E-05	2.16E-05	1.67E-05	1.19E-04
$F_{i,C}$ (lb/ft^2-hr)	4.78E-08	8.29E-07	4.05E-06	5.29E-06	1.67E-05	7.18E-06	5.55E-06	3.96E-05

Table E.57 Data for Calculation of VOC and HAP Emissions from the Metcalf Raffinate Pond

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	5.30	86.61	401.30	523.58	1,664.39	716.97	635.00	--
C_i^0 (g/m^3)	0.02	0.33	1.74	2.27	8.18	3.52	2.92	--
C_i^H (ppmv)	0.0002	0.0016	0.0003	0.0005	0.0095	0.0019	1.0117	--
C_i^H (g/m^3)	7.45E-07	6.01E-06	1.24E-06	2.35E-06	4.68E-05	9.43E-06	4.65E-03	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.95E-07	3.37E-06	1.65E-05	2.15E-05	6.79E-05	2.92E-05	2.27E-05	1.61E-04
$F_{i,UC}$ (lb/ft^2-hr) [a]	1.44E-07	2.49E-06	1.22E-05	1.59E-05	5.00E-05	2.16E-05	1.67E-05	1.19E-04
$F_{i,C}$ (lb/ft^2-hr)	4.78E-08	8.29E-07	4.05E-06	5.29E-06	1.67E-05	7.18E-06	5.58E-06	3.97E-05

[a] This may be an overstatement of the raffinate pond emissions because it assumes the diluent in the raffinate pond has the same composition as fresh diluent.

Table E.58 Data for Calculation of VOC and HAP Emissions from Modoc SX and Organic Tanks

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	37.90	41.37	42.82	45.91	385.00	385.00	2,500.00	--
C_i^0 (g/m^3)	0.12	0.16	0.19	0.20	1.89	1.89	11.48	--
C_i^H (ppmv)	0.0027	0.0079	0.0017	0.0009	0.0230	0.0101	16.9210	--
C_i^H (g/m^3)	8.72E-06	2.97E-05	7.54E-06	3.87E-06	1.13E-04	4.96E-05	7.77E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.39E-06	1.61E-06	1.76E-06	1.89E-06	1.57E-05	1.57E-05	8.89E-05	1.27E-04
$F_{i,UC}$ (lb/ft^2-hr)	1.03E-06	1.19E-06	1.30E-06	1.39E-06	1.16E-05	1.16E-05	6.56E-05	9.36E-05
$F_{i,C}$ (lb/ft^2-hr)	3.42E-07	3.96E-07	4.32E-07	4.63E-07	3.86E-06	3.86E-06	2.19E-05	3.12E-05

Table E.59 Data for Calculation of VOC and HAP Emissions from the Modoc Raffinate Pond

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	37.90	41.37	42.82	45.91	385.00	385.00	2,500.00	--
C_i^0 (g/m^3)	0.12	0.16	0.19	0.20	1.89	1.89	11.48	--
C_i^H (ppmv)	0.0017	0.0008	0.00003	0.00005	0.0022	0.0010	3.9830	--
C_i^H (g/m^3)	5.33E-06	2.87E-06	1.33E-07	2.06E-07	1.08E-05	5.06E-06	1.83E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.39E-06	1.61E-06	1.76E-06	1.89E-06	1.57E-05	1.57E-05	8.94E-05	1.27E-04
$F_{i,UC}$ (lb/ft^2-hr) [a]	1.03E-06	1.19E-06	1.30E-06	1.39E-06	1.16E-05	1.16E-05	6.59E-05	9.40E-05
$F_{i,C}$ (lb/ft^2-hr)	3.42E-07	3.96E-07	4.32E-07	4.63E-07	3.86E-06	3.86E-06	2.20E-05	3.13E-05

[a] This may be an overstatement of the raffinate pond emissions because it assumes the diluent in the raffinate pond has the same composition as fresh diluent.

Table E.60 Data for Calculation of VOC and HAP Emissions from Stargo SX and Organic Tanks

Input Parameter/ Calculated Value	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4 Trimethyl-benzene	1,3,5 Trimethyl-benzene	others	Total
M_i (g/g-mole)	78.11	92.13	106.16	106.16	120.19	120.19	112.30	--
V_i	90.68	111.14	131.60	131.60	172.26	172.26	--	--
D_i (cm^2/s)	0.12	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	5.29	85.41	394.71	515.06	1,642.10	711.19	667.50	--
C_i^0 (g/m^3)	0.02	0.32	1.71	2.24	8.07	3.50	3.07	--
C_i^H (ppmv)	0.0004	0.0163	0.0160	0.0100	0.0981	0.0187	4.5179	--
C_i^H (g/m^3)	1.22E-06	6.14E-05	6.95E-05	4.34E-05	4.82E-04	9.17E-05	2.07E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m^2-s)	1.94E-07	3.33E-06	1.62E-05	2.12E-05	6.69E-05	2.90E-05	2.37E-05	1.61E-04
$F_{i,UC}$ (lb/ft^2-hr)	1.43E-07	2.45E-06	1.20E-05	1.56E-05	4.94E-05	2.14E-05	1.75E-05	1.18E-04
$F_{i,C}$ (lb/ft^2-hr)	4.78E-08	8.17E-07	3.98E-06	5.20E-06	1.65E-05	7.13E-06	5.84E-06	3.95E-05

Table E.61 Process Rate and Emission Factor Information for Electrowinning

Process Number	Process/ Emission Unit Description	Process Rates			Quantity of Cells	Individual Surface Area (ft^2)	Total Surface Area (ft^2)	Emission Factors (lb/hr)				
		Hourly (hr/hr)	Annual (hr/yr)	Description				PM	PM_{10}	$PM_{2.5}$	H_2SO_4	Cobalt Compounds
Operation 009: Solution Extraction/Electrowinning Operations												
009-121	Central EW (548 cells)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	548	--	--	4.75	4.75	4.75	4.75	7.13E-04
009-122	Southside EW (220 cells)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	220	--	--	1.67	1.67	1.67	1.67	2.50E-04
009-221	Stargo EW (324 cells)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	324	--	--	2.96	2.96	2.96	2.96	4.44E-04
009-423	Modoc Test Facility EW (771.2 ft^2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	4	192.80	771.20	0.12	0.12	0.12	0.12	--

Table E.62 Data for Calculation of H_2SO_4 Emissions from Full-Scale Electrowinning

Input Parameter/ Calculated Value	Central EW	Southside EW	Stargo EW
A1 (ft^2)	3,394	1,157.3	2,000
A2 (ft^2)	5,184	3,400	6,000
H (ft)	24.5	24.5	30
A_w (ft^2)	3,394	1,157	2,000
h (ft)	17.10	21.93	26.97
Q_w (acfm)	1,130,977	385,645	666,457
Q_s (acfm)	575,684	222,320	426,064
Q_{wt} (acfm)	1,269,063	445,139	791,009

Table E.63 Process Rate and Emission Factor Information for the Storage Tanks

Process Number	Process/Emission Unit Description	Process Rates			EPA TANKS Program Input		Emission Factors (lb/hr)		
		Hourly (hr/hr)	Annual (hr/yr)	Description	Orientation	Contents	VOC	Greatest Single HAP	Total HAPs
Operation 011: Storage Tanks									
011-150	Diesel Tank D1 (177,850 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Distillate Fuel Oil No. 2	0.020	1.19E-03	1.75E-03
011-151	Diesel Tank D2 (200,434 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Distillate Fuel Oil No. 2	0.026	1.56E-03	2.30E-03
011-154	Diesel Tank D5 (47,255 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Distillate Fuel Oil No. 2	0.0085	5.08E-04	7.50E-04
011-161	Diesel Tank Pit 95 (101,690 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Distillate Fuel Oil No. 2	0.037	2.22E-03	3.28E-03
011-155	Gasoline Tank G1 (12,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 9)	0.98	1.95E-03	3.81E-02
011-156	Gasoline Tank G2 (12,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 9)	0.98	1.95E-03	3.81E-02
011-157	Gasoline Tank G3 (12,000 gallons)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 9)	0.58	1.16E-03	2.27E-02

Table E.64 EPA TANKS Program Input Information for the Storage Tanks

Process Number	Process/Emission Unit Description	EPA TANKS Program Input						
		Dimensions	Working Volume (gallons)	Net Throughput (gal/year)	Turnovers Per Year	Maximum Liquid Height (ft) [a]	Average Liquid Height (ft) [b]	Shell and Roof Color/ Shade
Operation 011: Storage Tanks								
011-150	Diesel Tank D1 (177,850 gallons)	31.25'D x 31'H	177,850	3,570,000	20.07	31	15.5	Aluminum/ Diffuse
011-151	Diesel Tank D2 (200,434 gallons)	42.4'D x 31'H	200,434	3,570,000	17.81	31	15.5	Aluminum/ Diffuse
011-154	Diesel Tank D5 (47,255 gallons)	20'D x 32'H	47,255	1,550,000	32.80	32	16	Aluminum/ Diffuse
011-161	Diesel Tank Pit 95 (101,690 gallons)	27'D x 30'H	101,690	36,270,000	356.67	30	15	Aluminum/ Diffuse
011-155	Gasoline Tank G1 (12,000 gallons)	9.00’D x 25’L	12,000	940,000	78.33	--	--	Gray/ Medium [c]
011-156	Gasoline Tank G2 (12,000 gallons)	9.00’D x 25’L	12,000	940,000	78.33	--	--	Gray/ Medium [c]
011-157	Gasoline Tank G3 (12,000 gallons)	9.00’D x 25’L	12,000	160,000	13.33	--	--	Gray/ Medium [c]

[a] Assumed equal to the tank height.

[b] Assumed equal to 50% of the maximum liquid height.

[c] The tanks are painted tan. Gray/medium is used to best approximate a tan paint color.

Table E.65 Process Rate and Emission Factor Information for the Bulk Flotation Operations

Process Number	Process/Emission Unit Description	Process Rates			Emission Factors (lb/ton)		
		Hourly (tph)	Annual (tpy)	Description	VOC	Greatest Single HAP	Total HAPs
Operation 002: Morenci Concentrator							
002-352	Morenci Concentrator Bulk Flotation	0.062	542.14	Quantity of organic reagent (frother and molybdenum collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Morenci Concentrator Bulk Flotation).	2.35	0.14	2.07E-01
Operation 017: Metcalf Concentrator							
017-327	Metcalf Concentrator Bulk Flotation	0.062	542.14	Quantity of organic reagent (frother and molybdenum collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Metcalf Concentrator Bulk Flotation).	2.35	0.14	2.07E-01

Table E.66 Process Rate and Emission Factor Information for the Agglomeration Drums

Process Number	Process/Emission Unit Description	Process Rates			Regulated Air Pollutant	Performance Test Result from the Common Stack of the Similar Units		Emission Factors	
		Hourly (hr/hr)	Annual (hr/yr)	Description		Highest Average (lb/ton)	Overall Average (lb/ton)	Value on an Hourly Basis (lb/ton)	Value on an Annual Basis (lb/ton)
Operation 003: MFL Fine Crushing Plant									
003-204	Agglomerating Unit 1	3,000	26,280,000	Equal to the maximum capacity of ore processed in the agglomerating unit at continuous operation	CO	1.03E-07	5.13E-08	6.15E-08	3.08E-08
					NO_X	1.90E-05	5.90E-06	1.14E-05	3.54E-06
					SO_2	1.42E-04	5.15E-05	8.51E-05	3.09E-05
					CO_2	3.23E-02	1.20E-02	1.94E-02	7.22E-03
003-205	Agglomerating Unit 2	3,000	26,280,000	Equal to the maximum capacity of ore processed in the agglomerating unit at continuous operation	CO	1.03E-07	5.13E-08	6.15E-08	3.08E-08
					NO_X	1.90E-05	5.90E-06	1.14E-05	3.54E-06
					SO_2	1.42E-04	5.15E-05	8.51E-05	3.09E-05
					CO_2	3.23E-02	1.20E-02	1.94E-02	7.22E-03

Table E.67 HAP Concentration of the Process Material

Process Material	HAP Concentration (ppm) [a]											
	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Total
Waste Rock	0.42	1.72	2.76	0.14	108.60	26.24	13.73	1,310.67	0.07	84.64	0.08	1,549.06
ROM Leach	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63
Morenci Concentrator Ore	0.38	1.22	0.23	1.56	4.93	3.62	76.00	41.10	0.08	1.64	1.97	132.72
MFL Fine Crushing Plant Ore	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63
Metcalf Concentrator Ore	18.75	25.80	1.75	1.75	3.50	5.75	76.00	3.00	0.50	12.25	15.50	164.55
Copper Concentrate	18.75	25.80	5.00	120.83	11.82	163.33	197.00	34.17	0.83	46.67	86.67	710.86
Molybdenum Concentrate	167.00	46.00	7.00	7.00	14.00	23.00	19.00	12.00	12.10	49.00	509.00	865.10
Tailings	4.50	7.50	1.00	0.50	12.00	3.62	12.29	142.00	0.08	12.00	20.00	215.49

Table E.67 HAP Concentration of the Process Material

Process Material	HAP Concentration (ppm) [a]											
	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Total
Combination of All Mined Material	8.06	11.57	1.28	1.41	21.39	8.23	65.76	234.03	0.25	19.73	7.31	379.00
Combination of Morenci Concentrator and Metcalf Concentrator Ore	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63
Combination of ROM Leach and Waste Material	7.38	10.69	1.41	1.29	29.13	9.83	61.13	329.67	0.24	25.49	6.67	482.94
Combination of Copper and Molybdenum Concentrate	20.78	26.08	5.03	119.28	11.85	161.41	194.57	33.86	0.98	46.70	92.44	712.97
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	9.56	13.51	0.99	1.66	4.22	4.69	76.00	22.05	0.29	6.95	8.74	148.63

Table E.67 HAP Concentration of the Process Material

Process Material	HAP Concentration (ppm) [a]											
	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Total
Dust Suppression Fan	--	--	0.001	0.0001	0.03	--	--	--	--	0.02	--	0.05
PLV and Oxygen Plant Cooling Towers	--	--	--	--	0.004	--	0.01	0.50	--	--	--	0.51

[a] When the process material is a combination of the individual process material, a weighted average HAP concentration is calculated based on the annual quantity of each individual process material.

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
Operation 001: Mining Operations				
001-004	Drilling	Best Operating Practices	0%	--
001-003	Blasting	Best Operating Practices	0%	--
001-001a	Vehicle Travel on Unpaved Roads	Unpaved Road Watering and/or Chemical Dust Suppression Use	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
001-001b	Dozer Operation	Best Operating Practices	0%	--
001-001c	Road Grader Operation	Best Operating Practices	0%	--
001-002a	Loading Ore into Haul Trucks	Best Operating Practices	0%	--
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Best Operating Practices	0%	--
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	Emissions are Exhaust Inside a Building Under Positive Pressure	50%	ADEQ Recommendation
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
001-344	Conveyor Belt P12 to Conveyor Belt P10	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-015	Processes Controlled by P5/P6 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-017	Wind Erosion of Mill IOS	Best Operating Practices	0%	--
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
001-227	Wind Erosion of MFL IOS	Best Operating Practices	0%	--
001-325	Processes Controlled by DC2/P5 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-299	Processes Controlled by Mill IOS/R1A FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-300	Processes Controlled by Mill IOS/R1B FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-272	Processes Controlled by R1A and R1B/R7 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-278	Processes Controlled by R2/R11 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-228	Processes Controlled by MFL IOS/R8 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-229	Processes Controlled by R8/R9 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-323a	Loading to the Portable Cleanup Conveyor	Best Operating Practices	0%	--
001-323b	Unloading from the Portable Cleanup Conveyor	Best Operating Practices	0%	--
Operation 002: Morenci Concentrator				
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-352	Morenci Concentrator Bulk Flotation	Best Operating Practices	0%	--
Operation 003: MFL Fine Crushing Plant				
003-273	Processes Controlled by R9/R10 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-330	Processes Controlled by R10/R3 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-079	Processes Controlled by R3/R4 Bag Collector 3	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-082	Processes Controlled by Scrubber 3C	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-317	Processes Controlled by FFDC 3A	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
003-301	Processes Controlled by FFDC 6A	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-302	Processes Controlled by FFDC 6B	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-304	Processes Controlled by FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-089	Processes Controlled by Scrubber 5	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-303	Processes Controlled by FFDC 8	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-088	Processes Controlled by Scrubber 4	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-320	Processes Controlled by 14/15 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-331	Processes Controlled by 15/16 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-309	Processes Controlled by 16/S11 FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
003-199	Conveyor Belt S11 (transfer to FOIS)	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
003-200	Wind Erosion of the FOIS	Best Operating Practices	0%	--
003-441	Dust Suppression Fan	Best Operating Practices	0%	--
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-202	Processes Controlled by A1A/A2A Bag Collector 8	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-203	Processes Controlled by A1A/A2C Bag Collector 9	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
003-204	Agglomerating Unit 1	Best Operating Practices	0%	--
003-205	Agglomerating Unit 2	Best Operating Practices	0%	--
Operation 004: Lime Slaking Plants and Lime Transloading				
004-231	Transfer of Quicklime to the Lime Silo 1	Mac Dust Filter	90%	Manufacturer's Information
004-232	Transfer of Quicklime to the Lime Silo 2	Mac Dust Filter	90%	Manufacturer's Information
004-233	Lime Slaker 1	Water Spray Mist System	0%	Control Efficiency Incorporated into the Emission Factor
004-234	Lime Slaker 2	Water Spray Mist System	0%	Control Efficiency Incorporated into the Emission Factor
004-275	Transfer of Quicklime to Metcalf Lime Silo	FARR Bin Vent	100%	Manufacturer's Information

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
004-276	Metcalf Lime Slaker	Metcalf Lime Slaker Wet Scrubber	0%	Control Efficiency Incorporated into Emission Factor
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Lime Transloading Dust Collector	99%	Minimum value from AP-42 Table B.2-3 (09/90)
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	Lime Transloading Dust Collector	99%	Minimum value from AP-42 Table B.2-3 (09/90)
004-446	Lime Transloading Engine (47.6 hp engine)	Best Operating Practices	0%	--
Operation 005: Metcalf Power Plant				
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	Best Operating Practices	0%	--
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	Best Operating Practices	0%	--
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	Best Operating Practices	0%	--
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	Best Operating Practices	0%	--
Operation 006: Copper Concentrate Processing Operations				
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044d	Conveyor Belt BA to Conveyor Belt BB	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044e	Conveyor Belt BB to Conveyor Belt BC	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	3-Sided Enclosure	75%	South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures for 3-Sided Enclosure
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	Best Operating Practices	0%	--
Operation 009: Solution Extraction/Electrowinning Operations				
009-117	Central SX (21,175 ft^2)	Covers (except for the open portions)	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-462	Central Backwash Bleed Tank (33,000 gallons)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-463	Central Barren Organic Tank (60,900 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-464	Central Bead Separator Tank (5,000 gallons)	Best Operating Practices	0%	--
009-465	Central High Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-466	Central Low Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-467	Central Gunk Tank 1 (7,600 gallons)	Best Operating Practices	0%	--
009-468	Central Gunk Tank 2 (7,600 gallons)	Best Operating Practices	0%	--
009-469	Central Gunk Tank 3 (23,800 gallons)	Best Operating Practices	0%	--
009-470	Central Organic Recovery Tank (306,700 gallons)	Best Operating Practices	0%	--
009-471	Central Raffinate Pond (9,905 ft^2)	Best Operating Practices	0%	--
009-118	Metcalf SX (40,585.41 ft^2)	Covers (except for the open portions)	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-473	Metcalf High A Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-474	Metcalf High B Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Best Operating Practices	0%	--
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Best Operating Practices	0%	--
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Best Operating Practices	0%	--
009-481	Metcalf Holding Tank (122,200 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Best Operating Practices	0%	--
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Best Operating Practices	0%	--
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-485	Metcalf Raffinate Pond (10,236 ft^2)	Best Operating Practices	0%	--
009-119	Modoc SX (88,229.16 ft^2)	Covers (except for the open portions)	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-488	Modoc High A Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-489	Modoc High B Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-490	Modoc Low A Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-491	Modoc Low B Decant Tank (4,700 gallons)	Best Operating Practices	0%	--
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Best Operating Practices	0%	--
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Best Operating Practices	0%	--
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Best Operating Practices	0%	--
009-496	Modoc Holding Tank (118,000 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Best Operating Practices	0%	--
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Best Operating Practices	0%	--
009-499	Modoc Raffinate Pond (15,678 ft^2)	Best Operating Practices	0%	--
009-349	Stargo SX (48,846.87 ft^2)	Covers (except for the open portions)	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Best Operating Practices	0%	--
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Best Operating Practices	0%	--
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Best Operating Practices	0%	--
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Best Operating Practices	0%	--
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-505	Stargo Holding Tank (108,900 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-506	Stargo Stormwater Tank (772,190 gallons)	Best Operating Practices	0%	--
009-507	Stargo Tricanter Feed Tank (250 gallons)	Best Operating Practices	0%	--
009-508	Stargo Slurry Tank (500 gallons)	Covers	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-121	Central EW (548 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor
009-122	Southside EW (220 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor
009-221	Stargo EW (324 cells)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	Best Operating Practices	0%	--
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	Best Operating Practices	0%	--
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	Best Operating Practices	0%	--
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	Best Operating Practices	0%	--
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	Best Operating Practices	0%	--
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	Best Operating Practices	0%	--
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	Best Operating Practices	0%	--
009-422	Modoc Test Facility SX (1,418.72 ft^2)	Covers (except for the open portions)	66.67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
009-423	Modoc Test Facility EW (771.2 ft^2)	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Best Operating Practices	0%	--
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Best Operating Practices	0%	--
Operation 010: Concrete Batch Plant				
010-144a	Unloading Aggregate to the Aggregate Stockpiles	Best Operating Practices	0%	--
010-144b	Wind Erosion of the Aggregate Stockpiles	Best Operating Practices	0%	--
010-144c	Loading Aggregate to the Feed Hopper	Best Operating Practices	0%	--
010-145	Feed Hopper to Aggregate Conveyor Belt	Best Operating Practices	0%	--
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	Unspecified Bin Vent	90%	Estimated Minimum Control Efficiency
010-147	Pneumatic Transfer of Cement to the Cement Silo	Unspecified Bin Vent	90%	Estimated Minimum Control Efficiency
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	Best Operating Practices	0%	--
010-148b	Cement Screw Conveyor to Weigh Hopper	Best Operating Practices	0%	--
010-148c	Aggregate Conveyor Belt to Weigh Hopper	Best Operating Practices	0%	--
010-148d	Weigh Hopper to Concrete Mixing Truck	Best Operating Practices	0%	--
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	Best Operating Practices	0%	--
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	Best Operating Practices	0%	--
Operation 011: Storage Tanks				
011-150	Diesel Tank D1 (177,850 gallons)	Best Operating Practices	0%	--
011-151	Diesel Tank D2 (200,434 gallons)	Best Operating Practices	0%	--
011-154	Diesel Tank D5 (47,255 gallons)	Best Operating Practices	0%	--
011-161	Diesel Tank Pit 95 (101,690 gallons)	Best Operating Practices	0%	--
011-155	Gasoline Tank G1 (12,000 gallons)	Best Operating Practices	0%	--
011-156	Gasoline Tank G2 (12,000 gallons)	Best Operating Practices	0%	--
011-157	Gasoline Tank G3 (12,000 gallons)	Best Operating Practices	0%	--
Operation 013: Grizzly Operations				
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	Best Operating Practices	0%	--
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	Best Operating Practices	0%	--
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	Best Operating Practices	0%	--
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	Best Operating Practices	0%	--
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	Best Operating Practices	0%	--
Operation 014: Concentrate Leach Plant				
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Best Operating Practices	0%	--
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
014-240	PLV Cooling Tower	Mist Eliminators	0%	Control Efficiency Incorporated into the Emission Factor
014-241	Oxygen Plant Cooling Tower 1	Mist Eliminators	0%	Control Efficiency Incorporated into the Emission Factor
014-348	Transfer of Flocculant to the Flocculant Bin	Combination of an Unspecified Bin Vent and Emissions Exhaust Inside a Building Under Positive Pressure	95%	Estimated Minimum Control Efficiency for the Bin Vent and ADEQ Recommendation for Exhausting Inside a Building
014-254	Transfer of Lime to the Lime Silo	Modu-Kleen Bin Vent	99.90%	Manufacturer's Information
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	Modu-Kleen Bin Vent	99.90%	Manufacturer's Information

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
Operation 015: Diesel Emergency Engines				
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	Best Operating Practices	0%	--
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Best Operating Practices	0%	--
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Best Operating Practices	0%	--
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Best Operating Practices	0%	--
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Best Operating Practices	0%	--
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Best Operating Practices	0%	--
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	Best Operating Practices	0%	--
015-439	Emergency Diesel Generator WWTP GNO61A (1,141 hp engine)	Best Operating Practices	0%	--
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Best Operating Practices	0%	--
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
Operation 017: Metcalf Concentrator				
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-280	Processes Controlled by Secondary Screening FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-281	Processes Controlled by Secondary Screening FFDC 2	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-283	Processes Controlled by Secondary Crushing FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-284	Processes Controlled by Secondary Crushing FFDC 2	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-291	Processes Controlled by Crushed Ore Transfers FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-294	Processes Controlled by Wet Screen Feed FFDC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
017-327	Metcalf Concentrator Bulk Flotation	Best Operating Practices	0%	--
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations				
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
018-336	Processes Controlled by H_2S Scrubber System	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
Operation 021: Propane and Natural Gas Emergency Engines				
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Best Operating Practices	0%	--
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Best Operating Practices	0%	--
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Best Operating Practices	0%	--
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Best Operating Practices	0%	--
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Best Operating Practices	0%	--
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	Best Operating Practices	0%	--
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Best Operating Practices	0%	--
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Best Operating Practices	0%	--
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	Best Operating Practices	0%	--
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	Best Operating Practices	0%	--
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	Best Operating Practices	0%	--
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	Best Operating Practices	0%	--
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	Best Operating Practices	0%	--
Operation 022: Prill Bins				
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	Best Operating Practices	0%	--
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
Operation 023: Tailings Operations				
023-418	Wind Erosion of Tailings	Use of a Wet Dam Construction Technique, Applying Water, Treating the Active Areas with Polymer and/or Magnesium Chloride, Hydro-seeding or Hydro-mulching, Limiting Vehicle Access and Speed, Covering, Utilizing Wind Breaks, Facilitating Encrustation, Maintaining the Inherent Moisture Content, and Wetting the Active Areas with Slurry	0%	Control Efficiency Incorporated into the Process Rate and Emission Factor
Operation 024: Miscellaneous Fuel Burning Equipment				
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	Best Operating Practices	0%	--
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	Best Operating Practices	0%	--
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	Best Operating Practices	0%	--
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	Best Operating Practices	0%	--
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	Best Operating Practices	0%	--
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	Best Operating Practices	0%	--

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
Operation 025: Diesel Non-Emergency Engines				
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Best Operating Practices	0%	--
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Best Operating Practices	0%	--
AOS1: Morenci Concentrator Quaternary Crushing Operations				
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.68 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Control Efficiency	Reference/Explanation
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
AOS2: Concentrate Leach Plant Upgrades				
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	Mist Eliminators	0%	Control Efficiency Incorporated into the Emission Factor

APPENDIX F EMISSION INVENTORY TABLES FOR POTENTIAL EMISSION CALCULATIONS

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
General Facility Information				
--	Elevation	4,000	feet	Elevation of the FMMI facility (for calculation of ambient pressure)
--	Meteorological Information	52.80	days	Number of days with precipitation ≥ 0.01 inches (based on 2017-2021 data from the Townsite Meteorological Monitor)
		65.86	°F	Average ambient temperature (based on 2017-2021 data from the Townsite Meteorological Monitor)
		6.88	mph	Mean ambient wind speed at the FMMI facility (based on 2017-2021 data from the Townsite Meteorological Monitor)
		11.81	%	Percentage of time with mean wind speed greater than 12 mph at mean stockpile heights (based on 2017-2021 data from the Townsite Meteorological Monitor, assume similar for all stockpiles)
		19.97	m/s	Fastest mile at anemometer height of 10 m (maximum hourly wind speed recorded by the Tailings Meteorological Monitor in 2018-2022, multiplied by 1.2 to convert to fastest mile)
--	Silt Content Information	5.00	%	Silt content of unpaved roads
		4.00	%	Silt content of material being bulldozed (estimated value based on similar copper mines)
		7.40	%	Silt content of the material in the Mill IOS
		7.40	%	Silt content of the material in the MFL IOS
		96	%	Silt content of the copper concentrate in the storage piles
		15	%	Silt content of the material in the FOIS
		7.40	%	Silt content of the material in the Concentrate Grizzly Oversize and Undersize Stockpiles
		7.40	%	Silt content of the material in the Construction Grizzly 1 Oversize and Undersize Stockpiles
		7.40	%	Silt content of the material in the Construction Grizzly 2 Oversize and Undersize Stockpiles
		7.40	%	Silt content of the material in the Construction Grizzly 3 Oversize and Undersize Stockpiles
		7.40	%	Silt content of the material in the Stockpile Grizzly 1 Oversize and Undersize Stockpiles

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Silt Content Information (cont'd)	7.40	%	Silt content of the material in the Stockpile Grizzly 2 Oversize and Undersize Stockpiles
		2.60	%	Silt content of the material in the Aggregate Stockpiles associated with the Concrete Batch Plant
--	Moisture Content Information	3.20	%	Moisture content of the ore and other mined material (minimum moisture content maintained for good operating practices)
		8.5	%	Moisture content of the produced molybdenum concentrate (site-specific)
		9.5	%	Moisture content of the produced copper concentrate (site-specific)
		3.20	%	Moisture content of the nonmetallic minerals processed by the Grizzlies (minimum moisture content maintained for good operating practices)
		1.77	%	Moisture content of the aggregate processed by the Concrete Batch Plant (footnote “b” of AP-42 Table 11.12-2)
--	Metal HAP Content of the Waste Rock	0.42	ppm	Concentration of antimony
		1.72	ppm	Concentration of arsenic
		2.76	ppm	Concentration of beryllium
		0.14	ppm	Concentration of cadmium
		108.60	ppm	Concentration of chromium
		26.24	ppm	Concentration of cobalt
		13.73	ppm	Concentration of lead
		1,310.67	ppm	Concentration of manganese
		0.07	ppm	Concentration of mercury
		84.64	ppm	Concentration of nickel
		0.08	ppm	Concentration of selenium

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
--	Metal HAP Content of the ROM Leach	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic
		0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury
		6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium
--	Metal HAP Content of the Morenci Concentrator Ore	0.38	ppm	Concentration of antimony
		1.22	ppm	Concentration of arsenic
		0.23	ppm	Concentration of beryllium
		1.56	ppm	Concentration of cadmium
		4.93	ppm	Concentration of chromium
		3.62	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Morenci Concentrator Ore (cont'd)	41.10	ppm	Concentration of manganese
		0.08	ppm	Concentration of mercury
		1.64	ppm	Concentration of nickel
		1.97	ppm	Concentration of selenium
--	Metal HAP Content of the MFL Fine Crushing Plant Ore	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic
		0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury
		6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium
--	Metal HAP Content of the Metcalf Concentrator Ore	18.75	ppm	Concentration of antimony
		25.80	ppm	Concentration of arsenic
		1.75	ppm	Concentration of beryllium

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Metcalf Concentrator Ore (cont'd)	1.75	ppm	Concentration of cadmium
		3.50	ppm	Concentration of chromium
		5.75	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		3.00	ppm	Concentration of manganese
		0.50	ppm	Concentration of mercury
		12.25	ppm	Concentration of nickel
		15.50	ppm	Concentration of selenium
--	Metal HAP Content of the Copper Concentrate	18.75	ppm	Concentration of antimony
		25.80	ppm	Concentration of arsenic
		5.00	ppm	Concentration of beryllium
		120.83	ppm	Concentration of cadmium
		11.82	ppm	Concentration of chromium
		163.33	ppm	Concentration of cobalt
		197.00	ppm	Concentration of lead
		34.17	ppm	Concentration of manganese
		0.83	ppm	Concentration of mercury
		46.67	ppm	Concentration of nickel

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Copper Concentrate (cont'd)	86.67	ppm	Concentration of selenium
--	Metal HAP Content of the Molybdenum Concentrate	167.00	ppm	Concentration of antimony
		46.00	ppm	Concentration of arsenic
		7.00	ppm	Concentration of beryllium
		7.00	ppm	Concentration of cadmium
		14.00	ppm	Concentration of chromium
		23.00	ppm	Concentration of cobalt
		19.00	ppm	Concentration of lead
		12.00	ppm	Concentration of manganese
		12.10	ppm	Concentration of mercury
		49.00	ppm	Concentration of nickel
		509.00	ppm	Concentration of selenium
--	Metal HAP Content of the Tailings	4.50	ppm	Concentration of antimony
		7.50	ppm	Concentration of arsenic
		1.00	ppm	Concentration of beryllium
		0.50	ppm	Concentration of cadmium
		12.00	ppm	Concentration of chromium
		3.62	ppm	Concentration of cobalt

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Tailings (cont'd)	12.29	ppm	Concentration of lead
		142.00	ppm	Concentration of manganese
		0.08	ppm	Concentration of mercury
		12.00	ppm	Concentration of nickel
		20.00	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of All Mined Material	8.06	ppm	Concentration of antimony
		11.57	ppm	Concentration of arsenic
		1.28	ppm	Concentration of beryllium
		1.41	ppm	Concentration of cadmium
		21.39	ppm	Concentration of chromium
		8.23	ppm	Concentration of cobalt
		65.76	ppm	Concentration of lead
		234.03	ppm	Concentration of manganese
		0.25	ppm	Concentration of mercury
		19.73	ppm	Concentration of nickel
		7.31	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of Morenci Concentrator and Metcalf Concentrator Ore	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Combination of Morenci Concentrator and Metcalf Concentrator Ore (cont'd)	0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury
		6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic
		0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore (cont'd)	6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of ROM Leach and Waste Material	7.38	ppm	Concentration of antimony
		10.69	ppm	Concentration of arsenic
		1.41	ppm	Concentration of beryllium
		1.29	ppm	Concentration of cadmium
		29.13	ppm	Concentration of chromium
		9.83	ppm	Concentration of cobalt
		61.13	ppm	Concentration of lead
		329.67	ppm	Concentration of manganese
		0.24	ppm	Concentration of mercury
		25.49	ppm	Concentration of nickel
		6.67	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of Copper and Molybdenum Concentrate	20.78	ppm	Concentration of antimony
		26.08	ppm	Concentration of arsenic
		5.03	ppm	Concentration of beryllium
		119.28	ppm	Concentration of cadmium
		11.85	ppm	Concentration of chromium

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Combination of Copper and Molybdenum Concentrate (cont'd)	161.41	ppm	Concentration of cobalt
		194.57	ppm	Concentration of lead
		33.86	ppm	Concentration of manganese
		0.98	ppm	Concentration of mercury
		46.70	ppm	Concentration of nickel
		92.44	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic
		0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury
		6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
--	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	9.56	ppm	Concentration of antimony
		13.51	ppm	Concentration of arsenic
		0.99	ppm	Concentration of beryllium
		1.66	ppm	Concentration of cadmium
		4.22	ppm	Concentration of chromium
		4.69	ppm	Concentration of cobalt
		76.00	ppm	Concentration of lead
		22.05	ppm	Concentration of manganese
		0.29	ppm	Concentration of mercury
		6.95	ppm	Concentration of nickel
		8.74	ppm	Concentration of selenium
--	Metal HAP Content of the Dust Suppression Fan	0	ppm	Concentration of antimony
		0	ppm	Concentration of arsenic
		0.001	ppm	Concentration of beryllium
		0.0001	ppm	Concentration of cadmium
		0.03	ppm	Concentration of chromium
		0	ppm	Concentration of cobalt
		0	ppm	Concentration of lead

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Metal HAP Content of the Dust Suppression Fan (cont'd)	0	ppm	Concentration of manganese
		0	ppm	Concentration of mercury
		0.02	ppm	Concentration of nickel
		0	ppm	Concentration of selenium
--	Metal HAP Content of the PLV and Oxygen Plant Cooling Towers	0	ppm	Concentration of antimony
		0	ppm	Concentration of arsenic
		0	ppm	Concentration of beryllium
		0	ppm	Concentration of cadmium
		0.004	ppm	Concentration of chromium
		0	ppm	Concentration of cobalt
		0.01	ppm	Concentration of lead
		0.50	ppm	Concentration of manganese
		0	ppm	Concentration of mercury
		0	ppm	Concentration of nickel
		0	ppm	Concentration of selenium
Operation 001: Mining Operations				
001-004	Drilling	211,174	holes/year	Annual quantity of holes drilled (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		350	holes/hour	Hourly quantity of holes drilled (estimated maximum drilling rate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-003	Blasting	2,136	blasts/year	Annual quantity of blasts (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		1	blasts/hour	Hourly quantity of blasts
		113,225,595	ft^2	Annual total area of all blasts (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		220,000	ft^2	Hourly total area of all blasts (estimated maximum blast area)
		5,141	tons/year	Annual quantity of diesel used in traditional ANFO (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		7.05	lb/gal	Density of diesel fuel (from AP-42 Table 1.3-12)
		3,321	tons/year	Annual quantity of Mixed Fuel used in ANFO emulsions (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		5.50	tons/hour	Hourly quantity of Mixed Fuel used in ANFO emulsions (based on the annual quantity and scaled using the number of holes drilled)
		78.50	%	Percent of diesel fuel in the Mixed Fuel (from James Rogers at Southwest Energy)
		21.50	%	Percent of animal fat in the Mixed Fuel (from James Rogers at Southwest Energy)
		7.34	lb/gal	Density of animal fat (based on *A Demonstration of Fat and Grease as an Industrial Boiler Fuel*)
		46.74	tons/year	Annual quantity of diesel fuel used in contractor ANFO (assume 6%)
		7,795	tons/year	Annual total quantity of diesel fuel used during blasting (sum of diesel information sources)
		2,211,270	gallons/year	Annual total quantity of diesel fuel used during blasting (calculated based on diesel fuel information sources and density)
		3,665	gallons/hour	Hourly total quantity of diesel fuel used during blasting (based on the annual quantity and scaled using the number of holes drilled)
		80,532	tons/year	Annual quantity of ammonium nitrate prill used (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		99.80	%	Percent of Ammonium Nitrate in the ammonium nitrate prill
		51,750	tons/year	Annual quantity of ammonium nitrate solution used (based on actual 2018-2022 data scaled up according to the maximum mining rate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-003 (cont'd)	Blasting (cont'd)	81	%	Percent of Ammonium Nitrate in the ammonium nitrate solution
		732.26	tons/year	Annual quantity of ammonium nitrate used in contractor ANFO (assume 94%)
		123,021	tons/year	Annual total quantity of ammonium nitrate used during blasting (sum of ammonium nitrate information sources)
		779	tons/year	Annual quantity of contractor ANFO used (based on actual 2018-2022 data scaled up according to the maximum mining rate)
		130,815	tons/year	Annual total quantity of ANFO used (sum of AN and FO references)
		216.81	tons/hour	Hourly total quantity of ANFO used (based on the annual quantity and scaled using the number of holes drilled)
		94.04	%	Percent of Ammonium Nitrate in ANFO (calculated value)
		5.96	%	Percent of Fuel Oil in ANFO (calculated value)
001-001a	Vehicle Travel on Unpaved Roads	13,402,800	VMT/year	Annual quantity of total miles traveled by the haul trucks
		1,530	VMT/hour	Hourly quantity of total miles traveled by the haul trucks
		8,304,409	VMT/year	Annual quantity of total miles traveled by the support vehicles
		1,086	VMT/hour	Hourly quantity of total miles traveled by the support vehicles
		21,707,209	VMT/year	Annual quantity of total miles traveled (calculated value)
		2,616	VMT/hour	Hourly quantity of total miles traveled (calculated value)
		200.61	tons	Mean vehicle weight on an annual basis (calculated value)
		190.43	tons	Mean vehicle weight on an hourly basis (calculated value)
001-001b	Dozer Operation	446,760	hours/year	Annual hours of operation of all dozers (assume all dozers operate continuously)
		51	hours/hour	Hourly hours of operation of all dozers (assume all dozers operate 60 minutes/hour)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-001c	Road Grader Operation	420,480	VMT/year	Annual quantity of total miles traveled (assume all graders operate continuously at an average of 4 miles/hour)
		48.00	VMT/hour	Hourly quantity of total miles traveled (assume all graders operate 60 minutes/hour at an average of 4 miles/hour)
		4.00	mph	Mean speed
001-002a	Loading Ore into Haul Trucks	401,500,000	tons/year	Annual quantity of all mined material (assume 1.1 MM tons/day and continuous operation)
		55,000	tons/hour	Hourly quantity of all mined material (assume continuous operation with a 20% increase over the average rate)
		66,046,750	tons/year	Annual quantity of waste rock mined (AC4 "true waste" material, estimated at 16.45% of material mined)
		9,048	tons/hour	Hourly quantity of waste rock mined (AC4 "true waste" material, estimated at 16.45% of material mined)
		16.45	%	Percent of all material mined that is waste rock (annual basis)
		23.87	%	Percent of all waste/ROM that is waste rock (annual basis)
		210,623,250	tons/year	Annual quantity of ROM leach ore mined (calculated by subtracting the other mined material amounts from the total amount of material mined)
		31,703	tons/hour	Hourly quantity of ROM leach ore mined (calculated by subtracting the other mined material amounts from the total amount of material mined)
		52.46	%	Percent of all material mined that is ROM leach ore (annual basis)
		76.13	%	Percent of all waste/ROM that is ROM leach ore (annual basis)
		33,178,500	tons/year	Annual quantity of Morenci Concentrator ore mined
		3,788	tons/hour	Hourly quantity of Morenci Concentrator ore mined
		8.26	%	Percent of all material mined that is Morenci Concentrator ore (annual basis)
		50.00	%	Percent of all concentrator ore that is Morenci Concentrator ore (annual basis)
		26.58	%	Percent of all processed ore that is Morenci Concentrator ore (annual basis)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-002a (cont'd)	Loading Ore into Haul Trucks (cont'd)	58,473,000	tons/year	Annual quantity of MFL Fine Crushing Plant ore mined
		6,675	tons/hour	Hourly quantity of MFL Fine Crushing Plant ore mined
		14.56	%	Percent of all material mined that is MFL Fine Crushing Plant ore (annual basis)
		46.84	%	Percent of all processed ore that is MFL Fine Crushing Plant ore (annual basis)
		33,178,500	tons/year	Annual quantity of Metcalf Concentrator ore mined
		3,788	tons/hour	Hourly quantity of Metcalf Concentrator ore mined
		8.26	%	Percent of all material mined that is Metcalf Concentrator ore (annual basis)
		50.00	%	Percent of all concentrator ore that is Metcalf Concentrator ore (annual basis)
		26.58	%	Percent of all processed ore that is Metcalf Concentrator ore (annual basis)
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	124,830,000	tons/year	Annual quantity of ore processed by In-Pit Crushers (sum of In-Pit Crushers 1/3)
		14,250	tons/hour	Hourly quantity of ore processed by In-Pit Crushers (sum of In-Pit Crushers 1/3)
001-002c	Haul Truck Unloading to Leaching/Storage Areas	276,670,000	tons/year	Annual quantity of ore sent to leaching/storage areas (difference between total ore mined and ore sent to the In-Pit Crushers)
		40,750	tons/hour	Hourly quantity of ore sent to leaching/storage areas (difference between total ore mined and ore sent to the In-Pit Crushers)
001-187	Apron Feeder AF2 to In-Pit Crusher 2	65,700,000	tons/year	Annual quantity of ore processed by In-Pit Crusher 2 (assume equal to the maximum hourly capacity at continuous operation)
		7,500	tons/hour	Hourly quantity of ore processed by In-Pit Crusher 2 (assume equal to the maximum hourly capacity)
		10	%	Percent of all material sent to IPC2 that is Morenci Concentrator ore (annual basis)
		80	%	Percent of all material sent to IPC2 that is MFL Fine Crushing Plant ore (annual basis)
		10	%	Percent of all material sent to IPC2 that is Metcalf Concentrator ore (annual basis)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-249	Apron Feeder AF3 to In-Pit Crusher 3	59,130,000	tons/year	Annual quantity of ore processed by In-Pit Crusher 3 (assume equal to the maximum hourly capacity at continuous operation)
		6,750	tons/hour	Hourly quantity of ore processed by In-Pit Crusher 3 (assume equal to the maximum hourly capacity)
		45	%	Percent of all material sent to IPC3 that is Morenci Concentrator ore (annual basis)
		10	%	Percent of all material sent to IPC3 that is MFL Fine Crushing Plant ore (annual basis)
		45	%	Percent of all material sent to IPC3 that is Metcalf Concentrator ore (annual basis)
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		17,900	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission factor (maximum outlet grain loading of a FFDC)
		0.004	gr/dscf	PM_{10} emission factor (maximum outlet grain loading of a FFDC)
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,300	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-251 (cont'd)	Processes Controlled by P11/P5 and P11/P12 FFDC (cont'd)	0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
001-344	Conveyor Belt P12 to Conveyor Belt P10	61,320,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		7,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
001-015	Processes Controlled by P5/P6 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12,800	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
001-016	Conveyor Belt P6 (transfer to Mill IOS)	79,716,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		9,100	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
001-017	Wind Erosion of Mill IOS	4.00	acres	Acreage of Mill IOS
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		18,400	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-225 (cont'd)	Processes Controlled by DC2/P9 and P9/P10 FFDC (cont'd)	0.001	gr/dscf	PM_{10} emission limit
001-226	Conveyor Belt P10 (transfer to MFL IOS)	61,320,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		7,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
001-227	Wind Erosion of MFL IOS	4.50	acres	Acreage of MFL IOS
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
001-325	Processes Controlled by DC2/P5 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		7,300	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
001-299	Processes Controlled by Mill IOS/R1A FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12,500	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
001-300	Processes Controlled by Mill IOS/R1B FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-300 (cont'd)	Processes Controlled by Mill IOS/R1B FFDC (cont'd)	10,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
001-272	Processes Controlled by R1A and R1B/R7 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,100	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit
001-278	Processes Controlled by R2/R11 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		4,600	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-228	Processes Controlled by MFL IOS/R8 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12,800	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
001-229	Processes Controlled by R8/R9 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		10,600	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
001-323a	Loading to the Portable Cleanup Conveyor	438,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		50	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
001-323b	Unloading from the Portable Cleanup Conveyor	438,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		50	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
Operation 002: Morenci Concentrator				
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		23,700	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
002-030 (cont'd)	Processes Controlled by Fine Crushing Line B FFDC 1 (cont'd)	0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		25,100	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		13,900	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,500	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
002-032 (cont'd)	Processes Controlled by Fine Crushing Line D FFDC 1 (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		23,700	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-352	Morenci Concentrator Bulk Flotation	542.14	tons/year	Annual quantity of organic reagent (frother and moly collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Morenci Concentrator Bulk Flotation)
		0.062	tons/hour	Hourly quantity of organic reagent (frother and moly collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Morenci Concentrator Bulk Flotation)
Operation 003: MFL Fine Crushing Plant				
003-273	Processes Controlled by R9/R10 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
003-330	Processes Controlled by R10/R3 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-079	Processes Controlled by R3/R4 Bag Collector 3	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,200	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		8,300	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit
003-082	Processes Controlled by Scrubber 3C	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		35,400	dscfm	Exhaust flow rate
		0.01	gr/dscf	PM emission limit
		0.01	gr/dscf	PM_{10} emission limit
003-317	Processes Controlled by FFDC 3A	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		38,000	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-317 (cont'd)	Processes Controlled by FFDC 3A (cont'd)	0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
003-301	Processes Controlled by FFDC 6A	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		31,100	dscfm	Exhaust flow rate
		0.005	gr/dscf	PM emission limit
		0.005	gr/dscf	PM_{10} emission limit
003-302	Processes Controlled by FFDC 6B	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		27,500	dscfm	Exhaust flow rate
		0.005	gr/dscf	PM emission limit
		0.005	gr/dscf	PM_{10} emission limit
003-304	Processes Controlled by FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		27,700	dscfm	Exhaust flow rate
		0.005	gr/dscf	PM emission limit
		0.005	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-089	Processes Controlled by Scrubber 5	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		41,400	dscfm	Exhaust flow rate
		0.01	gr/dscf	PM emission limit
		0.01	gr/dscf	PM_{10} emission limit
003-303	Processes Controlled by FFDC 8	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20,400	dscfm	Exhaust flow rate
		0.005	gr/dscf	PM emission limit
		0.005	gr/dscf	PM_{10} emission limit
003-088	Processes Controlled by Scrubber 4	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		45,900	dscfm	Exhaust flow rate
		0.01	gr/dscf	PM emission limit
		0.01	gr/dscf	PM_{10} emission limit
003-320	Processes Controlled by 14/15 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,500	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-320 (cont'd)	Processes Controlled by 14/15 FFDC (cont'd)	0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
003-331	Processes Controlled by 15/16 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,100	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
003-309	Processes Controlled by 16/S11 FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
003-199	Conveyor Belt S11 (transfer to FOIS)	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		6,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer)
003-200	Wind Erosion of the FOIS	1.00	acres	Acreage of the FOIS
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
003-441	Dust Suppression Fan	210,240	1,000 gallons/year	Annual quantity of water used (assume equal to the maximum hourly capacity of the water usage at continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-441 (cont'd)	Dust Suppression Fan (cont'd)	24	1,000 gallons/hour	Hourly quantity of water used (assume equal to the maximum hourly capacity of the water usage)
		1,100	ppm	Maximum total dissolved solids (TDS)
		0.02	%	Maximum liquid drift rate
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		11,200	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit
003-202	Processes Controlled by A1A/A2A Bag Collector 8	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,200	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit
003-203	Processes Controlled by A1A/A2C Bag Collector 9	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,200	dscfm	Exhaust flow rate
		0.007	gr/dscf	PM emission limit
		0.007	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
003-204	Agglomerating Unit 1	26,280,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity of the unit at continuous operation)
		3,000	tons/hour	Hourly quantity of ore processed (assume equal to the maximum hourly capacity of the unit)
003-205	Agglomerating Unit 2	26,280,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity of the unit at continuous operation)
		3,000	tons/hour	Hourly quantity of ore processed (assume equal to the maximum hourly capacity of the unit)
Operation 004: Lime Slaking Plants and Lime Transloading				
004-231	Transfer of Quicklime to the Lime Silo 1	54,750	tons/year	Annual quantity of lime transferred (assume equal to the maximum amount of lime processed in the slaker)
		25	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum lime delivery rate)
004-232	Transfer of Quicklime to the Lime Silo 2	54,750	tons/year	Annual quantity of lime transferred (assume equal to the maximum amount of lime processed in the slaker)
		25	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum lime delivery rate)
004-233	Lime Slaker 1	54,750	tons/year	Annual quantity of lime processed (assume equal to the maximum hourly capacity at continuous operation)
		6.25	tons/hour	Hourly quantity of lime processed (assume equal to the maximum hourly capacity)
004-234	Lime Slaker 2	54,750	tons/year	Annual quantity of lime processed (assume equal to the maximum hourly capacity at continuous operation)
		6.25	tons/hour	Hourly quantity of lime processed (assume equal to the maximum hourly capacity)
004-275	Transfer of Quicklime to Metcalf Lime Silo	109,500	tons/year	Annual quantity of lime transferred (assume equal to the maximum amount of lime processed in the slaker)
		25	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum lime delivery rate)
004-276	Metcalf Lime Slaker	109,500	tons/year	Annual quantity of lime processed (assume equal to the maximum hourly capacity at continuous operation)
		12.50	tons/hour	Hourly quantity of lime processed (assume equal to the maximum hourly capacity)
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	220,752	tons/year	Annual quantity of lime transferred (assume equal to the annual quantity of quicklime delivered to the various lime silos)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
004-445a (cont'd)	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor (cont'd)	50	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum hourly capacity of the transfer)
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	220,752	tons/year	Annual quantity of lime transferred (assume equal to the annual quantity of quicklime delivered to the various lime silos)
		50	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum hourly capacity of the transfer)
004-446	Lime Transloading Engine (47.6 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		47.60	hp	Rated horsepower of the engine
Operation 005: Metcalf Power Plant				
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	268,570	MMBtu/year	Annual natural gas usage (assume 50% of the combined voluntary limitation applies to each turbine)
		204.89	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
		0.082	lb/MMBtu	CO emission limit
		0.59	lb/MMBtu	NO_X emission limit
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	268,570	MMBtu/year	Annual natural gas usage (assume 50% of the combined voluntary limitation applies to each turbine)
		204.89	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
		0.082	lb/MMBtu	CO emission limit
		0.59	lb/MMBtu	NO_X emission limit
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	500	hours/year	Annual hours of operation (500 hours for emergency engines - black start engines do not operate more than emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		300	hp	Rated horsepower of the engine

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	500	hours/year	Annual hours of operation (500 hours for emergency engines - black start engines do not operate more than emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		300	hp	Rated horsepower of the engine
Operation 006: Copper Concentrate Processing Operations				
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
		98.63	%	Percent of all concentrate that is copper concentrate (annual basis)
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
006-044c (cont'd)	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles (cont'd)	500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044d	Conveyor Belt BA to Conveyor Belt BB	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044e	Conveyor Belt BB to Conveyor Belt BC	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	0.25	acres	Acreage of the Copper Concentrate Storage Piles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	4,380,000	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations at continuous operation)
		500	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum hourly capacity of the copper concentrate processing operations)
Operation 009: Solution Extraction/Electrowinning Operations				
009-117	Central SX (21,175 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		21,175.00	ft^2	Total surface area of active SX vessels
		95	%	Percent of the SX vessels that are covered
		SX-80 CT	--	Name of the diluent used in the SX system

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-117 (cont'd)	Central SX (21,175 ft2) (cont'd)	Acorga M5490	--	Name of the extractant used in the SX system
		27.70	%	Percentage of the SX organic solution that is extractant
009-462	Central Backwash Bleed Tank (33,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		201.06	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-463	Central Barren Organic Tank (60,900 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		452.39	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-464	Central Bead Separator Tank (5,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-465	Central High Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-466	Central Low Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-467	Central Gunk Tank 1 (7,600 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-468	Central Gunk Tank 2 (7,600 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-469	Central Gunk Tank 3 (23,800 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		132.73	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-470	Central Organic Recovery Tank (306,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-470 (cont'd)	Central Organic Recovery Tank (306,700 gallons) (cont'd)	2,827.43	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-471	Central Raffinate Pond (9,905 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		9,905.00	ft^2	Total surface area of the organic in the pond
		0	%	Percent of the pond that is covered
009-118	Metcalf SX (40,585.41 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		40,585.41	ft^2	Total surface area of active SX vessels
		95	%	Percent of the SX vessels that are covered
		SX-80 CT	--	Name of the diluent used in the SX system
		Acorga M5490	--	Name of the extractant used in the SX system
		25.40	%	Percentage of the SX organic solution that is extractant
009-472	Metcalf Barren Organic Tank (82,900 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		615.75	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-473	Metcalf High A Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-474	Metcalf High B Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-475	Metcalf Low A Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-476	Metcalf Low B Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-477 (cont'd)	Metcalf SX-7 Diluent Tank (51,200 gallons) (cont'd)	380.13	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		113.10	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		132.73	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-481	Metcalf Holding Tank (122,200 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		907.92	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2,827.43	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2,827.43	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		907.92	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-485	Metcalf Raffinate Pond (10,236 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		10,236	ft^2	Total surface area of the organic in the pond
		0	%	Percent of the pond that is covered
009-119	Modoc SX (88,229.16 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-119 (cont'd)	Modoc SX (88,229.16 ft2) (cont'd)	88,229.16	ft^2	Total surface area of active SX vessels
		95	%	Percent of the SX vessels that are covered
		170 ES	--	Name of the diluent used in the SX system
		Acorga M5490	--	Name of the extractant used in the SX system
		26.90	%	Percentage of the SX organic solution that is extractant
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		706.86	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		706.86	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-488	Modoc High A Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-489	Modoc High B Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-490	Modoc Low A Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-491	Modoc Low B Decant Tank (4,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		380.13	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-493	Modoc Gunk Tank 1 (15,400 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-493 (cont'd)	Modoc Gunk Tank 1 (15,400 gallons) (cont'd)	132.73	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-494	Modoc Gunk Tank 2 (7,600 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		78.54	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-495	Modoc Gunk Tank 3 (21,700 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		132.73	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-496	Modoc Holding Tank (118,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		1,017.88	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2,827.43	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2,827.43	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-499	Modoc Raffinate Pond (15,678 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,678	ft^2	Total surface area of the organic in the pond
		0	%	Percent of the pond that is covered
009-349	Stargo SX (48,846.87 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		48,846.87	ft^2	Total surface area of active SX vessels
		95	%	Percent of the SX vessels that are covered
		SX-80 CT	--	Name of the diluent used in the SX system
		LIX 964N	--	Name of the extractant used in the SX system
		26.70	%	Percentage of the SX organic solution that is extractant
009-500	Stargo Recovered Solution Tank (5,920 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		113.10	ft^2	Surface area of the tank

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-500 (cont'd)	Stargo Recovered Solution Tank (5,920 gallons) (cont'd)	0	%	Percent of the tank that is covered
009-501	Stargo Gunk Tank 1 (16,955 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		176.71	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-502	Stargo Gunk Tank 2 (16,955 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		176.71	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-503	Stargo Gunk Tank 3 (16,955 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		176.71	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-504	Stargo Loaded Organic Tank (98,515 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		572.56	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-505	Stargo Holding Tank (108,900 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-505 (cont'd)	Stargo Holding Tank (108,900 gallons) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		660.52	ft^2	Surface area of the tank
		100	%	Percent of the tank that is covered
009-506	Stargo Stormwater Tank (772,190 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		4,300.84	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-507	Stargo Tricanter Feed Tank (250 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16.00	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-508	Stargo Slurry Tank (500 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		19.63	ft^2	Surface area of the tank
		69.44	%	Percent of the tank that is covered
009-121	Central EW (548 cells)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,394	ft^2	Area of the air flow inlet opening

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-121 (cont'd)	Central EW (548 cells) (cont'd)	5,184	ft^2	Area of the air flow outlet opening
		24.50	ft	Vertical height separating inlet and outlet areas
		3,394	ft^2	Free area of openings (free area is net area of opening through which air can pass - assume equal to inlet opening)
		1	mg/m^3	Concentration of H_2SO_4 inside the electrowinning tankhouse building (assume the OSHA permissible exposure limit of 1 mg/m^3)
009-122	Southside EW (220 cells)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		1,157.30	ft^2	Area of the air flow inlet opening
		3,400	ft^2	Area of the air flow outlet opening
		24.50	ft	Vertical height separating inlet and outlet areas
		1,157.30	ft^2	Free area of openings (free area is net area of opening through which air can pass - assume equal to inlet opening)
		1	mg/m^3	Concentration of H_2SO_4 inside the electrowinning tankhouse building (assume the OSHA permissible exposure limit of 1 mg/m^3)
009-221	Stargo EW (324 cells)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2,000	ft^2	Area of the air flow inlet opening
		6,000	ft^2	Area of the air flow outlet opening
		30	ft	Vertical height separating inlet and outlet areas
		2,000	ft^2	Free area of openings (free area is net area of opening through which air can pass - assume equal to inlet opening)
		1	mg/m^3	Concentration of H_2SO_4 inside the electrowinning tankhouse building (assume the OSHA permissible exposure limit of 1 mg/m^3)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	125,000	MMBtu/year	Annual natural gas usage (assume 20% of the combined voluntary limitation applies to each boiler)
		17.56	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	125,000	MMBtu/year	Annual natural gas usage (assume 20% of the combined voluntary limitation applies to each boiler)
		17.56	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	125,000	MMBtu/year	Annual natural gas usage (assume 20% of the combined voluntary limitation applies to each boiler)
		17.56	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	125,000	MMBtu/year	Annual natural gas usage (assume 20% of the combined voluntary limitation applies to each boiler)
		17.56	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	125,000	MMBtu/year	Annual natural gas usage (assume 20% of the combined voluntary limitation applies to each boiler)
		17.56	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	4,818	MMBtu/year	Annual diesel usage (assume equal to the maximum hourly capacity at continuous operation)
		0.55	MMBtu/hour	Hourly diesel usage (assume equal to the maximum hourly capacity)
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	4,818	MMBtu/year	Annual diesel usage (assume equal to the maximum hourly capacity at continuous operation)
		0.55	MMBtu/hour	Hourly diesel usage (assume equal to the maximum hourly capacity)
009-422	Modoc Test Facility SX (1,418.72 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		1,418.72	ft^2	Total surface area of active SX vessels
		31	%	Percent of the SX vessels that are covered

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-423	Modoc Test Facility EW (771.2 ft2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		771.20	ft^2	Area of active electrowinning cells
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		52.55	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		52.55	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		28.27	ft^2	Surface area of the tank
		0	%	Percent of the tank that is covered
Operation 010: Concrete Batch Plant				
010-144a	Unloading Aggregate to the Aggregate Stockpiles	95,444.54	tons/year	Annual amount of aggregate used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete - includes rock, sand, and gravel)
		143.53	tons/hour	Hourly amount of aggregate used (based on a maximum plant capacity of 100 yd^3/hr concrete - includes rock, sand, and gravel)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
010-144b	Wind Erosion of the Aggregate Stockpiles	1.00	acres	Acreage of the Aggregate Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
010-144c	Loading Aggregate to the Feed Hopper	95,444.54	tons/year	Annual amount of aggregate used (based on a reasonable upper bound production rate of 66,500 yd^3/year - includes rock, sand, and gravel)
		143.53	tons/hour	Hourly amount of aggregate used (based on a maximum plant capacity of 100 yd^3/hr - includes rock, sand, and gravel)
010-145	Feed Hopper to Aggregate Conveyor Belt	95,444.54	tons/year	Annual amount of aggregate used (based on a reasonable upper bound production rate of 66,500 yd^3/year - includes rock, sand, and gravel)
		143.53	tons/hour	Hourly amount of aggregate used (based on a maximum plant capacity of 100 yd^3/hr - includes rock, sand, and gravel)
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	3,516.39	tons/year	Annual amount of fly ash used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete)
		5.29	tons/hour	Hourly amount of fly ash used (based on a maximum plant capacity of 100 yd^3/hr concrete)
010-147	Pneumatic Transfer of Cement to the Cement Silo	17,612.51	tons/year	Annual amount of cement used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete)
		26.48	tons/hour	Hourly amount of cement used (based on a maximum plant capacity of 100 yd^3/hr concrete)
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	3,516.39	tons/year	Annual amount of fly ash used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete)
		5.29	tons/hour	Hourly amount of fly ash used (based on a maximum plant capacity of 100 yd^3/hr concrete)
010-148b	Cement Screw Conveyor to Weigh Hopper	17,612.51	tons/year	Annual amount of cement used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete)
		26.48	tons/hour	Hourly amount of cement used (based on a maximum plant capacity of 100 yd^3/hr concrete)
010-148c	Aggregate Conveyor Belt to Weigh Hopper	95,444.54	tons/year	Annual amount of aggregate used (based on a reasonable upper bound production rate of 66,500 yd^3/year - includes rock, sand, and gravel)
		143.53	tons/hour	Hourly amount of aggregate used (based on a maximum plant capacity of 100 yd^3/hr - includes rock, sand, and gravel)
010-148d	Weigh Hopper to Concrete Mixing Truck	21,128.90	tons/year	Annual amount of fly ash and cement used (based on a reasonable upper bound production rate of 66,500 yd^3/year concrete)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
010-148d (cont'd)	Weigh Hopper to Concrete Mixing Truck (cont'd)	31.77	tons/hour	Hourly amount of fly ash and cement used (based on a maximum plant capacity of 100 yd^3/hr concrete)
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	8,848	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		1.01	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	8,848	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		1.01	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	8,848	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		1.01	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
Operation 011: Storage Tanks				
011-150	Diesel Tank D1 (177,850 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,570,000	gallons/yr	Maximum annual throughput
		31.25'D x 31'H	--	Dimensions
		177,850	gallons	Tank Capacity
		20.07	turnovers/yr	Maximum annual turnovers (calculated)
		174.07	lb/year	EPA TANKS Program output for VOC
		0.34	lb/year	EPA TANKS Program output for benzene
		0.56	lb/year	EPA TANKS Program output for ethylbenzene
		0.07	lb/year	EPA TANKS Program output for n-hexane

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
011-150 (cont'd)	Diesel Tank D1 (177,850 gallons) (cont'd)	3.98	lb/year	EPA TANKS Program output for toluene
		10.39	lb/year	EPA TANKS Program output for m-xylene
011-151	Diesel Tank D2 (200,434 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,570,000	gallons/yr	Maximum annual throughput
		42.4'D x 31'H	--	Dimensions
		200,434	gallons	Tank Capacity
		17.81	turnovers/yr	Maximum annual turnovers (calculated)
		228.76	lb/year	EPA TANKS Program output for VOC
		0.44	lb/year	EPA TANKS Program output for benzene
		0.73	lb/year	EPA TANKS Program output for ethylbenzene
		0.09	lb/year	EPA TANKS Program output for n-hexane
		5.23	lb/year	EPA TANKS Program output for toluene
		13.65	lb/year	EPA TANKS Program output for m-xylene
011-154	Diesel Tank D5 (47,255 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		1,550,000	gallons/yr	Maximum annual throughput
		20'D x 32'H	--	Dimensions

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
011-154 (cont'd)	Diesel Tank D5 (47,255 gallons) (cont'd)	47,255	gallons	Tank Capacity
		32.80	turnovers/yr	Maximum annual turnovers (calculated)
		74.63	lb/year	EPA TANKS Program output for VOC
		0.14	lb/year	EPA TANKS Program output for benzene
		0.24	lb/year	EPA TANKS Program output for ethylbenzene
		0.03	lb/year	EPA TANKS Program output for n-hexane
		1.71	lb/year	EPA TANKS Program output for toluene
		4.45	lb/year	EPA TANKS Program output for m-xylene
011-161	Diesel Tank Pit 95 (101,690 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		36,270,000	gallons/yr	Maximum annual throughput
		27'D x 30'H	--	Dimensions
		101,690	gallons	Tank Capacity
		356.67	turnovers/yr	Maximum annual turnovers (calculated)
		326.58	lb/year	EPA TANKS Program output for VOC
		0.63	lb/year	EPA TANKS Program output for benzene
		1.04	lb/year	EPA TANKS Program output for ethylbenzene
		0.13	lb/year	EPA TANKS Program output for n-hexane

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
011-161 (cont'd)	Diesel Tank Pit 95 (101,690 gallons) (cont'd)	7.46	lb/year	EPA TANKS Program output for toluene
		19.49	lb/year	EPA TANKS Program output for m-xylene
011-155	Gasoline Tank G1 (12,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		940,000	gallons/yr	Maximum annual throughput
		9.00'D x 25'L	--	Dimensions
		12,000	gallons	Tank Capacity
		78.33	turnovers/yr	Maximum annual turnovers (calculated)
		8,557.10	lb/year	EPA TANKS Program output for VOC
		83.14	lb/year	EPA TANKS Program output for benzene
		4.26	lb/year	EPA TANKS Program output for ethylbenzene
		122.37	lb/year	EPA TANKS Program output for n-hexane
		0.03	lb/year	EPA TANKS Program output for naphthalene
		3.14	lb/year	EPA TANKS Program output for cumene
		103.53	lb/year	EPA TANKS Program output for toluene
		17.13	lb/year	EPA TANKS Program output for m-xylene
011-156	Gasoline Tank G2 (12,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
011-156 (cont'd)	Gasoline Tank G2 (12,000 gallons) (cont'd)	940,000	gallons/yr	Maximum annual throughput
		9.00'D x 25'L	--	Dimensions
		12,000	gallons	Tank Capacity
		78.33	turnovers/yr	Maximum annual turnovers (calculated)
		8,557.10	lb/year	EPA TANKS Program output for VOC
		83.14	lb/year	EPA TANKS Program output for benzene
		4.26	lb/year	EPA TANKS Program output for ethylbenzene
		122.37	lb/year	EPA TANKS Program output for n-hexane
		0.03	lb/year	EPA TANKS Program output for naphthalene
		3.14	lb/year	EPA TANKS Program output for cumene
		103.53	lb/year	EPA TANKS Program output for toluene
		17.13	lb/year	EPA TANKS Program output for m-xylene
011-157	Gasoline Tank G3 (12,000 gallons)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		160,000	gallons/yr	Maximum annual throughput
		9.00'D x 25'L	--	Dimensions
		12,000	gallons	Tank Capacity
		13.33	turnovers/yr	Maximum annual turnovers (calculated)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
011-157 (cont'd)	Gasoline Tank G3 (12,000 gallons) (cont'd)	5,095.32	lb/year	EPA TANKS Program output for VOC
		49.51	lb/year	EPA TANKS Program output for benzene
		2.54	lb/year	EPA TANKS Program output for ethylbenzene
		72.86	lb/year	EPA TANKS Program output for n-hexane
		0.02	lb/year	EPA TANKS Program output for naphthalene
		1.87	lb/year	EPA TANKS Program output for cumene
		61.64	lb/year	EPA TANKS Program output for toluene
		10.20	lb/year	EPA TANKS Program output for m-xylene
Operation 013: Grizzly Operations				
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	525,600	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		60	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	525,600	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		60	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
013-339c (cont'd)	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (cont'd)	24	hours/day	Daily hours of operation (assume continuous operation)
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	4,380,000	tons/year	Annual amount of material processed (assume equal to the maximum hourly capacity at continuous operation)
		500	tons/hour	Hourly amount of material processed (assume equal to the maximum hourly capacity)
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	0.50	acres	Acreage of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Operation 014: Concentrate Leach Plant				
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	61,320	MMBtu/year	Annual natural gas usage (voluntary limitation of 61,320 MMBtu/yr)
		17.64	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		0.75	lb/hr	PM emission limit
		0.75	lb/hr	PM_{10} emission limit
		100	%	Fraction of Filterable Emissions (Method 5 - front-half catch)
		0	%	Fraction of Condensable Emissions (Method 202 - back-half catch)
		5.82	lb/hr	VOC emission limit
014-240	PLV Cooling Tower	5,256,000	1,000 gallons/year	Annual quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation at continuous operation)
		600	1,000 gallons/hour	Hourly quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation)
		1,500	ppm	Maximum total dissolved solids (TDS)
		0.004	%	Maximum liquid drift rate
014-241	Oxygen Plant Cooling Tower 1	2,706,840	1,000 gallons/year	Annual quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation at continuous operation)
		309	1,000 gallons/hour	Hourly quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation)
		1,500	ppm	Maximum total dissolved solids (TDS)
		0.002	%	Maximum liquid drift rate
014-348	Transfer of Flocculant to the Flocculant Bin	4,380	tons/year	Annual quantity of flocculant transferred (assume equal to the maximum expected flocculant usage rate)
		25	tons/hour	Hourly quantity of flocculant transferred (assume equal to the maximum flocculant delivery rate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
014-254	Transfer of Lime to the Lime Silo	1,752	tons/year	Annual quantity of lime transferred (assume equal to the maximum expected lime usage rate)
		25	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum lime delivery rate)
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	350	tons/year	Annual quantity of diatomaceous earth transferred (assume equal to the maximum expected diatomaceous earth usage rate)
		25	tons/hour	Hourly quantity of diatomaceous earth transferred (assume equal to the maximum diatomaceous earth delivery rate)
Operation 015: Diesel Emergency Engines				
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	300	hours/year	Annual hours of operation (voluntary limitation of 300 hr/yr)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		809.00	hp	Rated horsepower of the engine
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		810	hp	Rated horsepower of the engine
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		324	hp	Rated horsepower of the engine
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		220	hp	Rated horsepower of the engine

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		66	hp	Rated horsepower of the engine
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		225	hp	Rated horsepower of the engine
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		350	hp	Rated horsepower of the engine
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		1,141	hp	Rated horsepower of the engine
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		69	hp	Rated horsepower of the engine
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		539	hp	Rated horsepower of the engine

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
Operation 017: Metcalf Concentrator				
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		6,800	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-280	Processes Controlled by Secondary Screening FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		26,200	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-281	Processes Controlled by Secondary Screening FFDC 2	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		25,900	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
017-319 (cont'd)	Processes Controlled by Secondary Crusher Feed Bin FFDC (cont'd)	3,700	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-283	Processes Controlled by Secondary Crushing FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		8,800	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-284	Processes Controlled by Secondary Crushing FFDC 2	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		11,200	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		4,100	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20,400	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		22,900	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20,000	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
017-289 (cont'd)	Processes Controlled by Crushed Ore Bin FFDC 3 (cont'd)	0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-291	Processes Controlled by Crushed Ore Transfers FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		10,200	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		10,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
017-294	Processes Controlled by Wet Screen Feed FFDC	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,500	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
017-327	Metcalf Concentrator Bulk Flotation	542.14	tons/year	Annual quantity of organic reagent (frother and moly collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Metcalf Concentrator Bulk Flotation)
		0.062	tons/hour	Hourly quantity of organic reagent (frother and moly collector) used in the Flotation Operations (maximum usage rate from 2018-2022 multiplied by the maximum ore processing rate, assume 50% is used in the Metcalf Concentrator Bulk Flotation)
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations				
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	60,707	tons/year	Annual quantity of molybdenum concentrate produced (assume equal to the maximum hourly capacity of the filtering process at continuous operation)
		6.93	tons/hour	Hourly quantity of molybdenum concentrate produced (assume equal to the maximum hourly capacity of the filtering processes)
		1.37	%	Percent of all concentrate that is molybdenum concentrate (annual basis)
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	60,707	tons/year	Annual quantity of molybdenum concentrate produced (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		6.93	tons/hour	Hourly quantity of molybdenum concentrate produced (assume equal to the maximum hourly capacity of the transfer)
018-336	Processes Controlled by H2S Scrubber System	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		18,000	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
Operation 021: Propane and Natural Gas Emergency Engines				
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12.65	hp	Rated horsepower of the engine
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		97.70	hp	Rated horsepower of the engine
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		97.70	hp	Rated horsepower of the engine
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		97.70	hp	Rated horsepower of the engine
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		97.70	hp	Rated horsepower of the engine
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
021-373 (cont'd)	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine) (cont'd)	36.14	hp	Rated horsepower of the engine
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12.65	hp	Rated horsepower of the engine
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12.65	hp	Rated horsepower of the engine
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		12.65	hp	Rated horsepower of the engine
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		37	hp	Rated horsepower of the engine
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		37	hp	Rated horsepower of the engine
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
021-447 (cont'd)	Sunridge Propane Emergency Generator GNO85A (147 hp engine) (cont'd)	147	hp	Rated horsepower of the engine
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		460	hp	Rated horsepower of the engine
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		147	hp	Rated horsepower of the engine
Operation 022: Prill Bins				
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	81,264	tons/year	Annual quantity of prills delivered (equal to the annual ammonium nitrate prill usage rate, assume contractor usage is 100% prill)
		128.75	tons/hour	Hourly quantity of prills delivered (based on 5 filling ports each at 25.75 tons/hour)
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	81,264	tons/year	Annual quantity of prills transferred (equal to the annual ammonium nitrate prill usage rate, assume contractor usage is 100% prill)
		175	tons/hour	Hourly quantity of prills delivered (based on 7 trucks loaded/hour each at 25 tons)
Operation 023: Tailings Operations				
023-418	Wind Erosion of Tailings	2,645	acres	Acreage of the active tailings susceptible to wind erosion (i.e., drying area)
		1	disturbances/year	Annual disturbances of the material in the tailings storage area (the tailings storage areas are only disturbed when the tailings are placed in their drying area)
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
Operation 024: Miscellaneous Fuel Burning Equipment				
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	2,785.68	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		0.318	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	4,415.04	MMBtu/year	Annual natural gas usage (assume equal to the maximum hourly capacity at continuous operation)
		0.504	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	177,354.96	MMBtu/year	Annual natural gas usage (assume equal to the maximum hourly capacity at continuous operation)
		20.25	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	52,091.16	MMBtu/year	Annual natural gas usage (assume equal to the maximum hourly capacity at continuous operation)
		5.95	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum hourly capacity)
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	36,897.12	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		4.21	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	4,108.44	MMBtu/year	Annual propane usage (assume equal to the maximum hourly capacity at continuous operation)
		0.469	MMBtu/hour	Hourly propane usage (assume equal to the maximum hourly capacity)
Operation 025: Diesel Non-Emergency Engines				
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		173.80	hp	Rated horsepower of the engine
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
025-448 (cont'd)	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		74	hp	Rated horsepower of the engine
AOS1: Morenci Concentrator Quaternary Crushing Operations				
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		13,900	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,500	dscfm	Exhaust flow rate
		0.002	gr/dscf	PM emission limit
		0.001	gr/dscf	PM_{10} emission limit
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,900	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		9,300	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,900	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		3,000	dscfm	Exhaust flow rate

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
002-315 (AOS1) (cont'd)	Processes Controlled by East Surge Bin FFDC (AOS1) (cont'd)	0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		9,300	dscfm	Exhaust flow rate
		0.004	gr/dscf	PM emission limit
		0.004	gr/dscf	PM_{10} emission limit
AOS2: Concentrate Leach Plant Upgrades				
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		0.525	lb/hr	PM emission limit
		0.525	lb/hr	PM_{10} emission limit
		100	%	Fraction of Filterable Emissions (Method 5 - front-half catch)
		0	%	Fraction of Condensable Emissions (Method 202 - back-half catch)
		4.074	lb/hr	VOC emission limit
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		0.525	lb/hr	PM emission limit

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
014-459 (AOS2) (cont'd)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2) (cont'd)	0.525	lb/hr	PM_{10} emission limit
		100	%	Fraction of Filterable Emissions (Method 5 - front-half catch)
		0	%	Fraction of Condensable Emissions (Method 202 - back-half catch)
		4.074	lb/hr	VOC emission limit
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	1,892,160	1,000 gallons/year	Annual quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation at continuous operation)
		216	1,000 gallons/hour	Hourly quantity of water circulated (assume equal to the maximum hourly capacity of the water circulation)
		1,500	ppm	Maximum total dissolved solids (TDS)
		0.01	%	Maximum liquid drift rate
AOS3: Primary Crushing and Overland Conveying Operations				
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		NA	dscfm	Exhaust flow rate
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		NA	dscfm	Exhaust flow rate

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
Processes Controlled by Pollution Control Devices																					
FFDC006	Processes Controlled by In-Pit Crusher 2 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Manufacturer Information, Assume PM=PM10=PM2.5
FFDC251	Processes Controlled by P11/P5 and P11/P12 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC015	Processes Controlled by P5/P6 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC225	Processes Controlled by DC2/P9 and P9/P10 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC325	Processes Controlled by DC2/P5 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC299	Processes Controlled by Mill IOS/R1A FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC300	Processes Controlled by Mill IOS/R1B FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC272	Processes Controlled by R1A and R1B/R7 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
BC277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC278	Processes Controlled by R2/R11 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC228	Processes Controlled by MFL IOS/R8 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC229	Processes Controlled by R8/R9 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC030	Processes Controlled by Fine Crushing Line B FFDC 1	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC031	Processes Controlled by Fine Crushing Line C FFDC 1	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC032	Processes Controlled by Fine Crushing Line D FFDC 1	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC273	Processes Controlled by R9/R10 FFDC	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC330	Processes Controlled by R10/R3 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
BC079	Processes Controlled by R3/R4 Bag Collector 3	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
BC080	Processes Controlled by R4/R5/R6 Bag Collector 4	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
SC082	Processes Controlled by Scrubber 3C	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC317	Processes Controlled by FFDC 3A	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC301	Processes Controlled by FFDC 6A	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC302	Processes Controlled by FFDC 6B	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC304	Processes Controlled by FFDC 1	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
SC089	Processes Controlled by Scrubber 5	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC303	Processes Controlled by FFDC 8	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
SC088	Processes Controlled by Scrubber 4	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC320	Processes Controlled by 14/15 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC331	Processes Controlled by 15/16 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC309	Processes Controlled by 16/S11 FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
BC201	Processes Controlled by FOIS/A1A Bag Collector 7	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
BC202	Processes Controlled by A1A/A2A Bag Collector 8	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
BC203	Processes Controlled by A1A/A2C Bag Collector 9	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC318	Processes Controlled by Secondary Screen Feed Bin FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC280	Processes Controlled by Secondary Screening FFDC 1	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC281	Processes Controlled by Secondary Screening FFDC 2	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC319	Processes Controlled by Secondary Crusher Feed Bin FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC283	Processes Controlled by Secondary Crushing FFDC 1	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC284	Processes Controlled by Secondary Crushing FFDC 2	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
FFDC285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC287	Processes Controlled by Crushed Ore Bin FFDC 1	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC288	Processes Controlled by Crushed Ore Bin FFDC 2	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC289	Processes Controlled by Crushed Ore Bin FFDC 3	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC290	Processes Controlled by Crushed Ore Bin FFDC 4	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC291	Processes Controlled by Crushed Ore Transfers FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC292	Processes Controlled by HRC/HPGR Crusher FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC294	Processes Controlled by Wet Screen Feed FFDC	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
PLV2S	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	0.75	0	0.75	0.75	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
H2S	Processes Controlled by H2S Scrubber System	0.43	0	0.43	0.43	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Engineering Estimate and Mass Balance
FFDC035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
FFDC316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
PLVS1 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	0.525	0	0.525	0.525	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
PLVS2 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	0.525	0	0.525	0.525	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
Drilling and Blasting Operations																					
Drilling	Drilling	1.30	0	0.78	0.14	lb/hole	holes	1	0.60	0.111	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.9-4 (10/98), Drilling Overburden and particle size fractions from AP 42 Table 11.9.2-2 and Figure 11.19-4 (08/04), Tertiary Crushing (controlled)
ABlasting	Blasting (annual basis)	170.86	0	88.85	5.13	lb/blast	blasts	1	0.52	0.030	--	--	--	--	--	--	53,008	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
HBlasting	Blasting (hourly basis)	1,444.65	0	751.22	43.34	lb/blast	blasts	1	0.52	0.030	--	--	--	--	--	--	220,000	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
Vehicle Operations																					
ATravel	Vehicle Travel on Unpaved Roads (annual basis)	15.05	0	3.87	0.39	lb/VMT	VMT	4.90	1.50	0.15	--	--	5.00	--	--	52.80	--	200.61	--	--	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
HTravel	Vehicle Travel on Unpaved Roads (hourly basis)	17.19	0	4.42	0.44	lb/VMT	VMT	4.90	1.50	0.15	--	--	5.00	--	--	--	--	190.43	--	--	AP-42 Section 13.2.2, Expression 1a (11/06)
Dozer	Dozer Operation	6.63	0	1.18	0.70	lb/hr	hours	5.70	0.75	0.5985	--	3.20	4.00	--	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
Grader	Road Grader Operation	1.28	0	0.49	0.040	lb/VMT	VMT	1	0.60	0.031	--	--	--	4.00	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Grading
Material Transfer Operations																					
Ore1TrUnprt	Material Transfer of the Combination of All Mined Material (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore2TrUnprt	Material Transfer of Morenci Concentrator Ore (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore3TrPrt	Material Transfer of MFL Fine Crushing Plant Ore (Protected)	0.00021	0	0.00010	0.00002	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore3TrUnprt	Material Transfer of MFL Fine Crushing Plant Ore (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore4TrUnprt	Material Transfer of the Combination of Morenci Concentrator and Metcalf Concentrator Ore (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore5TrUnprt	Material Transfer of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore6TrUnprt	Material Transfer of the Combination of ROM Leach and Waste Material (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
MCTrPrt	Material Transfer of Molybdenum Concentrate (Protected)	0.000054	0	0.000026	0.0000039	lb/ton	tons	0.74	0.35	0.053	1.30	8.50	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
CCTrPrt	Material Transfer of Copper Concentrate (Protected)	0.000046	0	0.000022	0.0000033	lb/ton	tons	0.74	0.35	0.053	1.30	9.50	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
CCTrUnprt	Material Transfer of Copper Concentrate (Unprotected)	0.00041	0	0.00019	0.000029	lb/ton	tons	0.74	0.35	0.053	6.88	9.50	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
ConGTrUnprt	Material Transfer of Metallic Minerals Processed by the Concentrate Grizzly (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
CGTrUnprt	Material Transfer of Nonmetallic Minerals Processed by the Construction Grizzlies (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
SGTrUnprt	Material Transfer of Metallic Minerals Processed by the Stockpile Grizzlies (Unprotected)	0.0019	0	0.00088	0.00013	lb/ton	tons	0.74	0.35	0.053	6.88	3.20	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
AggTrUnprt	Material Transfer of Aggregate (Unprotected)	0.0043	0	0.0020	0.00031	lb/ton	tons	0.74	0.35	0.053	6.88	1.77	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
FlocLd	Flocculant Loading	0.61	0	0.21	0.032	lb/ton	tons	1	0.35	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.17-4 (02/98) for product loading enclosed truck (assume similar to lime), particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
LimeLd	Lime Loading	0.61	0	0.21	0.032	lb/ton	tons	1	0.35	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.17-4 (02/98) for product loading enclosed truck, particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
DELd	Diatomaceous Earth Loading	0.61	0	0.21	0.032	lb/ton	tons	1	0.35	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.17-4 (02/98) for product loading enclosed truck (assume similar to lime), particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
PBL	Material Transfer of Prill	0.020	0	0.0070	0.0011	lb/ton	tons	1	0.35	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 8.3-2 (07/93), Bulk Loading Operations, particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
CemTr	Material Transfer of Cement	0.73	0	0.47	0.039	lb/ton	tons	--	--	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.12-2 (06/06), Cement Unloading to Elevated Storage Silo (pneumatic), particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
FATr	Material Transfer of Fly Ash	3.14	0	1.10	0.17	lb/ton	tons	--	--	0.053	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.12-2 (06/06), Cement Supplement Unloading to Elevated Storage Silo (pneumatic), particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
LoadCMT	Loading to Concrete Mixing Truck	1.118	0	0.31	0.050	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.12-2 (06/06), Truck Loading (truck mix), particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
Slaking Operations																					
LimeSlk	Lime Slaking Associated with the Morenci Concentrator	0.068	0.011	0.068	0.068	lb/ton	tons	1	1	1	--	--	--	--	--	--	--	--	--	--	Stack Test of a Lime Slaker at the Western Sugar Company, Condensables based on AP-42 Table 11.17-2 (02/98) for Atmospheric Hydrator with Wet Scrubber, Assume $PM=PM_{10}=PM_{2.5}$
MLS	Lime Slaking Associated with the Metcalf Concentrator	0.0012	0.00020	0.0012	0.0012	lb/ton	tons	1	1	1	--	--	--	--	--	--	--	--	--	--	Manufacturer's Information with a 20% Safety Factor, Condensables based on AP-42 Table 11.17-2 (02/98) for Atmospheric Hydrator with Wet Scrubber, Assume $PM=PM_{10}=PM_{2.5}$
Wind Erosion																					
AWindIOS1	Wind Erosion of Mill IOS (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindIOS1	Wind Erosion of Mill IOS (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindIOS2	Wind Erosion of MFL IOS (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindIOS2	Wind Erosion of MFL IOS (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindCC	Wind Erosion of the Copper Concentrate Storage Piles (annual basis)	41,525.03	0	20,762.51	3,114.38	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	96	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindCC	Wind Erosion of the Copper Concentrate Storage Piles (hourly basis)	4.74	0	2.37	0.36	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	96	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindT	Wind Erosion of Tailings (annual basis)	344.42	0	172.21	25.83	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	1.06	0.43	AP-42 Section 13.2.5 (11/06)
HWindT	Wind Erosion of Tailings (hourly basis)	0.039	0	0.020	0.0029	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	1.06	0.43	AP-42 Section 13.2.5 (11/06)
AWindFO	Wind Erosion of the FOIS (annual basis)	6,488.29	0	3,244.14	486.62	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	15	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
HWindFO	Wind Erosion of the FOIS (hourly basis)	0.74	0	0.37	0.056	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	15	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindConG	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindConG	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindCG1	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindCG1	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindCG2	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindCG2	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindCG3	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindCG3	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindSG1	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindSG1	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindSG2	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (annual basis)	3,200.89	0	1,600.44	240.07	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindSG2	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (hourly basis)	0.37	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	7.40	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindAgg	Wind Erosion of the Aggregate Stockpiles (annual basis)	1,124.64	0	562.32	84.35	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	2.60	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindAgg	Wind Erosion of the Aggregate Stockpiles (hourly basis)	0.13	0	0.064	0.0096	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	2.60	--	11.81	52.80	--	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
Screening Operations																					
G1ScreenC	Concentrate Grizzly Screening (moisture content of material processed >1.3%)	0.0022	0	0.00074	0.000050	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled)
G2ScreenC	Construction Grizzly Screening (moisture content of material processed >1.3%)	0.0022	0	0.00074	0.000050	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled)
G3ScreenC	Stockpile Grizzly Screening (moisture content of material processed >1.3%)	0.0022	0	0.00074	0.000050	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled)
Solution Extraction/Electrowinning Operations																					
EWC	Central EW (548 cells)	4.75	0	4.75	4.75	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook
EWSS	Southside EW (220 cells)	1.67	0	1.67	1.67	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
EWSt	Stargo EW (324 cells)	2.96	0	2.96	2.96	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook
EW-MTF	Modoc Test Facility EW (771.2 ft2)	0.12	0	0.12	0.12	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	*Measurement of Sulfuric Acid Mist Emissions from the Cyprus Twin Buttes Copper Company Electrowinning Tankhouse* (12/92), Applied Environmental Consultants
Cooling Towers and the Dust Suppression Fan																					
PCT	PLV Cooling Tower	0.00050	0	0.00036	0.0000011	lb/1000 gal	1000 gal	1	0.73	0.0022	--	--	--	--	--	--	--	--	--	--	AP-42 Section 13.4 (01/95), maximum TDS value and liquid drift, and particle size fractions from the Reisman/Frisbie methodology
OCT1	Oxygen Plant Cooling Tower 1	0.00025	0	0.00018	0.0000006	lb/1000 gal	1000 gal	1	0.73	0.0022	--	--	--	--	--	--	--	--	--	--	AP-42 Section 13.4 (01/95), maximum TDS value and liquid drift, and particle size fractions from the Reisman/Frisbie methodology
OCT2 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	0.0013	0	0.00091	0.0000028	lb/1000 gal	1000 gal	1	0.73	0.0022	--	--	--	--	--	--	--	--	--	--	AP-42 Section 13.4 (01/95), maximum TDS value and liquid drift, and particle size fractions from the Reisman/Frisbie methodology
DSF	Dust Suppression Fan	0.0018	0	0.0018	0.0018	lb/1000 gal	1000 gal	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Section 13.4 (01/95), maximum TDS value, liquid drift for induced draft cooling towers, Assume $PM=PM_{10}=PM_{2.5}$
External Combustion																					
NGC	General Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 1.4-2 for Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100 (07/98) and 1,020 Btu/scf
DCI	General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr	0.024	0.0095	0.017	0.011	lb/MMBtu	MMBtu	1	0.50	0.12	--	--	--	--	--	--	--	--	--	--	AP-42 Tables 1.3-1, 1.3-2 and 1.3-6 (05/10) for Distillate Fuel Oil < 100 MMBtu/hr and 137,000 Btu/gallon
PCI	General Uncontrolled Propane Combustion in Industrial Boilers	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 1.5-1 (07/08) for LPG Combustion and 91.5 MMBtu/10^3 gallon
SGB	Natural Gas Startup Boiler (17.64 MMBtu/hr)	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 1.4-2 for Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100 (07/98) and 1,020 Btu/scf
Turbines																					
MGT1	Natural Gas Turbine 1 (204.89 MMBtu/hr)	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.1-2a (04/00) for Stationary Natural Gas-Fired Turbines
MGT2	Natural Gas Turbine 2 (204.89 MMBtu/hr)	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.1-2a (04/00) for Stationary Natural Gas-Fired Turbines
Stationary Engines																					
Diesel Emergency and Black Start Engines																					
DES	Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.3-1 (10/96), Diesel Fuel Industrial Engine, Assume $PM=PM_{10}=PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
Tier3-130/225	Tier 3 Diesel Engines (130 ≤ kW < 225)	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 130 ≤ kW < 225, Assume $PM=PM_{10}=PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
Tier3-225/450	Tier 3 Diesel Engines (225 ≤ kW < 450)	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 225 ≤ kW < 450, Assume $PM=PM_{10}=PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
Tier4-19/37	Tier 4 Diesel Engines (19 ≤ kW < 37)	0.000049	0.0000054	0.000049	0.000049	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Tier 4 Final Emission Standards from 40 CFR 1039.101 for Engines Rated 19 ≤ kW < 37, Assume $PM=PM_{10}=PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
GNO37A	GO Diesel Emergency Generator GNO37A (809 hp engine)	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family 8VPXL16.1ACB, Assume $PM = PM_{10} = PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
GNO38A	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family AVPXL16.1ACB, Assume $PM = PM_{10} = PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs [a]													Reference
		PM	CPM	PM_{10}	$PM_{2.5}$	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	s (%)	S (mph)	f (%)	p (days)	A (ft^2)	W (tons)	u* (m/s)	u_t* (m/s)	
GNO36A	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family FCEXL0409AAD, Assume PM = PM_{10} = $PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
GNO46A	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	0.00031	0.000034	0.00031	0.00031	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family 5JDXL06.8038, Assume PM = PM_{10} = $PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
GNO95A	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	0.000033	0.0000036	0.000033	0.000033	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family KSZXL02.2PXB, Assume PM = PM_{10} = $PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
MFPE	Metcalf Diesel Fire Pump Engine (350 hp engine)	0.00023	0.000025	0.00023	0.00023	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family EJDXL09.0114, Assume PM=PM_{10}=$PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
GNO61A	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	0.00021	0.000024	0.00021	0.00021	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family HCPXL27.0NZS, Assume PM=PM_{10}=$PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
MCR	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	0.00048	0.000053	0.00048	0.00048	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family HCEXL03.3BAA, Assume PM = PM_{10} = $PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
Propane Emergency Engines																					
P1CII	Propane 4-Stroke Rich Burn Phase 1 Class II Engines	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Generac1	Generac Propane Emergency Generators with Engine Family Number 7GNXS.4072DA	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Generac2	Generac Propane Emergency Generators with Engine Family Number 8GNXS.4072DA	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Generac3	Generac Propane Emergency Generators with Engine Family Number CGNXS.4072DC	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Cummins1	Cummins Propane Emergency Generators with Manufacturer's Information	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Cummins2	Cummins Propane Emergency Generators with Engine Family Number CCEXB06.8GDC	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
GNO85A	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
GNO24B	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Natural Gas Emergency Engines																					
GSC-NG	GSC Natural Gas Emergency Generator (460 hp engine)	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, Assume PM=PM_{10}=$PM_{2.5}$, and 10,500 Btu/hp-hr
Diesel Non-Emergency Engines																					
Tier3-75/130-DN	Tier 3 Diesel Engines (75 ≤ kW < 130)	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 75 ≤ kW < 130, Assume PM=PM_{10}=$PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)
S12-DN	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	0.000016	0.0000018	0.000016	0.000016	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family NDZXL02.9020, Assume PM = PM_{10} = $PM_{2.5}$, CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)

[a] k = particle size multipliers, U = mean wind speed, M = material moisture content, s = surface material silt content, S = mean vehicle speed, f = percentage of time with mean wind speed greater than 12 mph at the mean pile height, p = number of days/year with precipitation ≥ 0.01 inches, A = horizontal area of blasting surface, W = mean vehicle weight, u* = friction velocity, u_t* = threshold friction velocity

Table F.3 Particulate Matter Control Efficiencies - Potential Emission Inventory

Control Code	Control Description	Control Efficiency (%)	Reference
UnpvdRd	Unpaved Road Watering and/or Chemical Dust Suppression Use	90%	*Control of Open Fugitive Dust Sources* (09/88), pages 3-6 through 3-16
DFMac	Mac Dust Filter	90%	Manufacturer's Information
BVFARR	FARR Bin Vent	99.9%	Manufacturer's Information
LSWS	Metcalf Lime Slaker Wet Scrubber	0%	Control Efficiency Incorporated into Emission Factor
BVMod	Modu-Kleen Bin Vent	99.9%	Manufacturer's Information
BVUS	Unspecified Bin Vent	90%	Estimated Minimum Control Efficiency
InBVUS	Combination of an Unspecified Bin Vent and Emissions Exhaust Inside a Building Under Positive Pressure	95%	Estimated Minimum Control Efficiency for the Bin Vent and ADEQ Recommendation for Exhausting Inside a Building
LTDC	Lime Transloading Dust Collector	99%	Minimum value from AP-42 Table B.2-3 (09/90)
WSpry	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, Page 11.19.1-5 (11/95)
3Sided	3-Sided Enclosure	75%	South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures for 3-Sided Enclosure
InsideP	Emissions are Exhaust Inside a Building Under Positive Pressure	50%	ADEQ Recommendation
IncorpIWS	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
IncorpMC	High Moisture Content of the Process Material	0%	Control Efficiency Incorporated into the Emission Factor
IncorpWS	Water Spray/Wet Suppression	0%	Control Efficiency Incorporated into the Emission Factor
IncorpMist	Water Spray Mist System	0%	Control Efficiency Incorporated into the Emission Factor
IncorpEW	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor
IncorpME	Mist Eliminators	0%	Control Efficiency Incorporated into the Emission Factor
IncorpT	Use of a Wet Dam Construction Technique, Applying Water, Treating the Active Areas with Polymer and/or Magnesium Chloride, Hydro-seeding or Hydro-mulching, Limiting Vehicle Access and Speed, Covering, Utilizing Wind Breaks, Facilitating Encrustation, Maintaining the Inherent Moisture Content, and Wetting the Active Areas with Slurry	0%	Control Efficiency Incorporated into the Process Rate and Emission Factor
DC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
BC	Bag Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
SC	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
BOP	Best Operating Practices	0%	--

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Operation 001: Mining Operations																				
001-004	Drilling	Drilling	F	211,174	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	137.26	137.26	0	0	82.36	82.36	15.25	15.25
001-003	Blasting	ABlasting	F	2,136	blasts	170.86	0	88.85	5.13	lb/blast	BOP	0%	182.48	182.48	0	0	94.89	94.89	5.47	5.47
001-001a	Vehicle Travel on Unpaved Roads	ATravel	F	21,707,209	VMT	15.05	0	3.87	0.39	lb/VMT	UnpvdRd	90%	163,349.68	16,334.97	0	0	41,973.12	4,197.31	4,197.31	419.73
001-001b	Dozer Operation	Dozer	F	446,760	hours	6.63	0	1.18	0.70	lb/hr	BOP	0%	1,481.48	1,481.48	0	0	263.02	263.02	155.56	155.56
001-001c	Road Grader Operation	Grader	F	420,480	VMT	1.28	0	0.49	0.040	lb/VMT	BOP	0%	269.11	269.11	0	0	102.93	102.93	8.34	8.34
001-002a	Loading Ore into Haul Trucks	Ore1TrUnprt	F	401,500,000	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	373.14	373.14	0	0	176.49	176.49	26.73	26.73
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Ore5TrUnprt	F	124,830,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	116.01	11.60	0	0	54.87	5.49	8.31	0.83
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Ore6TrUnprt	F	276,670,000	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	257.13	257.13	0	0	121.61	121.61	18.42	18.42
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Ore5TrUnprt	F	65,700,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	61.06	6.11	0	0	28.88	2.89	4.37	0.44
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Ore5TrUnprt	F	59,130,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	54.95	5.50	0	0	25.99	2.60	3.94	0.39
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	FFDC006	NF	9,408,240,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.34	1.34	0	0	0.67	0.67	0.67	0.67
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	FFDC250	NF	6,307,200,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	InsideP	50%	1.80	0.90	0	0	1.80	0.90	1.80	0.90
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	FFDC251	NF	8,041,680,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	2.30	2.30	0	0	2.30	2.30	2.30	2.30
001-344	Conveyor Belt P12 to Conveyor Belt P10	Ore3TrPrt	NF	61,320,000	tons	0.00021	0	0.00010	0.000015	lb/ton	WSpry	90%	6.53	0.65	0	0	3.09	0.31	0.47	0.05
001-015	Processes Controlled by P5/P6 FFDC	FFDC015	NF	6,727,680,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.92	1.92	0	0	1.92	1.92	1.92	1.92
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Ore4TrUnprt	F	79,716,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	74.09	7.41	0	0	35.04	3.50	5.31	0.53
001-017	Wind Erosion of Mill IOS	AWindIOS1	F	4.00	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	6.40	6.40	0	0	3.20	3.20	0.48	0.48
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	FFDC225	NF	9,671,040,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.38	1.38	0	0	0.69	0.69	0.69	0.69
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Ore3TrUnprt	F	61,320,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	56.99	5.70	0	0	26.95	2.70	4.08	0.41
001-227	Wind Erosion of MFL IOS	AWindIOS2	F	4.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	7.20	7.20	0	0	3.60	3.60	0.54	0.54
001-325	Processes Controlled by DC2/P5 FFDC	FFDC325	NF	3,836,880,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.55	0.55	0	0	0.27	0.27	0.27	0.27
001-299	Processes Controlled by Mill IOS/R1A FFDC	FFDC299	NF	6,570,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.88	1.88	0	0	1.88	1.88	1.88	1.88
001-300	Processes Controlled by Mill IOS/R1B FFDC	FFDC300	NF	5,256,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.50	1.50	0	0	1.50	1.50	1.50	1.50
001-272	Processes Controlled by R1A and R1B/R7 FFDC	FFDC272	NF	1,576,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	BC277	NF	1,629,360,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.81	0.81	0	0	0.81	0.81	0.81	0.81
001-278	Processes Controlled by R2/R11 FFDC	FFDC278	NF	2,417,760,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.69	0.69	0	0	0.69	0.69	0.69	0.69
001-228	Processes Controlled by MFL IOS/R8 FFDC	FFDC228	NF	6,727,680,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.96	0.96	0	0	0.48	0.48	0.48	0.48
001-229	Processes Controlled by R8/R9 FFDC	FFDC229	NF	5,571,360,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.80	0.80	0	0	0.40	0.40	0.40	0.40
001-323a	Loading to the Portable Cleanup Conveyor	Ore5TrUnprt	F	438,000	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	0.41	0.41	0	0	0.19	0.19	0.03	0.03
001-323b	Unloading from the Portable Cleanup Conveyor	Ore5TrUnprt	NF	438,000	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	0.41	0.41	0	0	0.19	0.19	0.03	0.03

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive Emissions for Operation 001:													*23.32*	*16.55*	*0*	*0*	*17.15*	*13.47*	*14.37*	*13.05*
Total of Fugitive Emissions for Operation 001:													*166,427.39*	*19,085.89*	*0*	*0*	*42,993.15*	*5,062.78*	*4,454.13*	*653.15*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:													*166,450.71*	*19,102.44*	*0*	*0*	*43,010.30*	*5,076.25*	*4,468.50*	*666.19*
Operation 002: Morenci Concentrator																				
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	FFDC030	NF	12,456,720,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.78	1.78	0	0	0.89	0.89	0.89	0.89
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	FFDC031	NF	13,192,560,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.88	1.88	0	0	0.94	0.94	0.94	0.94
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	FFDC035	NF	7,305,840,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.04	1.04	0	0	0.52	0.52	0.52	0.52
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	FFDC036	NF	8,672,400,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.24	1.24	0	0	0.62	0.62	0.62	0.62
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	FFDC032	NF	12,456,720,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.78	1.78	0	0	0.89	0.89	0.89	0.89
Total of Non-Fugitive Emissions for Operation 002:													*7.73*	*7.73*	*0*	*0*	*3.86*	*3.86*	*3.86*	*3.86*
Total of Fugitive Emissions for Operation 002:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:													*7.73*	*7.73*	*0*	*0*	*3.86*	*3.86*	*3.86*	*3.86*
Operation 003: MFL Fine Crushing Plant																				
003-273	Processes Controlled by R9/R10 FFDC	FFDC273	NF	1,576,800,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.23	0.23	0	0	0.11	0.11	0.11	0.11
003-330	Processes Controlled by R10/R3 FFDC	FFDC330	NF	1,576,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
003-079	Processes Controlled by R3/R4 Bag Collector 3	BC079	NF	1,681,920,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.84	0.84	0	0	0.84	0.84	0.84	0.84
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	BC080	NF	4,362,480,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	2.18	2.18	0	0	2.18	2.18	2.18	2.18
003-082	Processes Controlled by Scrubber 3C	SC082	NF	18,606,240,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	13.29	13.29	0	0	13.29	13.29	13.29	13.29
003-317	Processes Controlled by FFDC 3A	FFDC317	NF	19,972,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	5.71	5.71	0	0	5.71	5.71	5.71	5.71
003-301	Processes Controlled by FFDC 6A	FFDC301	NF	16,346,160,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	5.84	5.84	0	0	5.84	5.84	5.84	5.84
003-302	Processes Controlled by FFDC 6B	FFDC302	NF	14,454,000,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	5.16	5.16	0	0	5.16	5.16	5.16	5.16
003-304	Processes Controlled by FFDC 1	FFDC304	NF	14,559,120,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	5.20	5.20	0	0	5.20	5.20	5.20	5.20
003-089	Processes Controlled by Scrubber 5	SC089	NF	21,759,840,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	15.54	15.54	0	0	15.54	15.54	15.54	15.54
003-303	Processes Controlled by FFDC 8	FFDC303	NF	10,722,240,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	3.83	3.83	0	0	3.83	3.83	3.83	3.83
003-088	Processes Controlled by Scrubber 4	SC088	NF	24,125,040,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	17.23	17.23	0	0	17.23	17.23	17.23	17.23
003-320	Processes Controlled by 14/15 FFDC	FFDC320	NF	1,839,600,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
003-331	Processes Controlled by 15/16 FFDC	FFDC331	NF	1,629,360,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.47	0.47	0	0	0.47	0.47	0.47	0.47
003-309	Processes Controlled by 16/S11 FFDC	FFDC309	NF	1,576,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
003-199	Conveyor Belt S11 (transfer to FOIS)	Ore3TrUnprt	F	52,560,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	48.85	4.88	0	0	23.10	2.31	3.50	0.35
003-200	Wind Erosion of the FOIS	AWindFO	F	1.00	acre-yr	6,488.29	0	3,244.14	486.62	lb/acre-yr	BOP	0%	3.24	3.24	0	0	1.62	1.62	0.24	0.24
003-441	Dust Suppression Fan	DSF	F	210,240	1000 gal	0.0018	0	0.0018	0.0018	lb/1000 gal	BOP	0%	0.19	0.19	0	0	0.19	0.19	0.19	0.19

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	BC201	NF	5,886,720,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	2.94	2.94	0	0	2.94	2.94	2.94	2.94
003-202	Processes Controlled by A1A/A2A Bag Collector 8	BC202	NF	1,681,920,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.84	0.84	0	0	0.84	0.84	0.84	0.84
003-203	Processes Controlled by A1A/A2C Bag Collector 9	BC203	NF	1,681,920,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.84	0.84	0	0	0.84	0.84	0.84	0.84
Total of Non-Fugitive Emissions for Operation 003:													*81.57*	*81.57*	*0*	*0*	*81.45*	*81.45*	*81.45*	*81.45*
Total of Fugitive Emissions for Operation 003:													*52.28*	*8.32*	*0*	*0*	*24.92*	*4.13*	*3.93*	*0.79*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:													*133.85*	*89.89*	*0*	*0*	*106.37*	*85.58*	*85.39*	*82.24*
Operation 004: Lime Slaking Plants and Lime Transloading																				
004-231	Transfer of Quicklime to the Lime Silo 1	LimeLd	NF	54,750	tons	0.61	0	0.21	0.032	lb/ton	DFMac	90%	16.70	1.67	0	0	5.84	0.58	0.89	0.09
004-232	Transfer of Quicklime to the Lime Silo 2	LimeLd	NF	54,750	tons	0.61	0	0.21	0.032	lb/ton	DFMac	90%	16.70	1.67	0	0	5.84	0.58	0.89	0.09
004-233	Lime Slaker 1	LimeSlk	NF	54,750	tons	0.068	0.011	0.068	0.068	lb/ton	IncorpMist	0%	1.86	1.86	0.30	0.30	1.86	1.86	1.86	1.86
004-234	Lime Slaker 2	LimeSlk	NF	54,750	tons	0.068	0.011	0.068	0.068	lb/ton	IncorpMist	0%	1.86	1.86	0.30	0.30	1.86	1.86	1.86	1.86
004-275	Transfer of Quicklime to Metcalf Lime Silo	LimeLd	NF	109,500	tons	0.61	0	0.21	0.032	lb/ton	BVFARR	99.9%	33.40	0.03	0	0	11.69	0.01	1.77	0.002
004-276	Metcalf Lime Slaker	MLS	NF	109,500	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSWS	0%	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.07
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	LimeLd	NF	220,752	tons	0.61	0	0.21	0.032	lb/ton	LTDC	99%	67.33	0.67	0	0	23.57	0.24	3.57	0.04
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	LimeLd	NF	220,752	tons	0.61	0	0.21	0.032	lb/ton	LTDC	99%	67.33	0.67	0	0	23.57	0.24	3.57	0.04
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	416,976	hp-hr	0.000049	0.0000054	0.000049	0.000049	lb/hp-hr	BOP	0%	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01
Total of Non-Fugitive Emissions for Operation 004:													*205.25*	*8.52*	*0.62*	*0.62*	*74.31*	*5.45*	*14.48*	*4.05*
Total of Fugitive Emissions for Operation 004:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:													*205.25*	*8.52*	*0.62*	*0.62*	*74.31*	*5.45*	*14.48*	*4.05*
Operation 005: Metcalf Power Plant																				
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	268,570	MMBtu	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	BOP	0%	0.89	0.89	0.63	0.63	0.89	0.89	0.89	0.89
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	268,570	MMBtu	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	BOP	0%	0.89	0.89	0.63	0.63	0.89	0.89	0.89	0.89
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	150,000	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.17	0.17	0.02	0.02	0.17	0.17	0.17	0.17
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	150,000	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.17	0.17	0.02	0.02	0.17	0.17	0.17	0.17
Total of Non-Fugitive Emissions for Operation 005:													*2.10*	*2.10*	*1.30*	*1.30*	*2.10*	*2.10*	*2.10*	*2.10*
Total of Fugitive Emissions for Operation 005:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:													*2.10*	*2.10*	*1.30*	*1.30*	*2.10*	*2.10*	*2.10*	*2.10*
Operation 006: Copper Concentrate Processing Operations																				
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	CCTrPrt	F	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044d	Conveyor Belt BA to Conveyor Belt BB	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044e	Conveyor Belt BB to Conveyor Belt BC	CCTrPrt	NF	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	CCTrPrt	F	4,380,000	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	AWindCC	F	0.25	acre-yr	41,525.03	0	20,762.51	3,114.38	lb/acre-yr	3Sided	75%	5.19	1.30	0	0	2.60	0.65	0.39	0.10
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	CCTrUnprt	F	4,380,000	tons	0.00041	0	0.00019	0.000029	lb/ton	BOP	0%	0.89	0.89	0	0	0.42	0.42	0.06	0.06
Total of Non-Fugitive Emissions for Operation 006:													*0.81*	*0.81*	*0*	*0*	*0.38*	*0.38*	*0.06*	*0.06*
Total of Fugitive Emissions for Operation 006:													*6.28*	*2.39*	*0*	*0*	*3.11*	*1.16*	*0.47*	*0.18*
Total of Non-Fugitive and Fugitive Emissions for Operation 006:													*7.09*	*3.20*	*0*	*0*	*3.50*	*1.55*	*0.53*	*0.23*
Operation 009: Solution Extraction/Electrowinning Operations																				
009-121	Central EW (548 cells)	EWC	F	8,760	hours	4.75	0	4.75	4.75	lb/hr	IncorpEW	0%	20.82	20.82	0	0	20.82	20.82	20.82	20.82
009-122	Southside EW (220 cells)	EWSS	F	8,760	hours	1.67	0	1.67	1.67	lb/hr	IncorpEW	0%	7.30	7.30	0	0	7.30	7.30	7.30	7.30
009-221	Stargo EW (324 cells)	EWSt	F	8,760	hours	2.96	0	2.96	2.96	lb/hr	IncorpEW	0%	12.98	12.98	0	0	12.98	12.98	12.98	12.98
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.47	0.47	0.35	0.35	0.47	0.47	0.47	0.47
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.47	0.47	0.35	0.35	0.47	0.47	0.47	0.47
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.47	0.47	0.35	0.35	0.47	0.47	0.47	0.47
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.47	0.47	0.35	0.35	0.47	0.47	0.47	0.47
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.47	0.47	0.35	0.35	0.47	0.47	0.47	0.47
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.06	0.06	0.02	0.02	0.04	0.04	0.03	0.03
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.06	0.06	0.02	0.02	0.04	0.04	0.03	0.03
009-423	Modoc Test Facility EW (771.2 ft2)	EW-MTF	F	8,760	hours	0.12	0	0.12	0.12	lb/hr	IncorpEW	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
Total of Non-Fugitive Emissions for Operation 009:													*2.44*	*2.44*	*1.79*	*1.79*	*2.41*	*2.41*	*2.38*	*2.38*
Total of Fugitive Emissions for Operation 009:													*41.63*	*41.63*	*0*	*0*	*41.63*	*41.63*	*41.63*	*41.63*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:													*44.08*	*44.08*	*1.79*	*1.79*	*44.04*	*44.04*	*44.01*	*44.01*
Operation 010: Concrete Batch Plant																				
010-144a	Unloading Aggregate to the Aggregate Stockpiles	AggTrUnprt	F	95,444.54	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.20	0.20	0	0	0.10	0.10	0.01	0.01
010-144b	Wind Erosion of the Aggregate Stockpiles	AWindAgg	F	1.00	acre-yr	1,124.64	0	562.32	84.35	lb/acre-yr	BOP	0%	0.56	0.56	0	0	0.28	0.28	0.04	0.04
010-144c	Loading Aggregate to the Feed Hopper	AggTrUnprt	F	95,444.54	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.20	0.20	0	0	0.10	0.10	0.01	0.01

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
010-145	Feed Hopper to Aggregate Conveyor Belt	AggTrUnprt	NF	95,444.54	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.20	0.20	0	0	0.10	0.10	0.01	0.01
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	FATr	NF	3,516.39	tons	3.14	0	1.10	0.17	lb/ton	BVUS	90%	5.52	0.55	0	0	1.93	0.19	0.29	0.03
010-147	Pneumatic Transfer of Cement to the Cement Silo	CemTr	NF	17,612.51	tons	0.73	0	0.47	0.039	lb/ton	BVUS	90%	6.43	0.64	0	0	4.14	0.41	0.34	0.03
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	FATr	NF	3,516.39	tons	3.14	0	1.10	0.17	lb/ton	BOP	0%	5.52	5.52	0	0	1.93	1.93	0.29	0.29
010-148b	Cement Screw Conveyor to Weigh Hopper	CemTr	NF	17,612.51	tons	0.73	0	0.47	0.039	lb/ton	BOP	0%	6.43	6.43	0	0	4.14	4.14	0.34	0.34
010-148c	Aggregate Conveyor Belt to Weigh Hopper	AggTrUnprt	NF	95,444.54	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.20	0.20	0	0	0.10	0.10	0.01	0.01
010-148d	Weigh Hopper to Concrete Mixing Truck	LoadCMT	NF	21,128.90	tons	1.12	0	0.31	0.050	lb/ton	BOP	0%	11.81	11.81	0	0	3.27	3.27	0.53	0.53
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
Total of Non-Fugitive Emissions for Operation 010:													*36.22*	*25.46*	*0.07*	*0.07*	*15.71*	*10.25*	*1.93*	*1.36*
Total of Fugitive Emissions for Operation 010:													*0.97*	*0.97*	*0*	*0*	*0.47*	*0.47*	*0.07*	*0.07*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:													*37.19*	*26.43*	*0.07*	*0.07*	*16.19*	*10.72*	*2.00*	*1.43*
Operation 013: Grizzly Operations																				
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	G1ScreenC	F	525,600	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	0.58	0.58	0	0	0.19	0.19	0.01	0.01
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	ConGTrUnprt	F	525,600	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.49	0.49	0	0	0.23	0.23	0.03	0.03
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	AWindConG	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	G2ScreenC	F	4,380,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	4.82	4.82	0	0	1.62	1.62	0.11	0.11
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	4.07	4.07	0	0	1.93	1.93	0.29	0.29
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	AWindCG1	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	G2ScreenC	F	4,380,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	4.82	4.82	0	0	1.62	1.62	0.11	0.11
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	4.07	4.07	0	0	1.93	1.93	0.29	0.29
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	AWindCG2	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	G2ScreenC	F	4,380,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	4.82	4.82	0	0	1.62	1.62	0.11	0.11
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	4.07	4.07	0	0	1.93	1.93	0.29	0.29
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	AWindCG3	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	G3ScreenC	F	4,380,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	4.82	4.82	0	0	1.62	1.62	0.11	0.11
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	SGTrUnprt	F	4,380,000	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	4.07	4.07	0	0	1.93	1.93	0.29	0.29
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	AWindSG1	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	G3ScreenC	F	4,380,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	4.82	4.82	0	0	1.62	1.62	0.11	0.11
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	SGTrUnprt	F	4,380,000	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	4.07	4.07	0	0	1.93	1.93	0.29	0.29

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	AWindSG2	F	0.50	acre-yr	3,200.89	0	1,600.44	240.07	lb/acre-yr	BOP	0%	0.80	0.80	0	0	0.40	0.40	0.06	0.06
Total of Non-Fugitive Emissions for Operation 013:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 013:													*50.31*	*50.31*	*0*	*0*	*20.56*	*20.56*	*2.41*	*2.41*
Total of Non-Fugitive and Fugitive Emissions for Operation 013:													*50.31*	*50.31*	*0*	*0*	*20.56*	*20.56*	*2.41*	*2.41*
Operation 014: Concentrate Leach Plant																				
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	61,320	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.23	0.23	0.17	0.17	0.23	0.23	0.23	0.23
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	8,760	hours	0.75	0	0.75	0.75	lb/hr	SC	0%	3.29	3.29	0	0	3.29	3.29	3.29	3.29
014-240	PLV Cooling Tower	PCT	F	5,256,000	1000 gal	0.00050	0	0.00036	0.0000011	lb/1000 gal	IncorpME	0%	1.32	1.32	0	0	0.95	0.95	0.003	0.003
014-241	Oxygen Plant Cooling Tower 1	OCT1	F	2,706,840	1000 gal	0.00025	0	0.00018	0.00000055	lb/1000 gal	IncorpME	0%	0.34	0.34	0	0	0.25	0.25	0.0007	0.0007
014-348	Transfer of Flocculant to the Flocculant Bin	FlocLd	NF	4,380	tons	0.61	0	0.21	0.032	lb/ton	InBVUS	95%	1.34	0.07	0	0	0.47	0.02	0.07	0.004
014-254	Transfer of Lime to the Lime Silo	LimeLd	NF	1,752	tons	0.61	0	0.21	0.032	lb/ton	BVMod	99.9%	0.53	0.0005	0	0	0.19	0.0002	0.03	0.00003
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	DELd	NF	350	tons	0.61	0	0.21	0.032	lb/ton	BVMod	99.9%	0.11	0.0001	0	0	0.04	0.00004	0.006	0.000006
Total of Non-Fugitive Emissions for Operation 014:													*5.49*	*3.58*	*0.17*	*0.17*	*4.21*	*3.54*	*3.62*	*3.52*
Total of Fugitive Emissions for Operation 014:													*1.65*	*1.65*	*0*	*0*	*1.20*	*1.20*	*0.004*	*0.004*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:													*7.14*	*5.23*	*0.17*	*0.17*	*5.41*	*4.74*	*3.62*	*3.52*
Operation 015: Diesel Emergency Engines																				
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	242,700	hp-hr	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	405,000	hp-hr	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	BOP	0%	0.04	0.04	0.004	0.004	0.04	0.04	0.04	0.04
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	162,000	hp-hr	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	BOP	0%	0.01	0.01	0.002	0.002	0.01	0.01	0.01	0.01
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	110,000	hp-hr	0.00031	0.000034	0.00031	0.00031	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	33,000	hp-hr	0.000033	0.0000036	0.000033	0.000033	lb/hp-hr	BOP	0%	0.0005	0.0005	0.00006	0.00006	0.0005	0.0005	0.0005	0.0005
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	112,500	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	175,000	hp-hr	0.00023	0.000025	0.00023	0.00023	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	570,500	hp-hr	0.00021	0.000024	0.00021	0.00021	lb/hp-hr	BOP	0%	0.06	0.06	0.007	0.007	0.06	0.06	0.06	0.06
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	34,500	hp-hr	0.00048	0.000053	0.00048	0.00048	lb/hp-hr	BOP	0%	0.008	0.008	0.0009	0.0009	0.008	0.008	0.008	0.008
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	269,500	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.04	0.04	0.005	0.005	0.04	0.04	0.04	0.04
Total of Non-Fugitive Emissions for Operation 015:													*0.24*	*0.24*	*0.03*	*0.03*	*0.24*	*0.24*	*0.24*	*0.24*
Total of Fugitive Emissions for Operation 015:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:													*0.24*	*0.24*	*0.03*	*0.03*	*0.24*	*0.24*	*0.24*	*0.24*
Operation 017: Metcalf Concentrator																				
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	FFDC318	NF	3,574,080,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.02	1.02	0	0	1.02	1.02	1.02	1.02

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
017-280	Processes Controlled by Secondary Screening FFDC 1	FFDC280	NF	13,770,720,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.93	3.93	0	0	3.93	3.93	3.93	3.93
017-281	Processes Controlled by Secondary Screening FFDC 2	FFDC281	NF	13,613,040,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.89	3.89	0	0	3.89	3.89	3.89	3.89
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	FFDC319	NF	1,944,720,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.56	0.56	0	0	0.56	0.56	0.56	0.56
017-283	Processes Controlled by Secondary Crushing FFDC 1	FFDC283	NF	4,625,280,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.32	1.32	0	0	1.32	1.32	1.32	1.32
017-284	Processes Controlled by Secondary Crushing FFDC 2	FFDC284	NF	5,886,720,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.68	1.68	0	0	1.68	1.68	1.68	1.68
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	FFDC285	NF	2,154,960,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.62	0.62	0	0	0.62	0.62	0.62	0.62
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	FFDC286	NF	10,722,240,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.06	3.06	0	0	3.06	3.06	3.06	3.06
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	FFDC287	NF	12,036,240,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.44	3.44	0	0	3.44	3.44	3.44	3.44
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	FFDC288	NF	10,512,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.00	3.00	0	0	3.00	3.00	3.00	3.00
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	FFDC289	NF	10,512,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.00	3.00	0	0	3.00	3.00	3.00	3.00
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	FFDC290	NF	10,512,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	3.00	3.00	0	0	3.00	3.00	3.00	3.00
017-291	Processes Controlled by Crushed Ore Transfers FFDC	FFDC291	NF	5,361,120,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.53	1.53	0	0	1.53	1.53	1.53	1.53
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	FFDC292	NF	5,256,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.50	1.50	0	0	1.50	1.50	1.50	1.50
017-294	Processes Controlled by Wet Screen Feed FFDC	FFDC294	NF	1,839,600,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
Total of Non-Fugitive Emissions for Operation 017:													*32.09*	*32.09*	*0*	*0*	*32.09*	*32.09*	*32.09*	*32.09*
Total of Fugitive Emissions for Operation 017:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:													*32.09*	*32.09*	*0*	*0*	*32.09*	*32.09*	*32.09*	*32.09*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations																				
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	MCTrPrt	NF	60,706.80	tons	0.000054	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.002	0.002	0	0	0.0008	0.0008	0.0001	0.0001
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	MCTrPrt	F	60,706.80	tons	0.000054	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.002	0.002	0	0	0.0008	0.0008	0.0001	0.0001
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	8,760	hours	0.43	0	0.43	0.43	lb/hr	SC	0%	1.90	1.90	0	0	1.90	1.90	1.90	1.90
Total of Non-Fugitive Emissions for Operation 018:													*1.91*	*1.91*	*0*	*0*	*1.91*	*1.91*	*1.90*	*1.90*
Total of Fugitive Emissions for Operation 018:													*0.002*	*0.002*	*0*	*0*	*0.0008*	*0.0008*	*0.0001*	*0.0001*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:													*1.91*	*1.91*	*0*	*0*	*1.91*	*1.91*	*1.90*	*1.90*
Operation 021: Propane and Natural Gas Emergency Engines																				
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.0006	0.0006	0.0003	0.0003	0.0006	0.0006	0.0006	0.0006
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	18,070	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.002	0.002	0.0009	0.0009	0.002	0.002	0.002	0.002

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.0006	0.0006	0.0003	0.0003	0.0006	0.0006	0.0006	0.0006
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	6,325	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.0006	0.0006	0.0003	0.0003	0.0006	0.0006	0.0006	0.0006
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	6,325	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.0006	0.0006	0.0003	0.0003	0.0006	0.0006	0.0006	0.0006
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	18,500	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.002
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	18,500	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.002
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	73,500	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.007	0.007	0.004	0.004	0.007	0.007	0.007	0.007
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	230,000	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	73,500	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.007	0.007	0.004	0.004	0.007	0.007	0.007	0.007
Total of Non-Fugitive Emissions for Operation 021:													*0.07*	*0.07*	*0.03*	*0.03*	*0.07*	*0.07*	*0.07*	*0.07*
Total of Fugitive Emissions for Operation 021:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:													*0.07*	*0.07*	*0.03*	*0.03*	*0.07*	*0.07*	*0.07*	*0.07*
Operation 022: Prill Bins																				
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	PBL	NF	81,264	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.81	0.81	0	0	0.28	0.28	0.04	0.04
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	PBL	NF	81,264	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.81	0.81	0	0	0.28	0.28	0.04	0.04
Total of Non-Fugitive Emissions for Operation 022:													*1.63*	*1.63*	*0*	*0*	*0.57*	*0.57*	*0.09*	*0.09*
Total of Fugitive Emissions for Operation 022:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 022:													*1.63*	*1.63*	*0*	*0*	*0.57*	*0.57*	*0.09*	*0.09*
Operation 023: Tailings Operations																				
023-418	Wind Erosion of Tailings	AWindT	F	2,645	acre-yr	344.42	0	172.21	25.83	lb/acre-yr	IncorpT	0%	455.49	455.49	0	0	227.75	227.75	34.16	34.16
Total of Non-Fugitive Emissions for Operation 023:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 023:													*455.49*	*455.49*	*0*	*0*	*227.75*	*227.75*	*34.16*	*34.16*
Total of Non-Fugitive and Fugitive Emissions for Operation 023:													*455.49*	*455.49*	*0*	*0*	*227.75*	*227.75*	*34.16*	*34.16*
Operation 024: Miscellaneous Fuel Burning Equipment																				
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	2,785.68	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.01	0.01	0.008	0.008	0.01	0.01	0.01	0.01
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	4,415.04	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	177,354.96	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.66	0.66	0.50	0.50	0.66	0.66	0.66	0.66
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	52,091.16	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.19	0.19	0.15	0.15	0.19	0.19	0.19	0.19
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	36,897.12	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.14	0.14	0.10	0.10	0.14	0.14	0.14	0.14
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	4,108.44	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
Total of Non-Fugitive Emissions for Operation 024:													*1.04*	*1.04*	*0.77*	*0.77*	*1.04*	*1.04*	*1.04*	*1.04*
Total of Fugitive Emissions for Operation 024:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive and Fugitive Emissions for Operation 024:													*1.04*	*1.04*	*0.77*	*0.77*	*1.04*	*1.04*	*1.04*	*1.04*
Operation 025: Diesel Non-Emergency Engines																				
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	1,522,488	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.38	0.38	0.04	0.04	0.38	0.38	0.38	0.38
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	648,240	hp-hr	0.000016	0.0000018	0.000016	0.000016	lb/hp-hr	BOP	0%	0.005	0.005	0.0006	0.0006	0.005	0.005	0.005	0.005
Total of Non-Fugitive Emissions for Operation 025:													*0.38*	*0.38*	*0.04*	*0.04*	*0.38*	*0.38*	*0.38*	*0.38*
Total of Fugitive Emissions for Operation 025:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:													*0.38*	*0.38*	*0.04*	*0.04*	*0.38*	*0.38*	*0.38*	*0.38*
AOS1: Morenci Concentrator Quaternary Crushing Operations																				
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	FFDC035 (AOS1)	NF	7,305,840,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.04	1.04	0	0	0.52	0.52	0.52	0.52
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	FFDC036 (AOS1)	NF	8,672,400,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	1.24	1.24	0	0	0.62	0.62	0.62	0.62
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	FFDC311 (AOS1)	NF	8,882,640,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	2.54	2.54	0	0	2.54	2.54	2.54	2.54
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	FFDC312 (AOS1)	NF	1,576,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	FFDC313 (AOS1)	NF	4,888,080,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.40	1.40	0	0	1.40	1.40	1.40	1.40
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	FFDC314 (AOS1)	NF	8,882,640,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	2.54	2.54	0	0	2.54	2.54	2.54	2.54
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	FFDC315 (AOS1)	NF	1,576,800,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	FFDC316 (AOS1)	NF	4,888,080,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.40	1.40	0	0	1.40	1.40	1.40	1.40
Total of Non-Fugitive Emissions for AOS1:													*11.05*	*11.05*	*0*	*0*	*9.91*	*9.91*	*9.91*	*9.91*
Total of Fugitive Emissions for AOS1:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for AOS1:													*11.05*	*11.05*	*0*	*0*	*9.91*	*9.91*	*9.91*	*9.91*
AOS2: Concentrate Leach Plant Upgrades																				
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	8,760	hours	0.53	0	0.53	0.53	lb/hr	SC	0%	2.30	2.30	0	0	2.30	2.30	2.30	2.30
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	8,760	hours	0.53	0	0.53	0.53	lb/hr	SC	0%	2.30	2.30	0	0	2.30	2.30	2.30	2.30
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	OCT2 (AOS2)	F	1,892,160	1000 gal	0.0013	0	0.00091	0.0000028	lb/1000 gal	IncorpME	0%	1.18	1.18	0	0	0.86	0.86	0.003	0.003
Total of Non-Fugitive Emissions for AOS2:													*4.60*	*4.60*	*0*	*0*	*4.60*	*4.60*	*4.60*	*4.60*
Total of Fugitive Emissions for AOS2:													*1.18*	*1.18*	*0*	*0*	*0.86*	*0.86*	*0.003*	*0.003*
Total of Non-Fugitive and Fugitive Emissions for AOS2:													*5.78*	*5.78*	*0*	*0*	*5.46*	*5.46*	*4.60*	*4.60*
AOS3: Primary Crushing and Overland Conveying Operations																				
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	--	NF	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.																
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	--	NF	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.																
Total of Non-Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--
Total of Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--

Table F.4 Annual Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (tpy)		CPM Emissions (tpy)		PM_{10} Emissions (tpy)		$PM_{2.5}$ Emissions (tpy)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive and Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--
Total of Non-Fugitive Emissions:													412.37	196.19	4.83	4.83	247.97	169.30	170.14	157.72
Total of Fugitive Emissions:													167,037.20	19,647.84	0	0	43,313.64	5,360.54	4,536.82	732.39
Total of Non-Fugitive and Fugitive Emissions:													167,449.57	19,844.04	4.83	4.83	43,561.61	5,529.83	4,706.96	890.11

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Operation 001: Mining Operations																				
001-004	Drilling	Drilling	F	350	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	455.00	455.00	0	0	273.00	273.00	50.56	50.56
001-003	Blasting	HBlasting	F	1	blasts	1,444.65	0	751.22	43.34	lb/blast	BOP	0%	1,444.65	1,444.65	0	0	751.22	751.22	43.34	43.34
001-001a	Vehicle Travel on Unpaved Roads	HTravel	F	2,616.39	VMT	17.19	0	4.42	0.44	lb/VMT	UnpvdRd	90%	44,969.92	4,496.99	0	0	11,555.14	1,155.51	1,155.51	115.55
001-001b	Dozer Operation	Dozer	F	51	hours	6.63	0	1.18	0.70	lb/hr	BOP	0%	338.24	338.24	0	0	60.05	60.05	35.51	35.51
001-001c	Road Grader Operation	Grader	F	48	VMT	1.28	0	0.49	0.040	lb/VMT	BOP	0%	61.44	61.44	0	0	23.50	23.50	1.90	1.90
001-002a	Loading Ore into Haul Trucks	Ore1TrUnprt	F	55,000	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	102.23	102.23	0	0	48.35	48.35	7.32	7.32
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Ore5TrUnprt	F	14,250	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	26.49	2.65	0	0	12.53	1.25	1.90	0.19
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Ore6TrUnprt	F	40,750	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	75.74	75.74	0	0	35.82	35.82	5.42	5.42
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Ore5TrUnprt	F	7,500	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	13.94	1.39	0	0	6.59	0.66	1.00	0.10
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Ore5TrUnprt	F	6,750	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	12.55	1.25	0	0	5.93	0.59	0.90	0.09
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	FFDC006	NF	1,074,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.31	0.31	0	0	0.15	0.15	0.15	0.15
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	FFDC250	NF	720,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	InsideP	50%	0.41	0.21	0	0	0.41	0.21	0.41	0.21
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	FFDC251	NF	918,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.52	0.52	0	0	0.52	0.52	0.52	0.52
001-344	Conveyor Belt P12 to Conveyor Belt P10	Ore3TrPrt	NF	7,000	tons	0.00021	0	0.00010	0.000015	lb/ton	WSpry	90%	1.49	0.15	0	0	0.70	0.07	0.11	0.01
001-015	Processes Controlled by P5/P6 FFDC	FFDC015	NF	768,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.44	0.44	0	0	0.44	0.44	0.44	0.44
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Ore4TrUnprt	F	9,100	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	16.91	1.69	0	0	8.00	0.80	1.21	0.12
001-017	Wind Erosion of Mill IOS	HWindIOS1	F	4.00	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	1.46	1.46	0	0	0.73	0.73	0.11	0.11
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	FFDC225	NF	1,104,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.32	0.32	0	0	0.16	0.16	0.16	0.16
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Ore3TrUnprt	F	7,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	13.01	1.30	0	0	6.15	0.62	0.93	0.09
001-227	Wind Erosion of MFL IOS	HWindIOS2	F	4.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	1.64	1.64	0	0	0.82	0.82	0.12	0.12
001-325	Processes Controlled by DC2/P5 FFDC	FFDC325	NF	438,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.13	0.13	0	0	0.06	0.06	0.06	0.06
001-299	Processes Controlled by Mill IOS/R1A FFDC	FFDC299	NF	750,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.43	0.43	0	0	0.43	0.43	0.43	0.43
001-300	Processes Controlled by Mill IOS/R1B FFDC	FFDC300	NF	600,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.34	0.34	0	0	0.34	0.34	0.34	0.34
001-272	Processes Controlled by R1A and R1B/R7 FFDC	FFDC272	NF	180,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.10	0.10	0	0	0.10	0.10	0.10	0.10
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	BC277	NF	186,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.19	0.19	0	0	0.19	0.19	0.19	0.19
001-278	Processes Controlled by R2/R11 FFDC	FFDC278	NF	276,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.16	0.16	0	0	0.16	0.16	0.16	0.16
001-228	Processes Controlled by MFL IOS/R8 FFDC	FFDC228	NF	768,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.22	0.22	0	0	0.11	0.11	0.11	0.11
001-229	Processes Controlled by R8/R9 FFDC	FFDC229	NF	636,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.18	0.18	0	0	0.09	0.09	0.09	0.09
001-323a	Loading to the Portable Cleanup Conveyor	Ore5TrUnprt	F	50	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	0.09	0.09	0	0	0.04	0.04	0.007	0.007
001-323b	Unloading from the Portable Cleanup Conveyor	Ore5TrUnprt	NF	50	tons	0.0019	0	0.00088	0.00013	lb/ton	BOP	0%	0.09	0.09	0	0	0.04	0.04	0.007	0.007

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive Emissions for Operation 001:													*5.32*	*3.78*	*0*	*0*	*3.92*	*3.08*	*3.28*	*2.98*
Total of Fugitive Emissions for Operation 001:													*47,533.32*	*6,985.78*	*0*	*0*	*12,787.89*	*2,352.98*	*1,305.75*	*260.45*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:													*47,538.64*	*6,989.56*	*0*	*0*	*12,791.80*	*2,356.05*	*1,309.03*	*263.42*
Operation 002: Morenci Concentrator																				
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	FFDC030	NF	1,422,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.41	0.41	0	0	0.20	0.20	0.20	0.20
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	FFDC031	NF	1,506,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.43	0.43	0	0	0.22	0.22	0.22	0.22
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	FFDC035	NF	834,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.24	0.24	0	0	0.12	0.12	0.12	0.12
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	FFDC036	NF	990,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.28	0.28	0	0	0.14	0.14	0.14	0.14
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	FFDC032	NF	1,422,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.41	0.41	0	0	0.20	0.20	0.20	0.20
Total of Non-Fugitive Emissions for Operation 002:													*1.76*	*1.76*	*0*	*0*	*0.88*	*0.88*	*0.88*	*0.88*
Total of Fugitive Emissions for Operation 002:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:													*1.76*	*1.76*	*0*	*0*	*0.88*	*0.88*	*0.88*	*0.88*
Operation 003: MFL Fine Crushing Plant																				
003-273	Processes Controlled by R9/R10 FFDC	FFDC273	NF	180,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.05	0.05	0	0	0.03	0.03	0.03	0.03
003-330	Processes Controlled by R10/R3 FFDC	FFDC330	NF	180,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.10	0.10	0	0	0.10	0.10	0.10	0.10
003-079	Processes Controlled by R3/R4 Bag Collector 3	BC079	NF	192,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.19	0.19	0	0	0.19	0.19	0.19	0.19
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	BC080	NF	498,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.50	0.50	0	0	0.50	0.50	0.50	0.50
003-082	Processes Controlled by Scrubber 3C	SC082	NF	2,124,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	3.03	3.03	0	0	3.03	3.03	3.03	3.03
003-317	Processes Controlled by FFDC 3A	FFDC317	NF	2,280,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	1.30	1.30	0	0	1.30	1.30	1.30	1.30
003-301	Processes Controlled by FFDC 6A	FFDC301	NF	1,866,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	1.33	1.33	0	0	1.33	1.33	1.33	1.33
003-302	Processes Controlled by FFDC 6B	FFDC302	NF	1,650,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	1.18	1.18	0	0	1.18	1.18	1.18	1.18
003-304	Processes Controlled by FFDC 1	FFDC304	NF	1,662,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	1.19	1.19	0	0	1.19	1.19	1.19	1.19
003-089	Processes Controlled by Scrubber 5	SC089	NF	2,484,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	3.55	3.55	0	0	3.55	3.55	3.55	3.55
003-303	Processes Controlled by FFDC 8	FFDC303	NF	1,224,000	dscf	7.14E-07	0	7.14E-07	7.14E-07	lb/dscf	DC	0%	0.87	0.87	0	0	0.87	0.87	0.87	0.87
003-088	Processes Controlled by Scrubber 4	SC088	NF	2,754,000	dscf	1.43E-06	0	1.43E-06	1.43E-06	lb/dscf	SC	0%	3.93	3.93	0	0	3.93	3.93	3.93	3.93
003-320	Processes Controlled by 14/15 FFDC	FFDC320	NF	210,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.12	0.12	0	0	0.12	0.12	0.12	0.12
003-331	Processes Controlled by 15/16 FFDC	FFDC331	NF	186,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.11	0.11	0	0	0.11	0.11	0.11	0.11
003-309	Processes Controlled by 16/S11 FFDC	FFDC309	NF	180,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.10	0.10	0	0	0.10	0.10	0.10	0.10
003-199	Conveyor Belt S11 (transfer to FOIS)	Ore3TrUnprt	F	6,000	tons	0.0019	0	0.00088	0.00013	lb/ton	WSpry	90%	11.15	1.12	0	0	5.27	0.53	0.80	0.08
003-200	Wind Erosion of the FOIS	HWindFO	F	1.00	acre-yr	0.74	0	0.37	0.056	lb/acre-hr	BOP	0%	0.74	0.74	0	0	0.37	0.37	0.06	0.06
003-441	Dust Suppression Fan	DSF	F	24.00	1000 gal	0.0018	0	0.0018	0.0018	lb/1000 gal	BOP	0%	0.04	0.04	0	0	0.04	0.04	0.04	0.04

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	BC201	NF	672,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.67	0.67	0	0	0.67	0.67	0.67	0.67
003-202	Processes Controlled by A1A/A2A Bag Collector 8	BC202	NF	192,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.19	0.19	0	0	0.19	0.19	0.19	0.19
003-203	Processes Controlled by A1A/A2C Bag Collector 9	BC203	NF	192,000	dscf	1.00E-06	0	1.00E-06	1.00E-06	lb/dscf	BC	0%	0.19	0.19	0	0	0.19	0.19	0.19	0.19
Total of Non-Fugitive Emissions for Operation 003:													*18.62*	*18.62*	*0*	*0*	*18.60*	*18.60*	*18.60*	*18.60*
Total of Fugitive Emissions for Operation 003:													*11.94*	*1.90*	*0*	*0*	*5.69*	*0.94*	*0.90*	*0.18*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:													*30.56*	*20.52*	*0*	*0*	*24.29*	*19.54*	*19.49*	*18.78*
Operation 004: Lime Slaking Plants and Lime Transloading																				
004-231	Transfer of Quicklime to the Lime Silo 1	LimeLd	NF	25	tons	0.61	0	0.21	0.032	lb/ton	DFMac	90%	15.25	1.53	0	0	5.34	0.53	0.81	0.08
004-232	Transfer of Quicklime to the Lime Silo 2	LimeLd	NF	25	tons	0.61	0	0.21	0.032	lb/ton	DFMac	90%	15.25	1.53	0	0	5.34	0.53	0.81	0.08
004-233	Lime Slaker 1	LimeSlk	NF	6.25	tons	0.068	0.011	0.068	0.068	lb/ton	IncorpMist	0%	0.43	0.43	0.07	0.07	0.43	0.43	0.43	0.43
004-234	Lime Slaker 2	LimeSlk	NF	6.25	tons	0.068	0.011	0.068	0.068	lb/ton	IncorpMist	0%	0.43	0.43	0.07	0.07	0.43	0.43	0.43	0.43
004-275	Transfer of Quicklime to Metcalf Lime Silo	LimeLd	NF	25.00	tons	0.61	0	0.21	0.032	lb/ton	BVFARR	99.9%	15.25	0.02	0	0	5.34	0.005	0.81	0.0008
004-276	Metcalf Lime Slaker	MLS	NF	12.50	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSWS	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	LimeLd	NF	50	tons	0.61	0	0.21	0.032	lb/ton	LTDC	99%	30.50	0.31	0	0	10.68	0.11	1.62	0.02
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	LimeLd	NF	50	tons	0.61	0	0.21	0.032	lb/ton	LTDC	99%	30.50	0.31	0	0	10.68	0.11	1.62	0.02
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	47.60	hp-hr	0.000049	0.0000054	0.000049	0.000049	lb/hp-hr	BOP	0%	0.002	0.002	0.0003	0.0003	0.002	0.002	0.002	0.002
Total of Non-Fugitive Emissions for Operation 004:													*107.62*	*4.54*	*0.14*	*0.14*	*38.23*	*2.15*	*6.53*	*1.06*
Total of Fugitive Emissions for Operation 004:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:													*107.62*	*4.54*	*0.14*	*0.14*	*38.23*	*2.15*	*6.53*	*1.06*
Operation 005: Metcalf Power Plant																				
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	204.89	MMBtu	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	BOP	0%	1.35	1.35	0.96	0.96	1.35	1.35	1.35	1.35
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	204.89	MMBtu	0.0066	0.0047	0.0066	0.0066	lb/MMBtu	BOP	0%	1.35	1.35	0.96	0.96	1.35	1.35	1.35	1.35
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	300	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.66	0.66	0.07	0.07	0.66	0.66	0.66	0.66
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	300	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.66	0.66	0.07	0.07	0.66	0.66	0.66	0.66
Total of Non-Fugitive Emissions for Operation 005:													*4.02*	*4.02*	*2.07*	*2.07*	*4.02*	*4.02*	*4.02*	*4.02*
Total of Fugitive Emissions for Operation 005:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:													*4.02*	*4.02*	*2.07*	*2.07*	*4.02*	*4.02*	*4.02*	*4.02*
Operation 006: Copper Concentrate Processing Operations																				
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	CCTrPrt	F	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044d	Conveyor Belt BA to Conveyor Belt BB	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044e	Conveyor Belt BB to Conveyor Belt BC	CCTrPrt	NF	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	CCTrPrt	F	500	tons	0.000046	0	0.000022	0.0000033	lb/ton	IncorpIWS	0%	0.02	0.02	0	0	0.01	0.01	0.002	0.002
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	HWindCC	F	0.25	acre-yr	4.74	0	2.37	0.36	lb/acre-hr	3Sided	75%	1.19	0.30	0	0	0.59	0.15	0.09	0.02
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	CCTrUnprt	F	500	tons	0.00041	0	0.00019	0.000029	lb/ton	BOP	0%	0.20	0.20	0	0	0.10	0.10	0.01	0.01
Total of Non-Fugitive Emissions for Operation 006:													*0.19*	*0.19*	*0*	*0*	*0.09*	*0.09*	*0.01*	*0.01*
Total of Fugitive Emissions for Operation 006:													*1.43*	*0.55*	*0*	*0*	*0.71*	*0.27*	*0.11*	*0.04*
Total of Non-Fugitive and Fugitive Emissions for Operation 006:													*1.62*	*0.73*	*0*	*0*	*0.80*	*0.35*	*0.12*	*0.05*
Operation 009: Solution Extraction/Electrowinning Operations																				
009-121	Central EW (548 cells)	EWC	F	1	hours	4.75	0	4.75	4.75	lb/hr	IncorpEW	0%	4.75	4.75	0	0	4.75	4.75	4.75	4.75
009-122	Southside EW (220 cells)	EWSS	F	1	hours	1.67	0	1.67	1.67	lb/hr	IncorpEW	0%	1.67	1.67	0	0	1.67	1.67	1.67	1.67
009-221	Stargo EW (324 cells)	EWSt	F	1	hours	2.96	0	2.96	2.96	lb/hr	IncorpEW	0%	2.96	2.96	0	0	2.96	2.96	2.96	2.96
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.01	0.01	0.005	0.005	0.009	0.009	0.006	0.006
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.01	0.01	0.005	0.005	0.009	0.009	0.006	0.006
009-423	Modoc Test Facility EW (771.2 ft2)	EW-MTF	F	1	hours	0.12	0	0.12	0.12	lb/hr	IncorpEW	0%	0.12	0.12	0	0	0.12	0.12	0.12	0.12
Total of Non-Fugitive Emissions for Operation 009:													*0.68*	*0.68*	*0.50*	*0.50*	*0.67*	*0.67*	*0.67*	*0.67*
Total of Fugitive Emissions for Operation 009:													*9.50*	*9.50*	*0*	*0*	*9.50*	*9.50*	*9.50*	*9.50*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:													*10.19*	*10.19*	*0.50*	*0.50*	*10.18*	*10.18*	*10.17*	*10.17*
Operation 010: Concrete Batch Plant																				
010-144a	Unloading Aggregate to the Aggregate Stockpiles	AggTrUnprt	F	143.53	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.61	0.61	0	0	0.29	0.29	0.04	0.04
010-144b	Wind Erosion of the Aggregate Stockpiles	HWindAgg	F	1.00	acre-yr	0.13	0	0.064	0.0096	lb/acre-hr	BOP	0%	0.13	0.13	0	0	0.06	0.06	0.01	0.01
010-144c	Loading Aggregate to the Feed Hopper	AggTrUnprt	F	143.53	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.61	0.61	0	0	0.29	0.29	0.04	0.04

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
010-145	Feed Hopper to Aggregate Conveyor Belt	AggTrUnprt	NF	143.53	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.61	0.61	0	0	0.29	0.29	0.04	0.04
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	FATr	NF	5.29	tons	3.14	0	1.10	0.17	lb/ton	BVUS	90%	16.60	1.66	0	0	5.82	0.58	0.88	0.09
010-147	Pneumatic Transfer of Cement to the Cement Silo	CemTr	NF	26.48	tons	0.73	0	0.47	0.039	lb/ton	BVUS	90%	19.33	1.93	0	0	12.45	1.24	1.02	0.10
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	FATr	NF	5.29	tons	3.14	0	1.10	0.17	lb/ton	BOP	0%	16.60	16.60	0	0	5.82	5.82	0.88	0.88
010-148b	Cement Screw Conveyor to Weigh Hopper	CemTr	NF	26.48	tons	0.73	0	0.47	0.039	lb/ton	BOP	0%	19.33	19.33	0	0	12.45	12.45	1.02	1.02
010-148c	Aggregate Conveyor Belt to Weigh Hopper	AggTrUnprt	NF	143.53	tons	0.0043	0	0.0020	0.00031	lb/ton	BOP	0%	0.61	0.61	0	0	0.29	0.29	0.04	0.04
010-148d	Weigh Hopper to Concrete Mixing Truck	LoadCMT	NF	31.77	tons	1.12	0	0.31	0.050	lb/ton	BOP	0%	35.52	35.52	0	0	9.85	9.85	1.59	1.59
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.008	0.008	0.006	0.006	0.008	0.008	0.008	0.008
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.008	0.008	0.006	0.006	0.008	0.008	0.008	0.008
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.008	0.008	0.006	0.006	0.008	0.008	0.008	0.008
Total of Non-Fugitive Emissions for Operation 010:													*108.64*	*76.30*	*0.02*	*0.02*	*46.98*	*30.54*	*5.51*	*3.79*
Total of Fugitive Emissions for Operation 010:													*1.35*	*1.35*	*0*	*0*	*0.64*	*0.64*	*0.10*	*0.10*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:													*109.99*	*77.65*	*0.02*	*0.02*	*47.62*	*31.18*	*5.61*	*3.89*
Operation 013: Grizzly Operations																				
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	G1ScreenC	F	60	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	0.13	0.13	0	0	0.04	0.04	0.003	0.003
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	ConGTrUnprt	F	60	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.11	0.11	0	0	0.05	0.05	0.008	0.008
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	HWindConG	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	G2ScreenC	F	500	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	1.10	1.10	0	0	0.37	0.37	0.03	0.03
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.93	0.93	0	0	0.44	0.44	0.07	0.07
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	HWindCG1	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	G2ScreenC	F	500	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	1.10	1.10	0	0	0.37	0.37	0.03	0.03
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.93	0.93	0	0	0.44	0.44	0.07	0.07
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	HWindCG2	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	G2ScreenC	F	500	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	1.10	1.10	0	0	0.37	0.37	0.03	0.03
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.93	0.93	0	0	0.44	0.44	0.07	0.07
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	HWindCG3	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	G3ScreenC	F	500	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	1.10	1.10	0	0	0.37	0.37	0.03	0.03
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	SGTrUnprt	F	500	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.93	0.93	0	0	0.44	0.44	0.07	0.07
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	HWindSG1	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	G3ScreenC	F	500	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpMC	0%	1.10	1.10	0	0	0.37	0.37	0.03	0.03
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	SGTrUnprt	F	500	tons	0.0019	0	0.00088	0.00013	lb/ton	IncorpMC	0%	0.93	0.93	0	0	0.44	0.44	0.07	0.07

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	HWindSG2	F	0.50	acre-yr	0.37	0	0.18	0.027	lb/acre-hr	BOP	0%	0.18	0.18	0	0	0.09	0.09	0.01	0.01
Total of Non-Fugitive Emissions for Operation 013:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 013:													*11.49*	*11.49*	*0*	*0*	*4.69*	*4.69*	*0.55*	*0.55*
Total of Non-Fugitive and Fugitive Emissions for Operation 013:													*11.49*	*11.49*	*0*	*0*	*4.69*	*4.69*	*0.55*	*0.55*
Operation 014: Concentrate Leach Plant																				
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	17.64	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	1	hours	0.75	0	0.75	0.75	lb/hr	SC	0%	0.75	0.75	0	0	0.75	0.75	0.75	0.75
014-240	PLV Cooling Tower	PCT	F	600	1000 gal	0.00050	0	0.00036	0.0000011	lb/1000 gal	IncorpME	0%	0.30	0.30	0	0	0.22	0.22	0.0007	0.0007
014-241	Oxygen Plant Cooling Tower 1	OCT1	F	309	1000 gal	0.00025	0	0.00018	0.00000055	lb/1000 gal	IncorpME	0%	0.08	0.08	0	0	0.06	0.06	0.0002	0.0002
014-348	Transfer of Flocculant to the Flocculant Bin	FlocLd	NF	25	tons	0.61	0	0.21	0.032	lb/ton	InBVUS	95%	15.25	0.76	0	0	5.34	0.27	0.81	0.04
014-254	Transfer of Lime to the Lime Silo	LimeLd	NF	25	tons	0.61	0	0.21	0.032	lb/ton	BVMod	99.9%	15.25	0.02	0	0	5.34	0.005	0.81	0.0008
014-253	Transfer of Diatomaceous Earth to the Super Sack Unloader	DELd	NF	25	tons	0.61	0	0.21	0.032	lb/ton	BVMod	99.9%	15.25	0.02	0	0	5.34	0.005	0.81	0.0008
Total of Non-Fugitive Emissions for Operation 014:													*46.63*	*1.67*	*0.10*	*0.10*	*16.89*	*1.16*	*3.31*	*0.92*
Total of Fugitive Emissions for Operation 014:													*0.38*	*0.38*	*0*	*0*	*0.27*	*0.27*	*0.0008*	*0.0008*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:													*47.01*	*2.05*	*0.10*	*0.10*	*17.17*	*1.43*	*3.31*	*0.92*
Operation 015: Diesel Emergency Engines																				
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	809.00	hp-hr	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	BOP	0%	0.14	0.14	0.02	0.02	0.14	0.14	0.14	0.14
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	810	hp-hr	0.00017	0.000019	0.00017	0.00017	lb/hp-hr	BOP	0%	0.14	0.14	0.02	0.02	0.14	0.14	0.14	0.14
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	324	hp-hr	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	BOP	0%	0.06	0.06	0.006	0.006	0.06	0.06	0.06	0.06
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	220	hp-hr	0.00031	0.000034	0.00031	0.00031	lb/hp-hr	BOP	0%	0.07	0.07	0.007	0.007	0.07	0.07	0.07	0.07
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	66	hp-hr	0.000033	0.0000036	0.000033	0.000033	lb/hp-hr	BOP	0%	0.002	0.002	0.0002	0.0002	0.002	0.002	0.002	0.002
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	225	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.07	0.07	0.008	0.008	0.07	0.07	0.07	0.07
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	350	hp-hr	0.00023	0.000025	0.00023	0.00023	lb/hp-hr	BOP	0%	0.08	0.08	0.009	0.009	0.08	0.08	0.08	0.08
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	1,141	hp-hr	0.00021	0.000024	0.00021	0.00021	lb/hp-hr	BOP	0%	0.24	0.24	0.03	0.03	0.24	0.24	0.24	0.24
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	69	hp-hr	0.00048	0.000053	0.00048	0.00048	lb/hp-hr	BOP	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	539	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.18	0.18	0.02	0.02	0.18	0.18	0.18	0.18
Total of Non-Fugitive Emissions for Operation 015:													*1.02*	*1.02*	*0.11*	*0.11*	*1.02*	*1.02*	*1.02*	*1.02*
Total of Fugitive Emissions for Operation 015:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:													*1.02*	*1.02*	*0.11*	*0.11*	*1.02*	*1.02*	*1.02*	*1.02*
Operation 017: Metcalf Concentrator																				
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	FFDC318	NF	408,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.23	0.23	0	0	0.23	0.23	0.23	0.23

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
017-280	Processes Controlled by Secondary Screening FFDC 1	FFDC280	NF	1,572,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.90	0.90	0	0	0.90	0.90	0.90	0.90
017-281	Processes Controlled by Secondary Screening FFDC 2	FFDC281	NF	1,554,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.89	0.89	0	0	0.89	0.89	0.89	0.89
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	FFDC319	NF	222,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.13	0.13	0	0	0.13	0.13	0.13	0.13
017-283	Processes Controlled by Secondary Crushing FFDC 1	FFDC283	NF	528,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.30	0.30	0	0	0.30	0.30	0.30	0.30
017-284	Processes Controlled by Secondary Crushing FFDC 2	FFDC284	NF	672,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.38	0.38	0	0	0.38	0.38	0.38	0.38
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	FFDC285	NF	246,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.14	0.14	0	0	0.14	0.14	0.14	0.14
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	FFDC286	NF	1,224,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.70	0.70	0	0	0.70	0.70	0.70	0.70
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	FFDC287	NF	1,374,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.79	0.79	0	0	0.79	0.79	0.79	0.79
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	FFDC288	NF	1,200,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.69	0.69	0	0	0.69	0.69	0.69	0.69
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	FFDC289	NF	1,200,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.69	0.69	0	0	0.69	0.69	0.69	0.69
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	FFDC290	NF	1,200,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.69	0.69	0	0	0.69	0.69	0.69	0.69
017-291	Processes Controlled by Crushed Ore Transfers FFDC	FFDC291	NF	612,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.35	0.35	0	0	0.35	0.35	0.35	0.35
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	FFDC292	NF	600,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.34	0.34	0	0	0.34	0.34	0.34	0.34
017-294	Processes Controlled by Wet Screen Feed FFDC	FFDC294	NF	210,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.12	0.12	0	0	0.12	0.12	0.12	0.12
Total of Non-Fugitive Emissions for Operation 017:													*7.33*	*7.33*	*0*	*0*	*7.33*	*7.33*	*7.33*	*7.33*
Total of Fugitive Emissions for Operation 017:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:													*7.33*	*7.33*	*0*	*0*	*7.33*	*7.33*	*7.33*	*7.33*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations																				
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	MCTrPrt	NF	6.93	tons	0.000054	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.0004	0.0004	0	0	0.0002	0.0002	0.00003	0.00003
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	MCTrPrt	F	6.93	tons	0.000054	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.0004	0.0004	0	0	0.0002	0.0002	0.00003	0.00003
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	1	hours	0.43	0	0.43	0.43	lb/hr	SC	0%	0.43	0.43	0	0	0.43	0.43	0.43	0.43
Total of Non-Fugitive Emissions for Operation 018:													*0.44*	*0.44*	*0*	*0*	*0.43*	*0.43*	*0.43*	*0.43*
Total of Fugitive Emissions for Operation 018:													*0.0004*	*0.0004*	*0*	*0*	*0.0002*	*0.0002*	*0.00003*	*0.00003*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:													*0.44*	*0.44*	*0*	*0*	*0.44*	*0.44*	*0.43*	*0.43*
Operation 021: Propane and Natural Gas Emergency Engines																				
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.003	0.003	0.001	0.001	0.003	0.003	0.003	0.003
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	36.14	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.007	0.007	0.004	0.004	0.007	0.007	0.007	0.007

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.003	0.003	0.001	0.001	0.003	0.003	0.003	0.003
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	12.65	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.003	0.003	0.001	0.001	0.003	0.003	0.003	0.003
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	12.65	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.003	0.003	0.001	0.001	0.003	0.003	0.003	0.003
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	37	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.008	0.008	0.004	0.004	0.008	0.008	0.008	0.008
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	37	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.008	0.008	0.004	0.004	0.008	0.008	0.008	0.008
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	147	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	460	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.09	0.09	0.05	0.05	0.09	0.09	0.09	0.09
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	147	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
Total of Non-Fugitive Emissions for Operation 021:													*0.27*	*0.27*	*0.14*	*0.14*	*0.27*	*0.27*	*0.27*	*0.27*
Total of Fugitive Emissions for Operation 021:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:													*0.27*	*0.27*	*0.14*	*0.14*	*0.27*	*0.27*	*0.27*	*0.27*
Operation 022: Prill Bins																				
022-393a	Delivery of Ammonium Nitrate Prill to Prill Bins 1/7	PBL	NF	128.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	2.58	2.58	0	0	0.90	0.90	0.14	0.14
022-393b	Prill Bins 1/7 to ANFO Trucks for Transfer to Drill Holes	PBL	NF	175.00	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	3.50	3.50	0	0	1.23	1.23	0.19	0.19
Total of Non-Fugitive Emissions for Operation 022:													*6.08*	*6.08*	*0*	*0*	*2.13*	*2.13*	*0.32*	*0.32*
Total of Fugitive Emissions for Operation 022:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 022:													*6.08*	*6.08*	*0*	*0*	*2.13*	*2.13*	*0.32*	*0.32*
Operation 023: Tailings Operations																				
023-418	Wind Erosion of Tailings	HWindT	F	2,645	acre-yr	0.039	0	0.020	0.0029	lb/acre-hr	IncorpT	0%	103.99	103.99	0	0	52.00	52.00	7.80	7.80
Total of Non-Fugitive Emissions for Operation 023:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 023:													*103.99*	*103.99*	*0*	*0*	*52.00*	*52.00*	*7.80*	*7.80*
Total of Non-Fugitive and Fugitive Emissions for Operation 023:													*103.99*	*103.99*	*0*	*0*	*52.00*	*52.00*	*7.80*	*7.80*
Operation 024: Miscellaneous Fuel Burning Equipment																				
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	0.318	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	0.504	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.004	0.004	0.003	0.003	0.004	0.004	0.004	0.004
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	20.25	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.15	0.15	0.11	0.11	0.15	0.15	0.15	0.15
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	5.95	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	4.21	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	0.469	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.004	0.004	0.003	0.003	0.004	0.004	0.004	0.004
Total of Non-Fugitive Emissions for Operation 024:													*0.24*	*0.24*	*0.18*	*0.18*	*0.24*	*0.24*	*0.24*	*0.24*
Total of Fugitive Emissions for Operation 024:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive and Fugitive Emissions for Operation 024:													*0.24*	*0.24*	*0.18*	*0.18*	*0.24*	*0.24*	*0.24*	*0.24*
Operation 025: Diesel Non-Emergency Engines																				
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	173.80	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.09	0.09	0.009	0.009	0.09	0.09	0.09	0.09
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	74	hp-hr	0.000016	0.0000018	0.000016	0.000016	lb/hp-hr	BOP	0%	0.001	0.001	0.0001	0.0001	0.001	0.001	0.001	0.001
Total of Non-Fugitive Emissions for Operation 025:													*0.09*	*0.09*	*0.01*	*0.01*	*0.09*	*0.09*	*0.09*	*0.09*
Total of Fugitive Emissions for Operation 025:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:													*0.09*	*0.09*	*0.01*	*0.01*	*0.09*	*0.09*	*0.09*	*0.09*
AOS1: Morenci Concentrator Quaternary Crushing Operations																				
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	FFDC035 (AOS1)	NF	834,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.24	0.24	0	0	0.12	0.12	0.12	0.12
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	FFDC036 (AOS1)	NF	990,000	dscf	2.86E-07	0	1.43E-07	1.43E-07	lb/dscf	DC	0%	0.28	0.28	0	0	0.14	0.14	0.14	0.14
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	FFDC311 (AOS1)	NF	1,014,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.58	0.58	0	0	0.58	0.58	0.58	0.58
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	FFDC312 (AOS1)	NF	180,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.10	0.10	0	0	0.10	0.10	0.10	0.10
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	FFDC313 (AOS1)	NF	558,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.32	0.32	0	0	0.32	0.32	0.32	0.32
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	FFDC314 (AOS1)	NF	1,014,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.58	0.58	0	0	0.58	0.58	0.58	0.58
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	FFDC315 (AOS1)	NF	180,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.10	0.10	0	0	0.10	0.10	0.10	0.10
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	FFDC316 (AOS1)	NF	558,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.32	0.32	0	0	0.32	0.32	0.32	0.32
Total of Non-Fugitive Emissions for AOS1:													*2.52*	*2.52*	*0*	*0*	*2.26*	*2.26*	*2.26*	*2.26*
Total of Fugitive Emissions for AOS1:													*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for AOS1:													*2.52*	*2.52*	*0*	*0*	*2.26*	*2.26*	*2.26*	*2.26*
AOS2: Concentrate Leach Plant Upgrades																				
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	1	hours	0.53	0	0.53	0.53	lb/hr	SC	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	1	hours	0.53	0	0.53	0.53	lb/hr	SC	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	OCT2 (AOS2)	F	216	1000 gal	0.0013	0	0.00091	0.0000028	lb/1000 gal	IncorpME	0%	0.27	0.27	0	0	0.20	0.20	0.0006	0.0006
Total of Non-Fugitive Emissions for AOS2:													*1.05*	*1.05*	*0*	*0*	*1.05*	*1.05*	*1.05*	*1.05*
Total of Fugitive Emissions for AOS2:													*0.27*	*0.27*	*0*	*0*	*0.20*	*0.20*	*0.0006*	*0.0006*
Total of Non-Fugitive and Fugitive Emissions for AOS2:													*1.32*	*1.32*	*0*	*0*	*1.25*	*1.25*	*1.05*	*1.05*
AOS3: Primary Crushing and Overland Conveying Operations																				
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	--	NF	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.																
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	--	NF	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.																
Total of Non-Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--
Total of Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--

Table F.5 Hourly Particulate Matter Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Control Efficiency (%)	PM (w/ CPM) Emissions (lb/hr)		CPM Emissions (lb/hr)		PM_{10} Emissions (lb/hr)		$PM_{2.5}$ Emissions (lb/hr)	
						PM (w/ CPM)	CPM	PM_{10}	$PM_{2.5}$				Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Total of Non-Fugitive and Fugitive Emissions for AOS3:													--	--	--	--	--	--	--	--
Total of Non-Fugitive Emissions:													311.24	129.32	3.26	3.26	144.08	74.99	54.80	44.94
Total of Fugitive Emissions:													47,673.67	7,115.21	0	0	12,861.59	2,421.49	1,324.71	278.62
Total of Non-Fugitive and Fugitive Emissions:													47,984.92	7,244.53	3.26	3.26	13,005.68	2,496.48	1,379.51	323.56

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
Processes Controlled by Pollution Control Devices													
PLV2S	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	0	0	0	5.82	0.75	0	0	0	0	lb/hr	hours	Emission Limits
H2S	Processes Controlled by H2S Scrubber System	0	0	0	0	0	0.47	0	0	0	lb/hr	hours	Manufacturer Guaranteed Limit of 5 ppm
PLVS1 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	0	0	0	4.074	0.525	0	0	0	0	lb/hr	hours	Emission Limits
PLVS2 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	0	0	0	4.074	0.525	0	0	0	0	lb/hr	hours	Emission Limits
Drilling and Blasting Operations													
ABlasting	Blasting (annual basis)	2,489	110.24	0.89	0	0	0	24,909	0.97	0.19	lb/blast	blasts	"Factors Affecting ANFO Fumes Production" from NIOSH (2001), "NO_X Emissions from Blasting Operations in Open-Cut Coal Mining" from Atmospheric Environment 42 (2008), Complete Sulfur Conversion Using a Sulfur Contents of 15 ppm for Diesel and 500 ppm for Animal Fat (worst case assumption based on a 03/2003 EPA document that says biofuels reduce SO_2 emissions compared to No. 2 diesel), 40 CFR 98, Tables C-1 and C-2, 137,000 Btu/gal diesel, 7.5 lb/gal diesel, 0.125 MMBtu/gal animal fat, and 7.34 lb/gal animal fat
HBlasting	Blasting (hourly basis)	8,812	390.26	3.14	0	0	0	88,184	3.42	0.67	lb/blast	blasts	
Bulk Flotation Operations													
BFO	Bulk Flotation Operations	0	0	0	2.35	0	0	0	0	0	lb/ton	tons	Testing at the Freeport-McMoRan Henderson Mill in 2009
Agglomeration Operations													
AAgg	Agglomeration Operations (annual basis)	3.08E-08	3.54E-06	3.09E-05	0	0	0	7.22E-03	0	0	lb/ton	tons	Average performance test result from a similar agglomerator with a 20% safety factor
HAgg	Agglomeration Operations (hourly basis)	6.15E-08	1.14E-05	8.51E-05	0	0	0	1.94E-02	0	0	lb/ton	tons	Maximum performance test result from a similar agglomerator with a 20% safety factor
Solution Extraction/Electrowinning Operations													
SXC	Central SX (21,175 ft2)	0	0	0	0.92	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank462	Central Backwash Bleed Tank (33,000 gallons)	0	0	0	0.024	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank463	Central Barren Organic Tank (60,900 gallons)	0	0	0	0.018	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank464	Central Bead Separator Tank (5,000 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank465	Central High Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
Tank466	Central Low Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank467	Central Gunk Tank 1 (7,600 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank468	Central Gunk Tank 2 (7,600 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank469	Central Gunk Tank 3 (23,800 gallons)	0	0	0	0.016	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank470	Central Organic Recovery Tank (306,700 gallons)	0	0	0	0.33	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Pond471	Central Raffinate Pond (9,905 ft2)	0	0	0	1.17	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
SXMe	Metcalf SX (40,585.41 ft2)	0	0	0	1.77	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank472	Metcalf Barren Organic Tank (82,900 gallons)	0	0	0	0.024	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank473	Metcalf High A Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank474	Metcalf High B Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank475	Metcalf Low A Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank476	Metcalf Low B Decant Tank (4,700 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank477	Metcalf SX-7 Diluent Tank (51,200 gallons)	0	0	0	0.015	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank478	Metcalf Gunk Tank 1 (15,200 gallons)	0	0	0	0.013	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank479	Metcalf Gunk Tank 2 (7,600 gallons)	0	0	0	0.0093	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank480	Metcalf Gunk Tank 3 (23,100 gallons)	0	0	0	0.016	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank481	Metcalf Holding Tank (122,200 gallons)	0	0	0	0.036	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank482	Metcalf Organic Recovery A Tank (302,500 gallons)	0	0	0	0.34	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
Tank483	Metcalf Organic Recovery B Tank (302,500 gallons)	0	0	0	0.34	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	0	0	0	0.036	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Pond485	Metcalf Raffinate Pond (10,236 ft2)	0	0	0	1.22	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
SXMo	Modoc SX (88,229.16 ft2)	0	0	0	3.03	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank486	Modoc Loaded Organic F Tank (81,400 gallons)	0	0	0	0.022	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank487	Modoc Loaded Organic G Tank (81,400 gallons)	0	0	0	0.022	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank488	Modoc High A Decant Tank (4,700 gallons)	0	0	0	0.0074	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank489	Modoc High B Decant Tank (4,700 gallons)	0	0	0	0.0074	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank490	Modoc Low A Decant Tank (4,700 gallons)	0	0	0	0.0074	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank491	Modoc Low B Decant Tank (4,700 gallons)	0	0	0	0.0074	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank492	Modoc SX-7 Diluent Tank (49,700 gallons)	0	0	0	0.012	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank493	Modoc Gunk Tank 1 (15,400 gallons)	0	0	0	0.012	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank494	Modoc Gunk Tank 2 (7,600 gallons)	0	0	0	0.0074	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank495	Modoc Gunk Tank 3 (21,700 gallons)	0	0	0	0.012	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank496	Modoc Holding Tank (118,000 gallons)	0	0	0	0.032	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank497	Modoc Organic Recovery A Tank (302,400 gallons)	0	0	0	0.26	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank498	Modoc Organic Recovery B Tank (302,400 gallons)	0	0	0	0.26	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Pond499	Modoc Raffinate Pond (15,678 ft2)	0	0	0	1.47	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
SXSt	Stargo SX (48,846.87 ft2)	0	0	0	2.12	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank500	Stargo Recovered Solution Tank (5,920 gallons)	0	0	0	0.013	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank501	Stargo Gunk Tank 1 (16,955 gallons)	0	0	0	0.021	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank502	Stargo Gunk Tank 2 (16,955 gallons)	0	0	0	0.021	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank503	Stargo Gunk Tank 3 (16,955 gallons)	0	0	0	0.021	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank504	Stargo Loaded Organic Tank (98,515 gallons)	0	0	0	0.023	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank505	Stargo Holding Tank (108,900 gallons)	0	0	0	0.026	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank506	Stargo Stormwater Tank (772,190 gallons)	0	0	0	0.51	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank507	Stargo Tricanter Feed Tank (250 gallons)	0	0	0	0.0019	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank508	Stargo Slurry Tank (500 gallons)	0	0	0	0.0012	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
EWC	Central EW (548 cells)	0	0	0	0	4.75	0	0	0	0	lb/hr	hours	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook
EWSS	Southside EW (220 cells)	0	0	0	0	1.67	0	0	0	0	lb/hr	hours	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook
EWSt	Stargo EW (324 cells)	0	0	0	0	2.96	0	0	0	0	lb/hr	hours	Building Ventilation Methodology from the 1985 American Society of Heating, Refrigerating, and Air Conditioning Engineers Fundamentals Handbook
SXM-MTF	Modoc Test Facility SX (1,418.72 ft2)	0	0	0	0.11	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
EW-MTF	Modoc Test Facility EW (771.2 ft2)	0	0	0	0	0.12	0	0	0	0	lb/hr	hours	*Measurement of Sulfuric Acid Mist Emissions from the Cyprus Twin Buttes Copper Company Electrowinning Tankhouse* (12/92), Applied Environmental Consultants
Tank424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	0	0	0	0.0049	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	0	0	0	0.0049	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
Tank426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	0	0	0	0.0026	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
External Combustion													
NGC	General Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	AP-42 Tables 1.4-1 and 1.4-2 for Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100 (07/98), 40 CFR 98 Tables C-1 and C-2, and 1,020 Btu/scf
DCI	General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	MMBtu	AP-42 Tables 1.3-1 and 1.3-3 (05/10) for Industrial Distillate Fuel Oil < 100 MMBtu/hr, Diesel Sulfur Content of 0.0015%, 40 CFR 98 Tables C-1 and C-2, and 137,000 Btu/gallon
PCI	General Uncontrolled Propane Combustion in Industrial Boilers	0.082	0.142	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	MMBtu	AP-42 Table 1.5-1 (07/08) for LPG Combustion, a Propane Heat Content of 91.5 MMBtu/10^3 gallons, AP-42 Table 1.4-2 (07/98), a Natural Gas Heating Value of 1,020 Btu/scf, Propane Sulfur Content of 15 gr/100 ft^3 and 40 CFR 98 Tables C-1 and C-2
SGB	Natural Gas Startup Boiler (17.64 MMBtu/hr)	0.082	0.050	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	AP-42 Tables 1.4-1 and 1.4-2 (07/98), Manufacturer Specifications for NO_X, 40 CFR 98 Tables C-1 and C-2, and 1,020 Btu/scf
Turbines													
MGT1	Natural Gas Turbine 1 (204.89 MMBtu/hr)	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	Emission Limits, AP-42 Table 3.1-2a (04/00) for Stationary Natural Gas-Fired Turbines, 0.0008% Natural Gas Sulfur Content, and 40 CFR 98 Tables C-1 and C-2
MGT2	Natural Gas Turbine 2 (204.89 MMBtu/hr)	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	Emission Limits, AP-42 Table 3.1-2a (04/00) for Stationary Natural Gas-Fired Turbines, 0.0008% Natural Gas Sulfur Content, and 40 CFR 98 Tables C-1 and C-2
Stationary Engines													
Diesel Emergency and Black Start Engines													
DES	Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)	0.00668	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	AP-42 Table 3.3-1 (10/96), Diesel Fuel Industrial Engine, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
Tier3-130/225	Tier 3 Diesel Engines (130 ≤ kW < 225)	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 130 ≤ kW < 225, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
Tier3-225/450	Tier 3 Diesel Engines (225 ≤ kW < 450)	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 225 ≤ kW < 450, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
Tier4-19/37	Tier 4 Diesel Engines (19 ≤ kW < 37)	0.0090	0.0073	0.000011	0.00044	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Tier 4 Final Emission Standards from 40 CFR 1039.101 for Engines Rated 19 ≤ kW < 37, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO37A	GO Diesel Emergency Generator GNO37A (809 hp engine)	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family 8VPXL16.1ACB, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO38A	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family AVPXL16.1ACB, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO36A	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	0.0016	0.0063	0.000011	0.00025	0	0	1.19	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family FCEXL0409AAD, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO46A	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	0.0010	0.0090	0.000011	0.00080	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family 5JDXL06.8038, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO95A	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	0.000016	0.0052	0.000011	0.000016	0	0	1.19	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family KSZXL02.2PXB, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
MFPE	Metcalf Diesel Fire Pump Engine (350 hp engine)	0.0015	0.0062	0.000011	0.00015	0	0	1.17	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family EJDXL09.0114, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
GNO61A	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	0.0021	0.0087	0.000011	0.00016	0	0	1.15	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family HCPXL27.0NZS, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
MCR	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	0.0033	0.0061	0.000011	0.0012	0	0	1.34	0.000046	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family HCEXL03.3BAA, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
Propane Emergency Engines													
P1CII	Propane 4-Stroke Rich Burn Phase 1 Class II Engines	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Phase 1 Class II Emission Standards from Table 1 of 40 CFR 90.103, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Generac1	Generac Propane Emergency Generators with Engine Family Number 7GNXS.4072DA	0.18	0.016	0.00018	0.0018	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family 7GNXS.4072DA, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Generac2	Generac Propane Emergency Generators with Engine Family Number 8GNXS.4072DA	0.49	0.017	0.00018	0.0021	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family 8GNXS.4072DA, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Generac3	Generac Propane Emergency Generators with Engine Family Number CGNXS.4072DC	0.37	0.0068	0.00018	0.00080	0	0	1.59	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family CGNXS.4072DC, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Cummins1	Cummins Propane Emergency Generators with Manufacturer's Information	0.16	0.012	0.00018	0.0022	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Manufacturer's Information, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Cummins2	Cummins Propane Emergency Generators with Engine Family Number CCEXB06.8GDC	0.14	0.012	0.00018	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family CCEXB06.8GDC, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
GNO85A	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family KPSIB5.702ED, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
GNO24B	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family NPSIB5.702ED, Complete Sulfur Conversion Using a Propane Sulfur Content of 0.15 grains/scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Natural Gas Emergency Engines													
GSC-NG	GSC Natural Gas Emergency Generator (460 hp engine)	0.0017	0.00022	0.000006	0.000016	0	0	0.90	0.00021	0.000082	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family NGNXB14.22C1, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 1,020 Btu/scf, and 10,500 Btu/hp-hr
Diesel Non-Emergency Engines													
Tier3-75/130-DN	Tier 3 Diesel Engines (75 ≤ kW < 130)	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.000009	lb/hp-hr	hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 75 ≤ kW < 130, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
S12-DN	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	0.000016	0.0064	0.000011	0.000016	0	0	1.28	0.00008	0.000009	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family NDZXL02.9020, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, and 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
Tanks													
Tank150	Diesel Tank D1 (177,850 gallons)	0	0	0	0.020	0	0	0	0	0	lb/hr	hours	EPA TANKS Program

Table F.6 Gaseous Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factor										Process Rate Units	Reference
		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	Units		
Tank151	Diesel Tank D2 (200,434 gallons)	0	0	0	0.026	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Tank154	Diesel Tank D5 (47,255 gallons)	0	0	0	0.0085	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Tank161	Diesel Tank Pit 95 (101,690 gallons)	0	0	0	0.037	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Tank155	Gasoline Tank G1 (12,000 gallons)	0	0	0	0.98	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Tank156	Gasoline Tank G2 (12,000 gallons)	0	0	0	0.98	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Tank157	Gasoline Tank G3 (12,000 gallons)	0	0	0	0.58	0	0	0	0	0	lb/hr	hours	EPA TANKS Program

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
Operation 001: Mining Operations																								
001-003	Blasting	ABlasting	F	2,136	blasts	2,489.17	110.24	0.89	0	0	0	24,909.40	0.97	0.19	lb/blast	2,658.43	117.73	0.95	0	0	0	26,603.24	1.03	0.20
Total of Non-Fugitive Emissions for Operation 001:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 001:																*2,658.43*	*117.73*	*0.95*	*0*	*0*	*0*	*26,603.24*	*1.03*	*0.20*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:																*2,658.43*	*117.73*	*0.95*	*0*	*0*	*0*	*26,603.24*	*1.03*	*0.20*
Operation 002: Morenci Concentrator																								
002-352	Morenci Concentrator Bulk Flotation	BFO	F	542.14	tons	0	0	0	2.35	0	0	0	0	0	lb/ton	0	0	0	0.64	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0.64*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0.64*	*0*	*0*	*0*	*0*	*0*
Operation 003: MFL Fine Crushing Plant																								
003-204	Agglomerating Unit 1	AAgg	NF	26,280,000	tons	3.08E-08	3.54E-06	3.09E-05	0	0	0	7.22E-03	0	0	lb/ton	0.0004	0.05	0.41	0	0	0	94.81	0	0
003-205	Agglomerating Unit 2	AAgg	NF	26,280,000	tons	3.08E-08	3.54E-06	3.09E-05	0	0	0	7.22E-03	0	0	lb/ton	0.0004	0.05	0.41	0	0	0	94.81	0	0
Total of Non-Fugitive Emissions for Operation 003:																*0.0008*	*0.09*	*0.81*	*0*	*0*	*0*	*189.62*	*0*	*0*
Total of Fugitive Emissions for Operation 003:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:																*0.0008*	*0.09*	*0.81*	*0*	*0*	*0*	*189.62*	*0*	*0*
Operation 004: Lime Slaking Plants and Lime Transloading																								
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	416,976	hp-hr	0.0090	0.0073	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.89	1.52	0.002	0.09	0	0	237.96	0.01	0.002
Total of Non-Fugitive Emissions for Operation 004:																*1.89*	*1.52*	*0.002*	*0.09*	*0*	*0*	*237.96*	*0.01*	*0.002*
Total of Fugitive Emissions for Operation 004:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:																*1.89*	*1.52*	*0.002*	*0.09*	*0*	*0*	*237.96*	*0.01*	*0.002*
Operation 005: Metcalf Power Plant																								
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	268,570	MMBtu	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	11.01	79.23	0.10	0.28	0	0	15,708.29	0.30	0.03
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	268,570	MMBtu	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	11.01	79.23	0.10	0.28	0	0	15,708.29	0.30	0.03
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	150,000	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.50	2.33	0.0008	0.19	0	0	85.60	0.003	0.0007
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	150,000	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.50	2.33	0.0008	0.19	0	0	85.60	0.003	0.0007
Total of Non-Fugitive Emissions for Operation 005:																*23.02*	*163.11*	*0.20*	*0.94*	*0*	*0*	*31,587.79*	*0.60*	*0.06*
Total of Fugitive Emissions for Operation 005:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:																*23.02*	*163.11*	*0.20*	*0.94*	*0*	*0*	*31,587.79*	*0.60*	*0.06*
Operation 009: Solution Extraction/Electrowinning Operations																								
009-117	Central SX (21,175 ft2)	SXC	F	8,760	hours	0	0	0	0.92	0	0	0	0	0	lb/hr	0	0	0	4.01	0	0	0	0	0
009-462	Central Backwash Bleed Tank (33,000 gallons)	Tank462	NF	8,760	hours	0	0	0	0.024	0	0	0	0	0	lb/hr	0	0	0	0.10	0	0	0	0	0

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
009-463	Central Barren Organic Tank (60,900 gallons)	Tank463	NF	8,760	hours	0	0	0	0.018	0	0	0	0	0	lb/hr	0	0	0	0.08	0	0	0	0	0
009-464	Central Bead Separator Tank (5,000 gallons)	Tank464	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-465	Central High Decant Tank (4,700 gallons)	Tank465	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-466	Central Low Decant Tank (4,700 gallons)	Tank466	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-467	Central Gunk Tank 1 (7,600 gallons)	Tank467	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-468	Central Gunk Tank 2 (7,600 gallons)	Tank468	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-469	Central Gunk Tank 3 (23,800 gallons)	Tank469	NF	8,760	hours	0	0	0	0.016	0	0	0	0	0	lb/hr	0	0	0	0.07	0	0	0	0	0
009-470	Central Organic Recovery Tank (306,700 gallons)	Tank470	NF	8,760	hours	0	0	0	0.33	0	0	0	0	0	lb/hr	0	0	0	1.46	0	0	0	0	0
009-471	Central Raffinate Pond (9,905 ft2)	Pond471	F	8,760	hours	0	0	0	1.17	0	0	0	0	0	lb/hr	0	0	0	5.12	0	0	0	0	0
009-118	Metcalf SX (40,585.41 ft2)	SXMe	F	8,760	hours	0	0	0	1.77	0	0	0	0	0	lb/hr	0	0	0	7.75	0	0	0	0	0
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Tank472	NF	8,760	hours	0	0	0	0.024	0	0	0	0	0	lb/hr	0	0	0	0.11	0	0	0	0	0
009-473	Metcalf High A Decant Tank (4,700 gallons)	Tank473	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-474	Metcalf High B Decant Tank (4,700 gallons)	Tank474	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Tank475	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Tank476	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Tank477	NF	8,760	hours	0	0	0	0.015	0	0	0	0	0	lb/hr	0	0	0	0.07	0	0	0	0	0
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Tank478	NF	8,760	hours	0	0	0	0.013	0	0	0	0	0	lb/hr	0	0	0	0.06	0	0	0	0	0
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Tank479	NF	8,760	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Tank480	NF	8,760	hours	0	0	0	0.016	0	0	0	0	0	lb/hr	0	0	0	0.07	0	0	0	0	0
009-481	Metcalf Holding Tank (122,200 gallons)	Tank481	NF	8,760	hours	0	0	0	0.036	0	0	0	0	0	lb/hr	0	0	0	0.16	0	0	0	0	0
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Tank482	NF	8,760	hours	0	0	0	0.34	0	0	0	0	0	lb/hr	0	0	0	1.47	0	0	0	0	0
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Tank483	NF	8,760	hours	0	0	0	0.34	0	0	0	0	0	lb/hr	0	0	0	1.47	0	0	0	0	0
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Tank484	NF	8,760	hours	0	0	0	0.036	0	0	0	0	0	lb/hr	0	0	0	0.16	0	0	0	0	0
009-485	Metcalf Raffinate Pond (10,236 ft2)	Pond485	F	8,760	hours	0	0	0	1.22	0	0	0	0	0	lb/hr	0	0	0	5.33	0	0	0	0	0
009-119	Modoc SX (88,229.16 ft2)	SXMo	F	8,760	hours	0	0	0	3.03	0	0	0	0	0	lb/hr	0	0	0	13.27	0	0	0	0	0
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Tank486	NF	8,760	hours	0	0	0	0.022	0	0	0	0	0	lb/hr	0	0	0	0.10	0	0	0	0	0
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Tank487	NF	8,760	hours	0	0	0	0.022	0	0	0	0	0	lb/hr	0	0	0	0.10	0	0	0	0	0
009-488	Modoc High A Decant Tank (4,700 gallons)	Tank488	NF	8,760	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-489	Modoc High B Decant Tank (4,700 gallons)	Tank489	NF	8,760	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-490	Modoc Low A Decant Tank (4,700 gallons)	Tank490	NF	8,760	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-491	Modoc Low B Decant Tank (4,700 gallons)	Tank491	NF	8,760	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Tank492	NF	8,760	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.05	0	0	0	0	0

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Tank493	NF	8,760	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.05	0	0	0	0	0
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Tank494	NF	8,760	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Tank495	NF	8,760	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.05	0	0	0	0	0
009-496	Modoc Holding Tank (118,000 gallons)	Tank496	NF	8,760	hours	0	0	0	0.032	0	0	0	0	0	lb/hr	0	0	0	0.14	0	0	0	0	0
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Tank497	NF	8,760	hours	0	0	0	0.26	0	0	0	0	0	lb/hr	0	0	0	1.16	0	0	0	0	0
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Tank498	NF	8,760	hours	0	0	0	0.26	0	0	0	0	0	lb/hr	0	0	0	1.16	0	0	0	0	0
009-499	Modoc Raffinate Pond (15,678 ft2)	Pond499	F	8,760	hours	0	0	0	1.47	0	0	0	0	0	lb/hr	0	0	0	6.45	0	0	0	0	0
009-349	Stargo SX (48,846.87 ft2)	SXSt	F	8,760	hours	0	0	0	2.12	0	0	0	0	0	lb/hr	0	0	0	9.29	0	0	0	0	0
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Tank500	NF	8,760	hours	0	0	0	0.013	0	0	0	0	0	lb/hr	0	0	0	0.06	0	0	0	0	0
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Tank501	NF	8,760	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.09	0	0	0	0	0
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Tank502	NF	8,760	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.09	0	0	0	0	0
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Tank503	NF	8,760	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.09	0	0	0	0	0
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Tank504	NF	8,760	hours	0	0	0	0.023	0	0	0	0	0	lb/hr	0	0	0	0.10	0	0	0	0	0
009-505	Stargo Holding Tank (108,900 gallons)	Tank505	NF	8,760	hours	0	0	0	0.026	0	0	0	0	0	lb/hr	0	0	0	0.11	0	0	0	0	0
009-506	Stargo Stormwater Tank (772,190 gallons)	Tank506	NF	8,760	hours	0	0	0	0.51	0	0	0	0	0	lb/hr	0	0	0	2.23	0	0	0	0	0
009-507	Stargo Tricanter Feed Tank (250 gallons)	Tank507	NF	8,760	hours	0	0	0	0.0019	0	0	0	0	0	lb/hr	0	0	0	0.008	0	0	0	0	0
009-508	Stargo Slurry Tank (500 gallons)	Tank508	NF	8,760	hours	0	0	0	0.0012	0	0	0	0	0	lb/hr	0	0	0	0.005	0	0	0	0	0
009-121	Central EW (548 cells)	EWC	F	8,760	hours	0	0	0	0	4.75	0	0	0	0	lb/hr	0	0	0	0	20.82	0	0	0	0
009-122	Southside EW (220 cells)	EWSS	F	8,760	hours	0	0	0	0	1.67	0	0	0	0	lb/hr	0	0	0	0	7.30	0	0	0	0
009-221	Stargo EW (324 cells)	EWSt	F	8,760	hours	0	0	0	0	2.96	0	0	0	0	lb/hr	0	0	0	0	12.98	0	0	0	0
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	5.15	6.13	0.04	0.34	0	0	7,311.08	0.14	0.01
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	5.15	6.13	0.04	0.34	0	0	7,311.08	0.14	0.01
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	5.15	6.13	0.04	0.34	0	0	7,311.08	0.14	0.01
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	5.15	6.13	0.04	0.34	0	0	7,311.08	0.14	0.01
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	5.15	6.13	0.04	0.34	0	0	7,311.08	0.14	0.01
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.09	0.35	0.004	0.004	0	0	392.80	0.02	0.003
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.09	0.35	0.004	0.004	0	0	392.80	0.02	0.003
009-422	Modoc Test Facility SX (1,418.72 ft2)	SXM-MTF	F	8,760	hours	0	0	0	0.11	0	0	0	0	0	lb/hr	0	0	0	0.46	0	0	0	0	0
009-423	Modoc Test Facility EW (771.2 ft2)	EW-MTF	F	8,760	hours	0	0	0	0	0.12	0	0	0	0	lb/hr	0	0	0	0	0.53	0	0	0	0
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Tank424	NF	8,760	hours	0	0	0	0.0049	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Tank425	NF	8,760	hours	0	0	0	0.0049	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Tank426	NF	8,760	hours	0	0	0	0.0026	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2[a]	CH_4[a]	N_2O[a]
Total of Non-Fugitive Emissions for Operation 009:																*25.91*	*31.34*	*0.19*	*13.19*	*0*	*0*	*37,340.99*	*0.72*	*0.08*
Total of Fugitive Emissions for Operation 009:																*0*	*0*	*0*	*51.69*	*41.63*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:																*25.91*	*31.34*	*0.19*	*64.88*	*41.63*	*0*	*37,340.99*	*0.72*	*0.08*
Operation 010: Concrete Batch Plant																								
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.36	0.63	0.07	0.02	0	0	613.16	0.03	0.006
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.36	0.63	0.07	0.02	0	0	613.16	0.03	0.006
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.36	0.63	0.07	0.02	0	0	613.16	0.03	0.006
Total of Non-Fugitive Emissions for Operation 010:																*1.09*	*1.89*	*0.22*	*0.07*	*0*	*0*	*1,839.48*	*0.09*	*0.02*
Total of Fugitive Emissions for Operation 010:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:																*1.09*	*1.89*	*0.22*	*0.07*	*0*	*0*	*1,839.48*	*0.09*	*0.02*
Operation 011: Storage Tanks																								
011-150	Diesel Tank D1 (177,850 gallons)	Tank150	NF	8,760	hours	0	0	0	0.020	0	0	0	0	0	lb/hr	0	0	0	0.09	0	0	0	0	0
011-151	Diesel Tank D2 (200,434 gallons)	Tank151	NF	8,760	hours	0	0	0	0.026	0	0	0	0	0	lb/hr	0	0	0	0.11	0	0	0	0	0
011-154	Diesel Tank D5 (47,255 gallons)	Tank154	NF	8,760	hours	0	0	0	0.0085	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
011-161	Diesel Tank Pit 95 (101,690 gallons)	Tank161	NF	8,760	hours	0	0	0	0.037	0	0	0	0	0	lb/hr	0	0	0	0.16	0	0	0	0	0
011-155	Gasoline Tank G1 (12,000 gallons)	Tank155	NF	8,760	hours	0	0	0	0.98	0	0	0	0	0	lb/hr	0	0	0	4.28	0	0	0	0	0
011-156	Gasoline Tank G2 (12,000 gallons)	Tank156	NF	8,760	hours	0	0	0	0.98	0	0	0	0	0	lb/hr	0	0	0	4.28	0	0	0	0	0
011-157	Gasoline Tank G3 (12,000 gallons)	Tank157	NF	8,760	hours	0	0	0	0.58	0	0	0	0	0	lb/hr	0	0	0	2.55	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*11.51*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*11.51*	*0*	*0*	*0*	*0*	*0*
Operation 014: Concentrate Leach Plant																								
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	61,320	MMBtu	0.082	0.050	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	2.52	1.53	0.02	0.17	0	0	3,586.52	0.07	0.007
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	8,760	hours	0	0	0	5.82	0.75	0	0	0	0	lb/hr	0	0	0	25.49	3.29	0	0	0	0
Total of Non-Fugitive Emissions for Operation 014:																*2.52*	*1.53*	*0.02*	*25.66*	*3.29*	*0*	*3,586.52*	*0.07*	*0.007*
Total of Fugitive Emissions for Operation 014:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:																*2.52*	*1.53*	*0.02*	*25.66*	*3.29*	*0*	*3,586.52*	*0.07*	*0.007*
Operation 015: Diesel Emergency Engines																								
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	242,700	hp-hr	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.14	1.10	0.001	0.07	0	0	138.51	0.006	0.00112
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	405,000	hp-hr	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.23	1.83	0.002	0.12	0	0	231.13	0.009	0.002
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	162,000	hp-hr	0.0016	0.0063	0.000011	0.00025	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.13	0.51	0.0009	0.02	0	0	96.54	0.004	0.0008

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	110,000	hp-hr	0.0010	0.0090	0.000011	0.00080	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.06	0.49	0.0006	0.04	0	0	62.78	0.003	0.0005
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	33,000	hp-hr	0.000016	0.0052	0.000011	0.000016	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.0003	0.09	0.0002	0.0003	0	0	19.67	0.0008	0.0002
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	112,500	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.32	0.35	0.0006	0.02	0	0	64.20	0.003	0.0005
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	175,000	hp-hr	0.0015	0.0062	0.000011	0.00015	0	0	1.17	0.000046	0.0000093	lb/hp-hr	0.13	0.55	0.001	0.01	0	0	102.53	0.004	0.0008
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	570,500	hp-hr	0.0021	0.0087	0.000011	0.00016	0	0	1.15	0.000046	0.0000093	lb/hp-hr	0.61	2.48	0.003	0.05	0	0	326.69	0.01	0.003
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	34,500	hp-hr	0.0033	0.0061	0.000011	0.0012	0	0	1.34	0.000046	0.0000093	lb/hp-hr	0.06	0.11	0.0002	0.02	0	0	23.08	0.0008	0.0002
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	269,500	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.78	0.83	0.001	0.06	0	0	153.80	0.006	0.001
Total of Non-Fugitive Emissions for Operation 015:																*2.46*	*8.33*	*0.01*	*0.42*	*0*	*0*	*1,218.93*	*0.05*	*0.01*
Total of Fugitive Emissions for Operation 015:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:																*2.46*	*8.33*	*0.01*	*0.42*	*0*	*0*	*1,218.93*	*0.05*	*0.01*
Operation 017: Metcalf Concentrator																								
017-327	Metcalf Concentrator Bulk Flotation	BFO	F	542.14	tons	0	0	0	2.35	0	0	0	0	0	lb/ton	0	0	0	0.64	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0.64*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0.64*	*0*	*0*	*0*	*0*	*0*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations																								
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	8,760	hours	0	0	0	0	0	0.47	0	0	0	lb/hr	0	0	0	0	0	2.06	0	0	0
Total of Non-Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*2.06*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*2.06*	*0*	*0*	*0*
Operation 021: Propane and Natural Gas Emergency Engines																								
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	0.49	0.017	0.00018	0.0021	0	0	1.46	0.000069	0.000014	lb/hp-hr	1.54	0.06	0.0006	0.006	0	0	4.60	0.0002	0.00004
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	0.16	0.012	0.00018	0.0022	0	0	1.46	0.000069	0.000014	lb/hp-hr	4.02	0.29	0.004	0.05	0	0	35.55	0.002	0.0003
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	0.14	0.012	0.00018	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	3.36	0.30	0.004	0.07	0	0	35.55	0.002	0.0003
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	0.16	0.012	0.00018	0.0022	0	0	1.46	0.000069	0.000014	lb/hp-hr	4.02	0.29	0.004	0.05	0	0	35.55	0.002	0.0003
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	0.14	0.012	0.00018	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	3.36	0.30	0.004	0.07	0	0	35.55	0.002	0.0003
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	18,070	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	7.71	0.18	0.002	0.02	0	0	13.15	0.0006	0.0001
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	0.49	0.017	0.00018	0.0021	0	0	1.46	0.000069	0.000014	lb/hp-hr	1.54	0.06	0.0006	0.006	0	0	4.60	0.0002	0.00004
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	6,325	hp-hr	0.18	0.016	0.00018	0.0018	0	0	1.46	0.000069	0.000014	lb/hp-hr	0.57	0.05	0.0006	0.006	0	0	4.60	0.0002	0.00004
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	6,325	hp-hr	0.37	0.0068	0.00018	0.00080	0	0	1.59	0.000069	0.000014	lb/hp-hr	1.17	0.021	0.0006	0.003	0	0	5.04	0.0002	0.00004
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	18,500	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	7.89	0.18	0.002	0.02	0	0	13.46	0.0006	0.0001

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	18,500	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	7.89	0.18	0.002	0.02	0	0	13.46	0.0006	0.0001
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	73,500	hp-hr	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	2.40	0.51	0.007	0.10	0	0	55.33	0.003	0.0005
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	230,000	hp-hr	0.0017	0.00022	0.0000059	0.000016	0	0	0.90	0.00021	0.000082	lb/hp-hr	0.20	0.03	0.0007	0.002	0	0	103.42	0.02	0.009
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	73,500	hp-hr	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	2.40	0.51	0.007	0.10	0	0	55.33	0.003	0.0005
Total of Non-Fugitive Emissions for Operation 021:																*48.05*	*2.95*	*0.04*	*0.54*	*0*	*0*	*415.18*	*0.04*	*0.01*
Total of Fugitive Emissions for Operation 021:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:																*48.05*	*2.95*	*0.04*	*0.54*	*0*	*0*	*415.18*	*0.04*	*0.01*
Operation 024: Miscellaneous Fuel Burning Equipment																								
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	2,786	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.11	0.20	0.02	0.008	0	0	193.05	0.009	0.002
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	4,415	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.18	0.22	0.001	0.01	0	0	258.23	0.005	0.0005
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	177,355	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	7.30	8.69	0.05	0.48	0	0	10,373.25	0.20	0.02
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	52,091	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	2.14	2.55	0.02	0.14	0	0	3,046.74	0.06	0.006
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	36,897	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	1.51	2.62	0.30	0.10	0	0	2,557.06	0.12	0.02
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	4,108	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.17	0.29	0.034	0.01	0	0	284.72	0.01	0.003
Total of Non-Fugitive Emissions for Operation 024:																*11.42*	*14.57*	*0.43*	*0.75*	*0*	*0*	*16,713.06*	*0.40*	*0.05*
Total of Fugitive Emissions for Operation 024:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 024:																*11.42*	*14.57*	*0.43*	*0.75*	*0*	*0*	*16,713.06*	*0.40*	*0.05*
Operation 025: Diesel Non-Emergency Engines																								
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	1,522,488	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	6.26	4.67	0.008	0.33	0	0	868.87	0.04	0.007
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	648,240	hp-hr	0.000016	0.0064	0.000011	0.000016	0	0	1.28	0.000082	0.0000093	lb/hp-hr	0.005	2.08	0.004	0.005	0	0	414.56	0.03	0.003
Total of Non-Fugitive Emissions for Operation 025:																*6.26*	*6.75*	*0.01*	*0.34*	*0*	*0*	*1,283.42*	*0.06*	*0.01*
Total of Fugitive Emissions for Operation 025:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:																*6.26*	*6.75*	*0.01*	*0.34*	*0*	*0*	*1,283.42*	*0.06*	*0.01*
AOS2: Concentrate Leach Plant Upgrades																								
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	8,760	hours	0	0	0	4.074	0.525	0	0	0	0	lb/hr	0	0	0	17.84	2.30	0	0	0	0
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	8,760	hours	0	0	0	4.074	0.525	0	0	0	0	lb/hr	0	0	0	17.84	2.30	0	0	0	0
Total of Non-Fugitive Emissions for AOS2:																*0*	*0*	*0*	*35.69*	*4.60*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for AOS2:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for AOS2:																*0*	*0*	*0*	*35.69*	*4.60*	*0*	*0*	*0*	*0*
Total of Non-Fugitive Emissions:																**122.63**	**232.08**	**1.93**	**63.71**	**4.60**	**2.06**	**94,413**	**2.04**	**0.25**
Total of Fugitive Emissions:																**2,658.43**	**117.73**	**0.95**	**52.96**	**41.63**	**0**	**26,603**	**1.03**	**0.20**

Table F.7 Annual Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	Emission Factors									EF Units	Emissions (tpy)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
Total of Non-Fugitive and Fugitive Emissions:																**2,781.06**	**349.81**	**2.88**	**116.67**	**46.23**	**2.06**	**121,016**	**3.07**	**0.45**

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

[a] CO_2e emissions are calculcated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). GWP of CO_2 = 1, GWP of CH_4 = 25, GWP of N_2O = 298.

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
Operation 001: Mining Operations																								
001-003	Blasting	HBlasting	F	1	blasts	8,812.17	390.26	3.14	0	0	0	88,184.47	3.42	0.67	lb/blast	8,812.17	390.26	3.14	0	0	0	88,184.47	3.42	0.67
Total of Non-Fugitive Emissions for Operation 001:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 001:																*8,812.17*	*390.26*	*3.14*	*0*	*0*	*0*	*88,184.47*	*3.42*	*0.67*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:																*8,812.17*	*390.26*	*3.14*	*0*	*0*	*0*	*88,184.47*	*3.42*	*0.67*
Operation 002: Morenci Concentrator																								
002-352	Morenci Concentrator Bulk Flotation	BFO	F	0.062	tons	0	0	0	2.35	0	0	0	0	0	lb/ton	0	0	0	0.15	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0.15*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:																*0*	*0*	*0*	*0.15*	*0*	*0*	*0*	*0*	*0*
Operation 003: MFL Fine Crushing Plant																								
003-204	Agglomerating Unit 1	HAgg	NF	3,000	tons	6.15E-08	1.14E-05	8.51E-05	0	0	0	1.94E-02	0	0	lb/ton	0.0002	0.03	0.26	0	0	0	58.22	0	0
003-205	Agglomerating Unit 2	HAgg	NF	3,000	tons	6.15E-08	1.14E-05	8.51E-05	0	0	0	1.94E-02	0	0	lb/ton	0.0002	0.03	0.26	0	0	0	58.22	0	0
Total of Non-Fugitive Emissions for Operation 003:																*0.0004*	*0.07*	*0.51*	*0*	*0*	*0*	*116.45*	*0*	*0*
Total of Fugitive Emissions for Operation 003:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:																*0.0004*	*0.07*	*0.51*	*0*	*0*	*0*	*116.45*	*0*	*0*
Operation 004: Lime Slaking Plants and Lime Transloading																								
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	47.60	hp-hr	0.0090	0.0073	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.43	0.35	0.0005	0.02	0	0	54.33	0.002	0.0004
Total of Non-Fugitive Emissions for Operation 004:																*0.43*	*0.35*	*0.0005*	*0.02*	*0*	*0*	*54.33*	*0.002*	*0.0004*
Total of Fugitive Emissions for Operation 004:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:																*0.43*	*0.35*	*0.0005*	*0.02*	*0*	*0*	*54.33*	*0.002*	*0.0004*
Operation 005: Metcalf Power Plant																								
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	204.89	MMBtu	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	16.80	120.89	0.15	0.43	0	0	23,967.47	0.45	0.05
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	204.89	MMBtu	0.082	0.59	0.00075	0.0021	0	0	116.98	0.0022	0.00022	lb/MMBtu	16.80	120.89	0.15	0.43	0	0	23,967.47	0.45	0.05
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	300	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	2.00	9.30	0.003	0.75	0	0	342.41	0.01	0.003
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	300	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	2.00	9.30	0.003	0.75	0	0	342.41	0.01	0.003
Total of Non-Fugitive Emissions for Operation 005:																*37.61*	*260.37*	*0.31*	*2.37*	*0*	*0*	*48,619.77*	*0.93*	*0.10*
Total of Fugitive Emissions for Operation 005:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:																*37.61*	*260.37*	*0.31*	*2.37*	*0*	*0*	*48,619.77*	*0.93*	*0.10*
Operation 009: Solution Extraction/Electrowinning Operations																								
009-117	Central SX (21,175 ft2)	SXC	F	1	hours	0	0	0	0.92	0	0	0	0	0	lb/hr	0	0	0	0.92	0	0	0	0	0
009-462	Central Backwash Bleed Tank (33,000 gallons)	Tank462	NF	1	hours	0	0	0	0.024	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2[a]	CH_4[a]	N_2O[a]
009-463	Central Barren Organic Tank (60,900 gallons)	Tank463	NF	1	hours	0	0	0	0.018	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-464	Central Bead Separator Tank (5,000 gallons)	Tank464	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-465	Central High Decant Tank (4,700 gallons)	Tank465	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-466	Central Low Decant Tank (4,700 gallons)	Tank466	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-467	Central Gunk Tank 1 (7,600 gallons)	Tank467	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-468	Central Gunk Tank 2 (7,600 gallons)	Tank468	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-469	Central Gunk Tank 3 (23,800 gallons)	Tank469	NF	1	hours	0	0	0	0.016	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-470	Central Organic Recovery Tank (306,700 gallons)	Tank470	NF	1	hours	0	0	0	0.33	0	0	0	0	0	lb/hr	0	0	0	0.33	0	0	0	0	0
009-471	Central Raffinate Pond (9,905 ft2)	Pond471	F	1	hours	0	0	0	1.17	0	0	0	0	0	lb/hr	0	0	0	1.17	0	0	0	0	0
009-118	Metcalf SX (40,585.41 ft2)	SXMe	F	1	hours	0	0	0	1.77	0	0	0	0	0	lb/hr	0	0	0	1.77	0	0	0	0	0
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Tank472	NF	1	hours	0	0	0	0.024	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-473	Metcalf High A Decant Tank (4,700 gallons)	Tank473	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-474	Metcalf High B Decant Tank (4,700 gallons)	Tank474	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Tank475	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Tank476	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Tank477	NF	1	hours	0	0	0	0.015	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Tank478	NF	1	hours	0	0	0	0.013	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Tank479	NF	1	hours	0	0	0	0.0093	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Tank480	NF	1	hours	0	0	0	0.016	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-481	Metcalf Holding Tank (122,200 gallons)	Tank481	NF	1	hours	0	0	0	0.036	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Tank482	NF	1	hours	0	0	0	0.34	0	0	0	0	0	lb/hr	0	0	0	0.34	0	0	0	0	0
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Tank483	NF	1	hours	0	0	0	0.34	0	0	0	0	0	lb/hr	0	0	0	0.34	0	0	0	0	0
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Tank484	NF	1	hours	0	0	0	0.036	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
009-485	Metcalf Raffinate Pond (10,236 ft2)	Pond485	F	1	hours	0	0	0	1.22	0	0	0	0	0	lb/hr	0	0	0	1.22	0	0	0	0	0
009-119	Modoc SX (88,229.16 ft2)	SXMo	F	1	hours	0	0	0	3.03	0	0	0	0	0	lb/hr	0	0	0	3.03	0	0	0	0	0
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Tank486	NF	1	hours	0	0	0	0.022	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Tank487	NF	1	hours	0	0	0	0.022	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-488	Modoc High A Decant Tank (4,700 gallons)	Tank488	NF	1	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.007	0	0	0	0	0
009-489	Modoc High B Decant Tank (4,700 gallons)	Tank489	NF	1	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.007	0	0	0	0	0
009-490	Modoc Low A Decant Tank (4,700 gallons)	Tank490	NF	1	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.007	0	0	0	0	0
009-491	Modoc Low B Decant Tank (4,700 gallons)	Tank491	NF	1	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.007	0	0	0	0	0
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Tank492	NF	1	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Tank493	NF	1	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Tank494	NF	1	hours	0	0	0	0.0074	0	0	0	0	0	lb/hr	0	0	0	0.007	0	0	0	0	0
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Tank495	NF	1	hours	0	0	0	0.012	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0
009-496	Modoc Holding Tank (118,000 gallons)	Tank496	NF	1	hours	0	0	0	0.032	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Tank497	NF	1	hours	0	0	0	0.26	0	0	0	0	0	lb/hr	0	0	0	0.26	0	0	0	0	0
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Tank498	NF	1	hours	0	0	0	0.26	0	0	0	0	0	lb/hr	0	0	0	0.26	0	0	0	0	0
009-499	Modoc Raffinate Pond (15,678 ft2)	Pond499	F	1	hours	0	0	0	1.47	0	0	0	0	0	lb/hr	0	0	0	1.47	0	0	0	0	0
009-349	Stargo SX (48,846.87 ft2)	SXSt	F	1	hours	0	0	0	2.12	0	0	0	0	0	lb/hr	0	0	0	2.12	0	0	0	0	0
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Tank500	NF	1	hours	0	0	0	0.013	0	0	0	0	0	lb/hr	0	0	0	0.01	0	0	0	0	0
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Tank501	NF	1	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Tank502	NF	1	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Tank503	NF	1	hours	0	0	0	0.021	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Tank504	NF	1	hours	0	0	0	0.023	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
009-505	Stargo Holding Tank (108,900 gallons)	Tank505	NF	1	hours	0	0	0	0.026	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
009-506	Stargo Stormwater Tank (772,190 gallons)	Tank506	NF	1	hours	0	0	0	0.51	0	0	0	0	0	lb/hr	0	0	0	0.51	0	0	0	0	0
009-507	Stargo Tricanter Feed Tank (250 gallons)	Tank507	NF	1	hours	0	0	0	0.0019	0	0	0	0	0	lb/hr	0	0	0	0.002	0	0	0	0	0
009-508	Stargo Slurry Tank (500 gallons)	Tank508	NF	1	hours	0	0	0	0.0012	0	0	0	0	0	lb/hr	0	0	0	0.001	0	0	0	0	0
009-121	Central EW (548 cells)	EWC	F	1	hours	0	0	0	0	4.75	0	0	0	0	lb/hr	0	0	0	0	4.75	0	0	0	0
009-122	Southside EW (220 cells)	EWSS	F	1	hours	0	0	0	0	1.67	0	0	0	0	lb/hr	0	0	0	0	1.67	0	0	0	0
009-221	Stargo EW (324 cells)	EWSt	F	1	hours	0	0	0	0	2.96	0	0	0	0	lb/hr	0	0	0	0	2.96	0	0	0	0
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	1.72	0.01	0.09	0	0	2,054.12	0.04	0.004
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	1.72	0.01	0.09	0	0	2,054.12	0.04	0.004
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	1.72	0.01	0.09	0	0	2,054.12	0.04	0.004
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	1.72	0.01	0.09	0	0	2,054.12	0.04	0.004
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	1.72	0.01	0.09	0	0	2,054.12	0.04	0.004
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.02	0.08	0.0009	0.0008	0	0	89.68	0.004	0.0007
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.02	0.08	0.0009	0.0008	0	0	89.68	0.004	0.0007
009-422	Modoc Test Facility SX (1,418.72 ft2)	SXM-MTF	F	1	hours	0	0	0	0.11	0	0	0	0	0	lb/hr	0	0	0	0.11	0	0	0	0	0
009-423	Modoc Test Facility EW (771.2 ft2)	EW-MTF	F	1	hours	0	0	0	0	0.12	0	0	0	0	lb/hr	0	0	0	0	0.12	0	0	0	0
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Tank424	NF	1	hours	0	0	0	0.0049	0	0	0	0	0	lb/hr	0	0	0	0.005	0	0	0	0	0
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Tank425	NF	1	hours	0	0	0	0.0049	0	0	0	0	0	lb/hr	0	0	0	0.005	0	0	0	0	0
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Tank426	NF	1	hours	0	0	0	0.0026	0	0	0	0	0	lb/hr	0	0	0	0.003	0	0	0	0	0

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O	EF Units	Emissions (lb/hr) CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
Total of Non-Fugitive Emissions for Operation 009:																*7.27*	*8.77*	*0.05*	*3.10*	*0*	*0*	*10,449.96*	*0.20*	*0.02*
Total of Fugitive Emissions for Operation 009:																*0*	*0*	*0*	*11.80*	*9.50*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:																*7.27*	*8.77*	*0.05*	*14.90*	*9.50*	*0*	*10,449.96*	*0.20*	*0.02*
Operation 010: Concrete Batch Plant																								
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.08	0.14	0.02	0.005	0	0	139.99	0.007	0.001
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.08	0.14	0.02	0.005	0	0	139.99	0.007	0.001
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.08	0.14	0.02	0.005	0	0	139.99	0.007	0.001
Total of Non-Fugitive Emissions for Operation 010:																*0.25*	*0.43*	*0.05*	*0.02*	*0*	*0*	*419.97*	*0.02*	*0.004*
Total of Fugitive Emissions for Operation 010:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:																*0.25*	*0.43*	*0.05*	*0.02*	*0*	*0*	*419.97*	*0.02*	*0.004*
Operation 011: Storage Tanks																								
011-150	Diesel Tank D1 (177,850 gallons)	Tank150	NF	1	hours	0	0	0	0.020	0	0	0	0	0	lb/hr	0	0	0	0.02	0	0	0	0	0
011-151	Diesel Tank D2 (200,434 gallons)	Tank151	NF	1	hours	0	0	0	0.026	0	0	0	0	0	lb/hr	0	0	0	0.03	0	0	0	0	0
011-154	Diesel Tank D5 (47,255 gallons)	Tank154	NF	1	hours	0	0	0	0.0085	0	0	0	0	0	lb/hr	0	0	0	0.009	0	0	0	0	0
011-161	Diesel Tank Pit 95 (101,690 gallons)	Tank161	NF	1	hours	0	0	0	0.037	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
011-155	Gasoline Tank G1 (12,000 gallons)	Tank155	NF	1	hours	0	0	0	0.98	0	0	0	0	0	lb/hr	0	0	0	0.98	0	0	0	0	0
011-156	Gasoline Tank G2 (12,000 gallons)	Tank156	NF	1	hours	0	0	0	0.98	0	0	0	0	0	lb/hr	0	0	0	0.98	0	0	0	0	0
011-157	Gasoline Tank G3 (12,000 gallons)	Tank157	NF	1	hours	0	0	0	0.58	0	0	0	0	0	lb/hr	0	0	0	0.58	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*2.63*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 011:																*0*	*0*	*0*	*2.63*	*0*	*0*	*0*	*0*	*0*
Operation 014: Concentrate Leach Plant																								
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	17.64	MMBtu	0.082	0.050	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.45	0.88	0.01	0.10	0	0	2,063.48	0.04	0.004
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	1	hours	0	0	0	5.82	0.75	0	0	0	0	lb/hr	0	0	0	5.82	0.75	0	0	0	0
Total of Non-Fugitive Emissions for Operation 014:																*1.45*	*0.88*	*0.01*	*5.92*	*0.75*	*0*	*2,063.48*	*0.04*	*0.004*
Total of Fugitive Emissions for Operation 014:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:																*1.45*	*0.88*	*0.01*	*5.92*	*0.75*	*0*	*2,063.48*	*0.04*	*0.004*
Operation 015: Diesel Emergency Engines																								
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	809	hp-hr	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.93	7.31	0.009	0.49	0	0	923.37	0.04	0.007
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	810	hp-hr	0.0012	0.0090	0.000011	0.00060	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.93	7.32	0.009	0.49	0	0	924.52	0.04	0.008
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	324	hp-hr	0.0016	0.0063	0.000011	0.00025	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.53	2.06	0.004	0.08	0	0	386.17	0.02	0.003

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2[a]	CH_4[a]	N_2O[a]
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	220	hp-hr	0.0010	0.0090	0.000011	0.00080	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.22	1.98	0.002	0.18	0	0	251.10	0.01	0.002
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	66	hp-hr	0.000016	0.0052	0.000011	0.000016	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.001	0.35	0.0007	0.001	0	0	78.66	0.003	0.0006
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	225	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.29	1.38	0.002	0.10	0	0	256.81	0.01	0.002
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	350	hp-hr	0.0015	0.0062	0.000011	0.00015	0	0	1.17	0.000046	0.0000093	lb/hp-hr	0.52	2.19	0.004	0.05	0	0	410.14	0.02	0.003
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	1,141	hp-hr	0.0021	0.0087	0.000011	0.00016	0	0	1.15	0.000046	0.0000093	lb/hp-hr	2.44	9.92	0.01	0.19	0	0	1,306.75	0.05	0.01
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	69	hp-hr	0.0033	0.0061	0.000011	0.0012	0	0	1.34	0.000046	0.0000093	lb/hp-hr	0.23	0.42	0.0008	0.08	0	0	92.34	0.003	0.0006
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	539	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	3.10	3.31	0.006	0.24	0	0	615.20	0.02	0.005
Total of Non-Fugitive Emissions for Operation 015:																*10.20*	*36.22*	*0.05*	*1.89*	*0*	*0*	*5,245.06*	*0.21*	*0.04*
Total of Fugitive Emissions for Operation 015:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:																*10.20*	*36.22*	*0.05*	*1.89*	*0*	*0*	*5,245.06*	*0.21*	*0.04*
Operation 017: Metcalf Concentrator																								
017-327	Metcalf Concentrator Bulk Flotation	BFO	F	0.062	tons	0	0	0	2.35	0	0	0	0	0	lb/ton	0	0	0	0.15	0	0	0	0	0
Total of Non-Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0.15*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:																*0*	*0*	*0*	*0.15*	*0*	*0*	*0*	*0*	*0*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations																								
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	1	hours	0	0	0	0	0	0.47	0	0	0	lb/hr	0	0	0	0	0	0.47	0	0	0
Total of Non-Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*0.47*	*0*	*0*	*0*
Total of Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:																*0*	*0*	*0*	*0*	*0*	*0.47*	*0*	*0*	*0*
Operation 021: Propane and Natural Gas Emergency Engines																								
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	0.49	0.017	0.00018	0.0021	0	0	1.46	0.000069	0.000014	lb/hp-hr	6.16	0.22	0.002	0.03	0	0	18.41	0.0009	0.0002
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	0.16	0.012	0.00018	0.0022	0	0	1.46	0.000069	0.000014	lb/hp-hr	16.07	1.16	0.02	0.22	0	0	142.19	0.007	0.001
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	0.14	0.012	0.00018	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	13.42	1.20	0.02	0.29	0	0	142.19	0.007	0.001
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	0.16	0.012	0.00018	0.0022	0	0	1.46	0.000069	0.000014	lb/hp-hr	16.07	1.16	0.02	0.22	0	0	142.19	0.007	0.001
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	0.14	0.012	0.00018	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	13.42	1.20	0.02	0.29	0	0	142.19	0.007	0.001
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	36.14	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	30.84	0.71	0.006	0.08	0	0	52.60	0.003	0.0005
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	0.49	0.017	0.00018	0.0021	0	0	1.46	0.000069	0.000014	lb/hp-hr	6.16	0.22	0.002	0.03	0	0	18.41	0.0009	0.0002
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	12.65	hp-hr	0.18	0.016	0.00018	0.0018	0	0	1.46	0.000069	0.000014	lb/hp-hr	2.27	0.20	0.002	0.02	0	0	18.41	0.0009	0.0002
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	12.65	hp-hr	0.37	0.0068	0.00018	0.00080	0	0	1.59	0.000069	0.000014	lb/hp-hr	4.70	0.09	0.002	0.01	0	0	20.17	0.0009	0.0002
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	37	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	31.57	0.73	0.007	0.09	0	0	53.85	0.003	0.0005

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2[a]	CH_4[a]	N_2O[a]
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	37	hp-hr	0.85	0.020	0.00018	0.0023	0	0	1.46	0.000069	0.000014	lb/hp-hr	31.57	0.73	0.007	0.09	0	0	53.85	0.003	0.0005
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	147	hp-hr	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	9.59	2.04	0.03	0.40	0	0	221.31	0.01	0.002
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	460	hp-hr	0.0017	0.00022	0.0000059	0.000016	0	0	0.90	0.00021	0.000082	lb/hp-hr	0.79	0.10	0.003	0.008	0	0	413.66	0.10	0.04
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	147	hp-hr	0.065	0.014	0.00018	0.0027	0	0	1.51	0.000069	0.000014	lb/hp-hr	9.59	2.04	0.03	0.40	0	0	221.31	0.01	0.002
Total of Non-Fugitive Emissions for Operation 021:																*192.21*	*11.81*	*0.15*	*2.16*	*0*	*0*	*1,660.72*	*0.16*	*0.05*
Total of Fugitive Emissions for Operation 021:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:																*192.21*	*11.81*	*0.15*	*2.16*	*0*	*0*	*1,660.72*	*0.16*	*0.05*
Operation 024: Miscellaneous Fuel Burning Equipment																								
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	0.318	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.03	0.05	0.005	0.002	0	0	44.08	0.002	0.0004
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	0.504	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.04	0.05	0.0003	0.003	0	0	58.96	0.001	0.0001
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	20.25	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.67	1.98	0.01	0.11	0	0	2,368.32	0.04	0.004
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	5.95	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.49	0.58	0.003	0.03	0	0	695.60	0.01	0.001
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	4.21	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.35	0.60	0.07	0.02	0	0	583.80	0.03	0.006
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	0.469	MMBtu	0.082	0.14	0.016	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.04	0.07	0.008	0.003	0	0	65.01	0.003	0.0006
Total of Non-Fugitive Emissions for Operation 024:																*2.61*	*3.33*	*0.10*	*0.17*	*0*	*0*	*3,815.77*	*0.09*	*0.01*
Total of Fugitive Emissions for Operation 024:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 024:																*2.61*	*3.33*	*0.10*	*0.17*	*0*	*0*	*3,815.77*	*0.09*	*0.01*
Operation 025: Diesel Non-Emergency Engines																								
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	173.80	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.43	1.07	0.002	0.08	0	0	198.37	0.008	0.002
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	74	hp-hr	0.000016	0.0064	0.000011	0.000016	0	0	1.28	0.000082	0.0000093	lb/hp-hr	0.001	0.47	0.0008	0.001	0	0	94.65	0.006	0.0007
Total of Non-Fugitive Emissions for Operation 025:																*1.43*	*1.54*	*0.003*	*0.08*	*0*	*0*	*293.02*	*0.01*	*0.002*
Total of Fugitive Emissions for Operation 025:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:																*1.43*	*1.54*	*0.003*	*0.08*	*0*	*0*	*293.02*	*0.01*	*0.002*
AOS2: Concentrate Leach Plant Upgrades																								
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	1	hours	0	0	0	4.074	0.525	0	0	0	0	lb/hr	0	0	0	4.07	0.53	0	0	0	0
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	1	hours	0	0	0	4.074	0.525	0	0	0	0	lb/hr	0	0	0	4.07	0.53	0	0	0	0
Total of Non-Fugitive Emissions for AOS2:																*0*	*0*	*0*	*8.15*	*1.05*	*0*	*0*	*0*	*0*
Total of Fugitive Emissions for AOS2:																*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total of Non-Fugitive and Fugitive Emissions for AOS2:																*0*	*0*	*0*	*8.15*	*1.05*	*0*	*0*	*0*	*0*
Total of Non-Fugitive Emissions:																**253.46**	**323.77**	**1.24**	**20.67**	**1.05**	**0.47**	**72,739**	**1.67**	**0.23**
Total of Fugitive Emissions:																**8,812.17**	**390.26**	**3.14**	**12.09**	**9.50**	**0**	**88,184**	**3.42**	**0.67**

Table F.8 Hourly Gaseous Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors									EF Units	Emissions (lb/hr)								
						CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2	CH_4	N_2O		CO	NO_X	SO_2	VOC	H_2SO_4	H_2S	CO_2 [a]	CH_4 [a]	N_2O [a]
Total of Non-Fugitive and Fugitive Emissions:																**9,065.63**	**714.03**	**4.38**	**32.77**	**10.55**	**0.47**	**160,923**	**5.09**	**0.91**

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

[a] CO_2e emissions are calculcated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). GWP of CO_2 = 1, GWP of CH_4 = 25, GWP of N_2O = 298.

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Processes Controlled by Pollution Control Devices							
FFDC006	Processes Controlled by In-Pit Crusher 2 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		
		Nickel	7440020	9.92E-13	lb/dscf		
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC251	Processes Controlled by P11/P5 and P11/P12 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC015	Processes Controlled by P5/P6 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC225	Processes Controlled by DC2/P9 and P9/P10 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC225 (cont'd)	Processes Controlled by DC2/P9 and P9/P10 FFDC (cont'd)	Nickel	7440020	9.92E-13	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC325	Processes Controlled by DC2/P5 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		
		Nickel	7440020	9.92E-13	lb/dscf		
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC299	Processes Controlled by Mill IOS/R1A FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC300	Processes Controlled by Mill IOS/R1B FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC272	Processes Controlled by R1A and R1B/R7 FFDC	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
BC277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	Antimony	7440360	1.88E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.58E-11	lb/dscf		
		Beryllium	7440417	1.75E-12	lb/dscf		
		Cadmium	7440439	1.75E-12	lb/dscf		
		Chromium	7440473	3.50E-12	lb/dscf		
		Cobalt	7440484	5.75E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	3.00E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
BC277 (cont'd)	Processes Controlled by R1A and R1B/R2 Bag Collector 1 (cont'd)	Mercury	7439976	4.97E-13	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Nickel	7440020	1.23E-11	lb/dscf		
		Selenium	7782492	1.55E-11	lb/dscf		
		Total HAPs	--	1.65E-10	lb/dscf		
FFDC278	Processes Controlled by R2/R11 FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC228	Processes Controlled by MFL IOS/R8 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		
		Nickel	7440020	9.92E-13	lb/dscf		
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC229	Processes Controlled by R8/R9 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		
		Nickel	7440020	9.92E-13	lb/dscf		
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC030	Processes Controlled by Fine Crushing Line B FFDC 1	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	5.87E-12	lb/dscf		
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC031	Processes Controlled by Fine Crushing Line C FFDC 1	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC031 (cont'd)	Processes Controlled by Fine Crushing Line C FFDC 1 (cont'd)	Manganese	7439965	5.87E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	5.87E-12	lb/dscf		
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	5.87E-12	lb/dscf		
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC032	Processes Controlled by Fine Crushing Line D FFDC 1	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	5.87E-12	lb/dscf		
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC273	Processes Controlled by R9/R10 FFDC	Antimony	7440360	1.37E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-12	lb/dscf		
		Beryllium	7440417	1.41E-13	lb/dscf		
		Cadmium	7440439	2.36E-13	lb/dscf		
		Chromium	7440473	6.02E-13	lb/dscf		
		Cobalt	7440484	6.69E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	3.15E-12	lb/dscf		
		Mercury	7439976	4.12E-14	lb/dscf		
		Nickel	7440020	9.92E-13	lb/dscf		
		Selenium	7782492	1.25E-12	lb/dscf		
		Total HAPs	--	2.12E-11	lb/dscf		
FFDC330	Processes Controlled by R10/R3 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC330 (cont'd)	Processes Controlled by R10/R3 FFDC (cont'd)	Lead	7439921	4.34E-11	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
BC079	Processes Controlled by R3/R4 Bag Collector 3	Antimony	7440360	9.56E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-11	lb/dscf		
		Beryllium	7440417	9.88E-13	lb/dscf		
		Cadmium	7440439	1.66E-12	lb/dscf		
		Chromium	7440473	4.22E-12	lb/dscf		
		Cobalt	7440484	4.69E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	2.21E-11	lb/dscf		
		Mercury	7439976	2.89E-13	lb/dscf		
		Nickel	7440020	6.95E-12	lb/dscf		
		Selenium	7782492	8.74E-12	lb/dscf		
		Total HAPs	--	1.49E-10	lb/dscf		
BC080	Processes Controlled by R4/R5/R6 Bag Collector 4	Antimony	7440360	9.56E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-11	lb/dscf		
		Beryllium	7440417	9.88E-13	lb/dscf		
		Cadmium	7440439	1.66E-12	lb/dscf		
		Chromium	7440473	4.22E-12	lb/dscf		
		Cobalt	7440484	4.69E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	2.21E-11	lb/dscf		
		Mercury	7439976	2.89E-13	lb/dscf		
		Nickel	7440020	6.95E-12	lb/dscf		
		Selenium	7782492	8.74E-12	lb/dscf		
		Total HAPs	--	1.49E-10	lb/dscf		
SC082	Processes Controlled by Scrubber 3C	Antimony	7440360	1.37E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-11	lb/dscf		
		Beryllium	7440417	1.41E-12	lb/dscf		
		Cadmium	7440439	2.36E-12	lb/dscf		
		Chromium	7440473	6.02E-12	lb/dscf		
		Cobalt	7440484	6.69E-12	lb/dscf		
		Lead	7439921	1.09E-10	lb/dscf		
		Manganese	7439965	3.15E-11	lb/dscf		
		Mercury	7439976	4.12E-13	lb/dscf		
		Nickel	7440020	9.92E-12	lb/dscf		
		Selenium	7782492	1.25E-11	lb/dscf		
		Total HAPs	--	2.12E-10	lb/dscf		
FFDC317	Processes Controlled by FFDC 3A	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC301	Processes Controlled by FFDC 6A	Antimony	7440360	6.83E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.65E-12	lb/dscf		
		Beryllium	7440417	7.05E-13	lb/dscf		
		Cadmium	7440439	1.18E-12	lb/dscf		
		Chromium	7440473	3.01E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC301 (cont'd)	Processes Controlled by FFDC 6A (cont'd)	Cobalt	7440484	3.35E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Lead	7439921	5.43E-11	lb/dscf		
		Manganese	7439965	1.58E-11	lb/dscf		
		Mercury	7439976	2.06E-13	lb/dscf		
		Nickel	7440020	4.96E-12	lb/dscf		
		Selenium	7782492	6.24E-12	lb/dscf		
		Total HAPs	--	1.06E-10	lb/dscf		
FFDC302	Processes Controlled by FFDC 6B	Antimony	7440360	6.83E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.65E-12	lb/dscf		
		Beryllium	7440417	7.05E-13	lb/dscf		
		Cadmium	7440439	1.18E-12	lb/dscf		
		Chromium	7440473	3.01E-12	lb/dscf		
		Cobalt	7440484	3.35E-12	lb/dscf		
		Lead	7439921	5.43E-11	lb/dscf		
		Manganese	7439965	1.58E-11	lb/dscf		
		Mercury	7439976	2.06E-13	lb/dscf		
		Nickel	7440020	4.96E-12	lb/dscf		
		Selenium	7782492	6.24E-12	lb/dscf		
		Total HAPs	--	1.06E-10	lb/dscf		
FFDC304	Processes Controlled by FFDC 1	Antimony	7440360	6.83E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.65E-12	lb/dscf		
		Beryllium	7440417	7.05E-13	lb/dscf		
		Cadmium	7440439	1.18E-12	lb/dscf		
		Chromium	7440473	3.01E-12	lb/dscf		
		Cobalt	7440484	3.35E-12	lb/dscf		
		Lead	7439921	5.43E-11	lb/dscf		
		Manganese	7439965	1.58E-11	lb/dscf		
		Mercury	7439976	2.06E-13	lb/dscf		
		Nickel	7440020	4.96E-12	lb/dscf		
		Selenium	7782492	6.24E-12	lb/dscf		
		Total HAPs	--	1.06E-10	lb/dscf		
SC089	Processes Controlled by Scrubber 5	Antimony	7440360	1.37E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-11	lb/dscf		
		Beryllium	7440417	1.41E-12	lb/dscf		
		Cadmium	7440439	2.36E-12	lb/dscf		
		Chromium	7440473	6.02E-12	lb/dscf		
		Cobalt	7440484	6.69E-12	lb/dscf		
		Lead	7439921	1.09E-10	lb/dscf		
		Manganese	7439965	3.15E-11	lb/dscf		
		Mercury	7439976	4.12E-13	lb/dscf		
		Nickel	7440020	9.92E-12	lb/dscf		
		Selenium	7782492	1.25E-11	lb/dscf		
		Total HAPs	--	2.12E-10	lb/dscf		
FFDC303	Processes Controlled by FFDC 8	Antimony	7440360	6.83E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.65E-12	lb/dscf		
		Beryllium	7440417	7.05E-13	lb/dscf		
		Cadmium	7440439	1.18E-12	lb/dscf		
		Chromium	7440473	3.01E-12	lb/dscf		
		Cobalt	7440484	3.35E-12	lb/dscf		
		Lead	7439921	5.43E-11	lb/dscf		
		Manganese	7439965	1.58E-11	lb/dscf		
		Mercury	7439976	2.06E-13	lb/dscf		
		Nickel	7440020	4.96E-12	lb/dscf		
		Selenium	7782492	6.24E-12	lb/dscf		
		Total HAPs	--	1.06E-10	lb/dscf		
SC088	Processes Controlled by Scrubber 4	Antimony	7440360	1.37E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-11	lb/dscf		
		Beryllium	7440417	1.41E-12	lb/dscf		
		Cadmium	7440439	2.36E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
SC088 (cont'd)	Processes Controlled by Scrubber 4 (cont'd)	Chromium	7440473	6.02E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Cobalt	7440484	6.69E-12	lb/dscf		
		Lead	7439921	1.09E-10	lb/dscf		
		Manganese	7439965	3.15E-11	lb/dscf		
		Mercury	7439976	4.12E-13	lb/dscf		
		Nickel	7440020	9.92E-12	lb/dscf		
		Selenium	7782492	1.25E-11	lb/dscf		
		Total HAPs	--	2.12E-10	lb/dscf		
FFDC320	Processes Controlled by 14/15 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC331	Processes Controlled by 15/16 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
FFDC309	Processes Controlled by 16/S11 FFDC	Antimony	7440360	5.46E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	7.72E-12	lb/dscf		
		Beryllium	7440417	5.64E-13	lb/dscf		
		Cadmium	7440439	9.46E-13	lb/dscf		
		Chromium	7440473	2.41E-12	lb/dscf		
		Cobalt	7440484	2.68E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.26E-11	lb/dscf		
		Mercury	7439976	1.65E-13	lb/dscf		
		Nickel	7440020	3.97E-12	lb/dscf		
		Selenium	7782492	4.99E-12	lb/dscf		
		Total HAPs	--	8.49E-11	lb/dscf		
BC201	Processes Controlled by FOIS/A1A Bag Collector 7	Antimony	7440360	9.56E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-11	lb/dscf		
		Beryllium	7440417	9.88E-13	lb/dscf		
		Cadmium	7440439	1.66E-12	lb/dscf		
		Chromium	7440473	4.22E-12	lb/dscf		
		Cobalt	7440484	4.69E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	2.21E-11	lb/dscf		
		Mercury	7439976	2.89E-13	lb/dscf		
		Nickel	7440020	6.95E-12	lb/dscf		
		Selenium	7782492	8.74E-12	lb/dscf		
		Total HAPs	--	1.49E-10	lb/dscf		
BC202	Processes Controlled by A1A/A2A Bag Collector 8	Antimony	7440360	9.56E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-11	lb/dscf		
		Beryllium	7440417	9.88E-13	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
BC202 (cont'd)	Processes Controlled by A1A/A2A Bag Collector 8 (cont'd)	Cadmium	7440439	1.66E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Chromium	7440473	4.22E-12	lb/dscf		
		Cobalt	7440484	4.69E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	2.21E-11	lb/dscf		
		Mercury	7439976	2.89E-13	lb/dscf		
		Nickel	7440020	6.95E-12	lb/dscf		
		Selenium	7782492	8.74E-12	lb/dscf		
		Total HAPs	--	1.49E-10	lb/dscf		
BC203	Processes Controlled by A1A/A2C Bag Collector 9	Antimony	7440360	9.56E-12	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-11	lb/dscf		
		Beryllium	7440417	9.88E-13	lb/dscf		
		Cadmium	7440439	1.66E-12	lb/dscf		
		Chromium	7440473	4.22E-12	lb/dscf		
		Cobalt	7440484	4.69E-12	lb/dscf		
		Lead	7439921	7.60E-11	lb/dscf		
		Manganese	7439965	2.21E-11	lb/dscf		
		Mercury	7439976	2.89E-13	lb/dscf		
		Nickel	7440020	6.95E-12	lb/dscf		
		Selenium	7782492	8.74E-12	lb/dscf		
		Total HAPs	--	1.49E-10	lb/dscf		
FFDC318	Processes Controlled by Secondary Screen Feed Bin FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC280	Processes Controlled by Secondary Screening FFDC 1	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC281	Processes Controlled by Secondary Screening FFDC 2	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC319	Processes Controlled by Secondary Crusher Feed Bin FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC283	Processes Controlled by Secondary Crushing FFDC 1	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC284	Processes Controlled by Secondary Crushing FFDC 2	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC286 (cont'd)	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC (cont'd)	Nickel	7440020	7.00E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC287	Processes Controlled by Crushed Ore Bin FFDC 1	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC288	Processes Controlled by Crushed Ore Bin FFDC 2	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC289	Processes Controlled by Crushed Ore Bin FFDC 3	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC290	Processes Controlled by Crushed Ore Bin FFDC 4	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC291	Processes Controlled by Crushed Ore Transfers FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC291 (cont'd)	Processes Controlled by Crushed Ore Transfers FFDC (cont'd)	Mercury	7439976	2.84E-13	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC292	Processes Controlled by HRC/HPGR Crusher FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
FFDC294	Processes Controlled by Wet Screen Feed FFDC	Antimony	7440360	1.07E-11	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-11	lb/dscf		
		Beryllium	7440417	1.00E-12	lb/dscf		
		Cadmium	7440439	1.00E-12	lb/dscf		
		Chromium	7440473	2.00E-12	lb/dscf		
		Cobalt	7440484	3.29E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	1.71E-12	lb/dscf		
		Mercury	7439976	2.84E-13	lb/dscf		
		Nickel	7440020	7.00E-12	lb/dscf		
		Selenium	7782492	8.86E-12	lb/dscf		
		Total HAPs	--	9.40E-11	lb/dscf		
PLV2S	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	Antimony	7440360	1.41E-05	lb/hr	hours	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.94E-05	lb/hr		
		Beryllium	7440417	3.75E-06	lb/hr		
		Cadmium	7440439	9.06E-05	lb/hr		
		Chromium	7440473	8.86E-06	lb/hr		
		Cobalt	7440484	1.23E-04	lb/hr		
		Lead	7439921	1.48E-04	lb/hr		
		Manganese	7439965	2.56E-05	lb/hr		
		Mercury	7439976	6.22E-07	lb/hr		
		Nickel	7440020	3.50E-05	lb/hr		
		Selenium	7782492	6.50E-05	lb/hr		
		Total HAPs	--	5.33E-04	lb/hr		
H2S	Processes Controlled by H2S Scrubber System	Antimony	7440360	7.26E-05	lb/hr	hours	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.00E-05	lb/hr		
		Beryllium	7440417	3.04E-06	lb/hr		
		Cadmium	7440439	3.04E-06	lb/hr		
		Chromium	7440473	6.09E-06	lb/hr		
		Cobalt	7440484	1.00E-05	lb/hr		
		Lead	7439921	8.26E-06	lb/hr		
		Manganese	7439965	5.22E-06	lb/hr		
		Mercury	7439976	5.26E-06	lb/hr		
		Nickel	7440020	2.13E-05	lb/hr		
		Selenium	7782492	2.21E-04	lb/hr		
		Total HAPs	--	3.76E-04	lb/hr		
FFDC035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC035 (AOS1) (cont'd)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1) (cont'd)	Manganese	7439965	5.87E-12	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Antimony	7440360	5.36E-14	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.74E-13	lb/dscf		
		Beryllium	7440417	3.21E-14	lb/dscf		
		Cadmium	7440439	2.23E-13	lb/dscf		
		Chromium	7440473	7.04E-13	lb/dscf		
		Cobalt	7440484	5.17E-13	lb/dscf		
		Lead	7439921	1.09E-11	lb/dscf		
		Manganese	7439965	5.87E-12	lb/dscf		
		Mercury	7439976	1.14E-14	lb/dscf		
		Nickel	7440020	2.34E-13	lb/dscf		
		Selenium	7782492	2.81E-13	lb/dscf		
		Total HAPs	--	1.90E-11	lb/dscf		
FFDC311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
FFDC312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
FFDC313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
FFDC314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
FFDC314 (AOS1) (cont'd)	Processes Controlled by East Transfer Points FFDC (AOS1) (cont'd)	Lead	7439921	4.34E-11	lb/dscf	dscf (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
FFDC315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
FFDC316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	Antimony	7440360	2.14E-13	lb/dscf	dscf	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.97E-13	lb/dscf		
		Beryllium	7440417	1.29E-13	lb/dscf		
		Cadmium	7440439	8.91E-13	lb/dscf		
		Chromium	7440473	2.82E-12	lb/dscf		
		Cobalt	7440484	2.07E-12	lb/dscf		
		Lead	7439921	4.34E-11	lb/dscf		
		Manganese	7439965	2.35E-11	lb/dscf		
		Mercury	7439976	4.57E-14	lb/dscf		
		Nickel	7440020	9.37E-13	lb/dscf		
		Selenium	7782492	1.13E-12	lb/dscf		
		Total HAPs	--	7.58E-11	lb/dscf		
PLVS1 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	Antimony	7440360	9.84E-06	lb/hr	hours	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-05	lb/hr		
		Beryllium	7440417	2.63E-06	lb/hr		
		Cadmium	7440439	6.34E-05	lb/hr		
		Chromium	7440473	6.20E-06	lb/hr		
		Cobalt	7440484	8.58E-05	lb/hr		
		Lead	7439921	1.03E-04	lb/hr		
		Manganese	7439965	1.79E-05	lb/hr		
		Mercury	7439976	4.35E-07	lb/hr		
		Nickel	7440020	2.45E-05	lb/hr		
		Selenium	7782492	4.55E-05	lb/hr		
		Total HAPs	--	3.73E-04	lb/hr		
PLVS2 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	Antimony	7440360	9.84E-06	lb/hr	hours	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.35E-05	lb/hr		
		Beryllium	7440417	2.63E-06	lb/hr		
		Cadmium	7440439	6.34E-05	lb/hr		
		Chromium	7440473	6.20E-06	lb/hr		
		Cobalt	7440484	8.58E-05	lb/hr		
		Lead	7439921	1.03E-04	lb/hr		
		Manganese	7439965	1.79E-05	lb/hr		
		Mercury	7439976	4.35E-07	lb/hr		
		Nickel	7440020	2.45E-05	lb/hr		
		Selenium	7782492	4.55E-05	lb/hr		
		Total HAPs	--	3.73E-04	lb/hr		
Drilling and Blasting Operations							
Drilling	Drilling	Antimony	7440360	6.29E-06	lb/hole	holes	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.02E-06	lb/hole		
		Beryllium	7440417	9.98E-07	lb/hole		
		Cadmium	7440439	1.10E-06	lb/hole		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Drilling (cont'd)	Drilling (cont'd)	Chromium	7440473	1.67E-05	lb/hole	holes (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Cobalt	7440484	6.42E-06	lb/hole		
		Lead	7439921	5.13E-05	lb/hole		
		Manganese	7439965	1.83E-04	lb/hole		
		Mercury	7439976	1.97E-07	lb/hole		
		Nickel	7440020	1.54E-05	lb/hole		
		Selenium	7782492	5.70E-06	lb/hole		
		Total HAPs	--	2.96E-04	lb/hole		
ABlasting	Blasting (annual basis)	POM	250	3.72E-03	lb/blast	blasts	AP-42 Tables 1.3-8 and 1.3-10 (05/10), 137,000 Btu/gallon, 0.125 MMBtu/gal animal fat, and 7.34 lb/gal animal fat (assume diesel combustion emissions are an upper limit for animal fat combustion emissions), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Formaldehyde	50000	6.87E-02	lb/blast		
		Antimony	7440360	7.16E-04	lb/blast		
		Arsenic	7440382	1.64E-03	lb/blast		
		Beryllium	7440417	5.73E-04	lb/blast		
		Cadmium	7440439	5.85E-04	lb/blast		
		Chromium	7440473	2.36E-03	lb/blast		
		Cobalt	7440484	7.31E-04	lb/blast		
		Lead	7439921	7.22E-03	lb/blast		
		Manganese	7439965	2.17E-02	lb/blast		
		Mercury	7439976	4.82E-04	lb/blast		
		Nickel	7440020	2.21E-03	lb/blast		
		Selenium	7782492	2.95E-03	lb/blast		
		Total HAPs	--	1.14E-01	lb/blast		
HBlasting	Blasting (hourly basis)	POM	250	1.32E-02	lb/blast	blasts	AP-42 Tables 1.3-8 and 1.3-10 (05/10), 137,000 Btu/gallon, 0.125 MMBtu/gal animal fat, and 7.34 lb/gal animal fat (assume diesel combustion emissions are an upper limit for animal fat combustion emissions), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Formaldehyde	50000	2.43E-01	lb/blast		
		Antimony	7440360	6.05E-03	lb/blast		
		Arsenic	7440382	1.09E-02	lb/blast		
		Beryllium	7440417	2.59E-03	lb/blast		
		Cadmium	7440439	2.68E-03	lb/blast		
		Chromium	7440473	1.77E-02	lb/blast		
		Cobalt	7440484	6.18E-03	lb/blast		
		Lead	7439921	5.43E-02	lb/blast		
		Manganese	7439965	1.79E-01	lb/blast		
		Mercury	7439976	1.82E-03	lb/blast		
		Nickel	7440020	1.64E-02	lb/blast		
		Selenium	7782492	1.36E-02	lb/blast		
		Total HAPs	--	5.68E-01	lb/blast		
Vehicle Operations							
ATravel	Vehicle Travel on Unpaved Roads (annual basis)	Antimony	7440360	3.12E-05	lb/VMT	VMT	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	4.47E-05	lb/VMT		
		Beryllium	7440417	4.95E-06	lb/VMT		
		Cadmium	7440439	5.44E-06	lb/VMT		
		Chromium	7440473	8.27E-05	lb/VMT		
		Cobalt	7440484	3.18E-05	lb/VMT		
		Lead	7439921	2.54E-04	lb/VMT		
		Manganese	7439965	9.05E-04	lb/VMT		
		Mercury	7439976	9.79E-07	lb/VMT		
		Nickel	7440020	7.63E-05	lb/VMT		
		Selenium	7782492	2.83E-05	lb/VMT		
		Total HAPs	--	1.47E-03	lb/VMT		
HTravel	Vehicle Travel on Unpaved Roads (hourly basis)	Antimony	7440360	3.56E-05	lb/VMT	VMT	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	5.11E-05	lb/VMT		
		Beryllium	7440417	5.65E-06	lb/VMT		
		Cadmium	7440439	6.21E-06	lb/VMT		
		Chromium	7440473	9.44E-05	lb/VMT		
		Cobalt	7440484	3.64E-05	lb/VMT		
		Lead	7439921	2.90E-04	lb/VMT		
		Manganese	7439965	1.03E-03	lb/VMT		
		Mercury	7439976	1.12E-06	lb/VMT		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
HTravel (cont'd)	Vehicle Travel on Unpaved Roads (hourly basis) (cont'd)	Nickel	7440020	8.71E-05	lb/VMT	VMT (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Selenium	7782492	3.23E-05	lb/VMT		
		Total HAPs	--	1.67E-03	lb/VMT		
Dozer	Dozer Operation	Antimony	7440360	9.49E-06	lb/hr	hours	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.36E-05	lb/hr		
		Beryllium	7440417	1.51E-06	lb/hr		
		Cadmium	7440439	1.65E-06	lb/hr		
		Chromium	7440473	2.52E-05	lb/hr		
		Cobalt	7440484	9.69E-06	lb/hr		
		Lead	7439921	7.74E-05	lb/hr		
		Manganese	7439965	2.76E-04	lb/hr		
		Mercury	7439976	2.98E-07	lb/hr		
		Nickel	7440020	2.32E-05	lb/hr		
		Selenium	7782492	8.61E-06	lb/hr		
		Total HAPs	--	4.46E-04	lb/hr		
Grader	Road Grader Operation	Antimony	7440360	3.95E-06	lb/VMT	VMT	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	5.66E-06	lb/VMT		
		Beryllium	7440417	6.27E-07	lb/VMT		
		Cadmium	7440439	6.88E-07	lb/VMT		
		Chromium	7440473	1.05E-05	lb/VMT		
		Cobalt	7440484	4.03E-06	lb/VMT		
		Lead	7439921	3.22E-05	lb/VMT		
		Manganese	7439965	1.15E-04	lb/VMT		
		Mercury	7439976	1.24E-07	lb/VMT		
		Nickel	7440020	9.66E-06	lb/VMT		
		Selenium	7782492	3.58E-06	lb/VMT		
		Total HAPs	--	1.86E-04	lb/VMT		
Material Transfer Operations							
Ore1TrUnprt	Material Transfer of the Combination of All Mined Material (Unprotected)	Antimony	7440360	7.08E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.02E-08	lb/ton		
		Beryllium	7440417	1.13E-09	lb/ton		
		Cadmium	7440439	1.24E-09	lb/ton		
		Chromium	7440473	1.88E-08	lb/ton		
		Cobalt	7440484	7.24E-09	lb/ton		
		Lead	7439921	5.78E-08	lb/ton		
		Manganese	7439965	2.06E-07	lb/ton		
		Mercury	7439976	2.22E-10	lb/ton		
		Nickel	7440020	1.73E-08	lb/ton		
		Selenium	7782492	6.43E-09	lb/ton		
		Total HAPs	--	3.33E-07	lb/ton		
Ore2TrUnprt	Material Transfer of Morenci Concentrator Ore (Unprotected)	Antimony	7440360	3.30E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.07E-09	lb/ton		
		Beryllium	7440417	1.98E-10	lb/ton		
		Cadmium	7440439	1.37E-09	lb/ton		
		Chromium	7440473	4.33E-09	lb/ton		
		Cobalt	7440484	3.18E-09	lb/ton		
		Lead	7439921	6.68E-08	lb/ton		
		Manganese	7439965	3.61E-08	lb/ton		
		Mercury	7439976	7.03E-11	lb/ton		
		Nickel	7440020	1.44E-09	lb/ton		
		Selenium	7782492	1.73E-09	lb/ton		
		Total HAPs	--	1.17E-07	lb/ton		
Ore3TrPrt	Material Transfer of MFL Fine Crushing Plant Ore (Protected)	Antimony	7440360	9.63E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.36E-09	lb/ton		
		Beryllium	7440417	9.94E-11	lb/ton		
		Cadmium	7440439	1.67E-10	lb/ton		
		Chromium	7440473	4.24E-10	lb/ton		
		Cobalt	7440484	4.72E-10	lb/ton		
		Lead	7439921	7.65E-09	lb/ton		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Ore3TrPrt (cont'd)	Material Transfer of MFL Fine Crushing Plant Ore (Protected) (cont'd)	Manganese	7439965	2.22E-09	lb/ton	tons (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Mercury	7439976	2.90E-11	lb/ton		
		Nickel	7440020	6.99E-10	lb/ton		
		Selenium	7782492	8.79E-10	lb/ton		
		Total HAPs	--	1.50E-08	lb/ton		
Ore3TrUnprt	Material Transfer of MFL Fine Crushing Plant Ore (Unprotected)	Antimony	7440360	8.41E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.19E-08	lb/ton		
		Beryllium	7440417	8.68E-10	lb/ton		
		Cadmium	7440439	1.45E-09	lb/ton		
		Chromium	7440473	3.71E-09	lb/ton		
		Cobalt	7440484	4.12E-09	lb/ton		
		Lead	7439921	6.68E-08	lb/ton		
		Manganese	7439965	1.94E-08	lb/ton		
		Mercury	7439976	2.54E-10	lb/ton		
		Nickel	7440020	6.11E-09	lb/ton		
		Selenium	7782492	7.68E-09	lb/ton		
		Total HAPs	--	1.31E-07	lb/ton		
Ore4TrUnprt	Material Transfer of the Combination of Morenci Concentrator and Metcalf Concentrator Ore (Unprotected)	Antimony	7440360	8.41E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.19E-08	lb/ton		
		Beryllium	7440417	8.68E-10	lb/ton		
		Cadmium	7440439	1.45E-09	lb/ton		
		Chromium	7440473	3.71E-09	lb/ton		
		Cobalt	7440484	4.12E-09	lb/ton		
		Lead	7439921	6.68E-08	lb/ton		
		Manganese	7439965	1.94E-08	lb/ton		
		Mercury	7439976	2.54E-10	lb/ton		
		Nickel	7440020	6.11E-09	lb/ton		
		Selenium	7782492	7.68E-09	lb/ton		
		Total HAPs	--	1.31E-07	lb/ton		
Ore5TrUnprt	Material Transfer of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore (Unprotected)	Antimony	7440360	8.41E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.19E-08	lb/ton		
		Beryllium	7440417	8.68E-10	lb/ton		
		Cadmium	7440439	1.45E-09	lb/ton		
		Chromium	7440473	3.71E-09	lb/ton		
		Cobalt	7440484	4.12E-09	lb/ton		
		Lead	7439921	6.68E-08	lb/ton		
		Manganese	7439965	1.94E-08	lb/ton		
		Mercury	7439976	2.54E-10	lb/ton		
		Nickel	7440020	6.11E-09	lb/ton		
		Selenium	7782492	7.68E-09	lb/ton		
		Total HAPs	--	1.31E-07	lb/ton		
Ore6TrUnprt	Material Transfer of the Combination of ROM Leach and Waste Material (Unprotected)	Antimony	7440360	6.49E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.40E-09	lb/ton		
		Beryllium	7440417	1.24E-09	lb/ton		
		Cadmium	7440439	1.14E-09	lb/ton		
		Chromium	7440473	2.56E-08	lb/ton		
		Cobalt	7440484	8.64E-09	lb/ton		
		Lead	7439921	5.37E-08	lb/ton		
		Manganese	7439965	2.90E-07	lb/ton		
		Mercury	7439976	2.08E-10	lb/ton		
		Nickel	7440020	2.24E-08	lb/ton		
		Selenium	7782492	5.86E-09	lb/ton		
		Total HAPs	--	4.25E-07	lb/ton		
MCTrPrt	Material Transfer of Molybdenum Concentrate (Protected)	Antimony	7440360	4.28E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.18E-09	lb/ton		
		Beryllium	7440417	1.79E-10	lb/ton		
		Cadmium	7440439	1.79E-10	lb/ton		
		Chromium	7440473	3.59E-10	lb/ton		
		Cobalt	7440484	5.90E-10	lb/ton		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
MCTrPrt (cont'd)	Material Transfer of Molybdenum Concentrate (Protected) (cont'd)	Lead	7439921	4.87E-10	lb/ton	tons (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Manganese	7439965	3.08E-10	lb/ton		
		Mercury	7439976	3.10E-10	lb/ton		
		Nickel	7440020	1.26E-09	lb/ton		
		Selenium	7782492	1.31E-08	lb/ton		
		Total HAPs	--	2.22E-08	lb/ton		
CCTrPrt	Material Transfer of Copper Concentrate (Protected)	Antimony	7440360	4.11E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	5.66E-10	lb/ton		
		Beryllium	7440417	1.10E-10	lb/ton		
		Cadmium	7440439	2.65E-09	lb/ton		
		Chromium	7440473	2.59E-10	lb/ton		
		Cobalt	7440484	3.58E-09	lb/ton		
		Lead	7439921	4.32E-09	lb/ton		
		Manganese	7439965	7.50E-10	lb/ton		
		Mercury	7439976	1.82E-11	lb/ton		
		Nickel	7440020	1.02E-09	lb/ton		
		Selenium	7782492	1.90E-09	lb/ton		
		Total HAPs	--	1.56E-08	lb/ton		
CCTrUnprt	Material Transfer of Copper Concentrate (Unprotected)	Antimony	7440360	3.59E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	4.94E-09	lb/ton		
		Beryllium	7440417	9.58E-10	lb/ton		
		Cadmium	7440439	2.32E-08	lb/ton		
		Chromium	7440473	2.26E-09	lb/ton		
		Cobalt	7440484	3.13E-08	lb/ton		
		Lead	7439921	3.78E-08	lb/ton		
		Manganese	7439965	6.55E-09	lb/ton		
		Mercury	7439976	1.59E-10	lb/ton		
		Nickel	7440020	8.94E-09	lb/ton		
		Selenium	7782492	1.66E-08	lb/ton		
		Total HAPs	--	1.36E-07	lb/ton		
ConGTrUnprt	Material Transfer of Metallic Minerals Processed by the Concentrate Grizzly (Unprotected)	Antimony	7440360	1.83E-08	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.29E-08	lb/ton		
		Beryllium	7440417	4.42E-09	lb/ton		
		Cadmium	7440439	1.05E-07	lb/ton		
		Chromium	7440473	1.04E-08	lb/ton		
		Cobalt	7440484	1.42E-07	lb/ton		
		Lead	7439921	1.71E-07	lb/ton		
		Manganese	7439965	2.98E-08	lb/ton		
		Mercury	7439976	8.65E-10	lb/ton		
		Nickel	7440020	4.11E-08	lb/ton		
		Selenium	7782492	8.13E-08	lb/ton		
		Total HAPs	--	6.27E-07	lb/ton		
CGTrUnprt	Material Transfer of Nonmetallic Minerals Processed by the Construction Grizzlies (Unprotected)	Antimony	7440360	3.71E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.51E-09	lb/ton		
		Beryllium	7440417	2.43E-09	lb/ton		
		Cadmium	7440439	1.21E-10	lb/ton		
		Chromium	7440473	9.55E-08	lb/ton		
		Cobalt	7440484	2.31E-08	lb/ton		
		Lead	7439921	1.21E-08	lb/ton		
		Manganese	7439965	1.15E-06	lb/ton		
		Mercury	7439976	6.42E-11	lb/ton		
		Nickel	7440020	7.44E-08	lb/ton		
		Selenium	7782492	7.03E-11	lb/ton		
		Total HAPs	--	1.36E-06	lb/ton		
SGTrUnprt	Material Transfer of Metallic Minerals Processed by the Stockpile Grizzlies (Unprotected)	Antimony	7440360	8.41E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.19E-08	lb/ton		
		Beryllium	7440417	8.68E-10	lb/ton		
		Cadmium	7440439	1.45E-09	lb/ton		
		Chromium	7440473	3.71E-09	lb/ton		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
SGTrUnprt (cont'd)	Material Transfer of Metallic Minerals Processed by the Stockpile Grizzlies (Unprotected) (cont'd)	Cobalt	7440484	4.12E-09	lb/ton	tons (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Lead	7439921	6.68E-08	lb/ton		
		Manganese	7439965	1.94E-08	lb/ton		
		Mercury	7439976	2.54E-10	lb/ton		
		Nickel	7440020	6.11E-09	lb/ton		
		Selenium	7782492	7.68E-09	lb/ton		
		Total HAPs	--	1.31E-07	lb/ton		
AggTrUnprt	Material Transfer of Aggregate (Unprotected)	Antimony	7440360	8.50E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	3.46E-09	lb/ton		
		Beryllium	7440417	5.57E-09	lb/ton		
		Cadmium	7440439	2.78E-10	lb/ton		
		Chromium	7440473	2.19E-07	lb/ton		
		Cobalt	7440484	5.29E-08	lb/ton		
		Lead	7439921	2.77E-08	lb/ton		
		Manganese	7439965	2.64E-06	lb/ton		
		Mercury	7439976	1.47E-10	lb/ton		
		Nickel	7440020	1.70E-07	lb/ton		
		Selenium	7782492	1.61E-10	lb/ton		
		Total HAPs	--	3.12E-06	lb/ton		
CemTr	Material Transfer of Cement	Arsenic	7440382	1.68E-06	lb/ton	tons	AP-42 Table 11.12-8 (06/06), Cement Silo Filling (uncontrolled)
		Beryllium	7440417	1.79E-08	lb/ton		
		Cadmium	7440439	2.34E-07	lb/ton		
		Chromium	7440473	2.52E-07	lb/ton		
		Lead	7439921	7.36E-07	lb/ton		
		Manganese	7439965	2.02E-04	lb/ton		
		Nickel	7440020	1.76E-05	lb/ton		
		Total HAPs	--	2.23E-04	lb/ton		
FATr	Material Transfer of Fly Ash	Arsenic	7440382	5.00E-05	lb/ton	tons	AP-42 Table 11.12-8 (06/06), Cement Supplement Silo Filling (controlled), emission factors uncontrolled using a 98% control efficiency (see AP-42 Table 11.12-8 (06/06), footnote "b")
		Beryllium	7440417	4.52E-06	lb/ton		
		Cadmium	7440439	9.90E-09	lb/ton		
		Chromium	7440473	6.10E-05	lb/ton		
		Lead	7439921	2.60E-05	lb/ton		
		Manganese	7439965	1.28E-05	lb/ton		
		Nickel	7440020	1.14E-04	lb/ton		
		Selenium	7782492	3.62E-06	lb/ton		
		Total HAPs	--	2.72E-04	lb/ton		
LoadCMT	Loading to Concrete Mixing Truck	Arsenic	7440382	1.22E-05	lb/ton	tons	AP-42 Table 11.12-8 (06/06), Truck Loading (uncontrolled)
		Beryllium	7440417	2.44E-07	lb/ton		
		Cadmium	7440439	3.42E-08	lb/ton		
		Chromium	7440473	1.14E-05	lb/ton		
		Lead	7439921	3.62E-06	lb/ton		
		Manganese	7439965	6.12E-05	lb/ton		
		Nickel	7440020	1.19E-05	lb/ton		
		Selenium	7782492	2.62E-06	lb/ton		
		Total HAPs	--	1.03E-04	lb/ton		
Wind Erosion							
AWindIOS1	Wind Erosion of Mill IOS (annual basis)	Antimony	7440360	1.53E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.16E-02	lb/acre-yr		
		Beryllium	7440417	1.58E-03	lb/acre-yr		
		Cadmium	7440439	2.65E-03	lb/acre-yr		
		Chromium	7440473	6.75E-03	lb/acre-yr		
		Cobalt	7440484	7.50E-03	lb/acre-yr		
		Lead	7439921	1.22E-01	lb/acre-yr		
		Manganese	7439965	3.53E-02	lb/acre-yr		
		Mercury	7439976	4.62E-04	lb/acre-yr		
		Nickel	7440020	1.11E-02	lb/acre-yr		
		Selenium	7782492	1.40E-02	lb/acre-yr		
		Total HAPs	--	2.38E-01	lb/acre-yr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
HWindIOS1	Wind Erosion of Mill IOS (hourly basis)	Antimony	7440360	1.75E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.47E-06	lb/acre-hr		
		Beryllium	7440417	1.80E-07	lb/acre-hr		
		Cadmium	7440439	3.02E-07	lb/acre-hr		
		Chromium	7440473	7.70E-07	lb/acre-hr		
		Cobalt	7440484	8.56E-07	lb/acre-hr		
		Lead	7439921	1.39E-05	lb/acre-hr		
		Manganese	7439965	4.03E-06	lb/acre-hr		
		Mercury	7439976	5.27E-08	lb/acre-hr		
		Nickel	7440020	1.27E-06	lb/acre-hr		
		Selenium	7782492	1.60E-06	lb/acre-hr		
		Total HAPs	--	2.72E-05	lb/acre-hr		
AWindIOS2	Wind Erosion of MFL IOS (annual basis)	Antimony	7440360	1.53E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.16E-02	lb/acre-yr		
		Beryllium	7440417	1.58E-03	lb/acre-yr		
		Cadmium	7440439	2.65E-03	lb/acre-yr		
		Chromium	7440473	6.75E-03	lb/acre-yr		
		Cobalt	7440484	7.50E-03	lb/acre-yr		
		Lead	7439921	1.22E-01	lb/acre-yr		
		Manganese	7439965	3.53E-02	lb/acre-yr		
		Mercury	7439976	4.62E-04	lb/acre-yr		
		Nickel	7440020	1.11E-02	lb/acre-yr		
		Selenium	7782492	1.40E-02	lb/acre-yr		
		Total HAPs	--	2.38E-01	lb/acre-yr		
HWindIOS2	Wind Erosion of MFL IOS (hourly basis)	Antimony	7440360	1.75E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.47E-06	lb/acre-hr		
		Beryllium	7440417	1.80E-07	lb/acre-hr		
		Cadmium	7440439	3.02E-07	lb/acre-hr		
		Chromium	7440473	7.70E-07	lb/acre-hr		
		Cobalt	7440484	8.56E-07	lb/acre-hr		
		Lead	7439921	1.39E-05	lb/acre-hr		
		Manganese	7439965	4.03E-06	lb/acre-hr		
		Mercury	7439976	5.27E-08	lb/acre-hr		
		Nickel	7440020	1.27E-06	lb/acre-hr		
		Selenium	7782492	1.60E-06	lb/acre-hr		
		Total HAPs	--	2.72E-05	lb/acre-hr		
AWindCC	Wind Erosion of the Copper Concentrate Storage Piles (annual basis)	Antimony	7440360	3.89E-01	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	5.36E-01	lb/acre-yr		
		Beryllium	7440417	1.04E-01	lb/acre-yr		
		Cadmium	7440439	2.51E+00	lb/acre-yr		
		Chromium	7440473	2.45E-01	lb/acre-yr		
		Cobalt	7440484	3.39E+00	lb/acre-yr		
		Lead	7439921	4.09E+00	lb/acre-yr		
		Manganese	7439965	7.09E-01	lb/acre-yr		
		Mercury	7439976	1.72E-02	lb/acre-yr		
		Nickel	7440020	9.69E-01	lb/acre-yr		
		Selenium	7782492	1.80E+00	lb/acre-yr		
		Total HAPs	--	1.48E+01	lb/acre-yr		
HWindCC	Wind Erosion of the Copper Concentrate Storage Piles (hourly basis)	Antimony	7440360	4.44E-05	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	6.11E-05	lb/acre-hr		
		Beryllium	7440417	1.19E-05	lb/acre-hr		
		Cadmium	7440439	2.86E-04	lb/acre-hr		
		Chromium	7440473	2.80E-05	lb/acre-hr		
		Cobalt	7440484	3.87E-04	lb/acre-hr		
		Lead	7439921	4.67E-04	lb/acre-hr		
		Manganese	7439965	8.10E-05	lb/acre-hr		
		Mercury	7439976	1.97E-06	lb/acre-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
HWindCC (cont'd)	Wind Erosion of the Copper Concentrate Storage Piles (hourly basis) (cont'd)	Nickel	7440020	1.11E-04	lb/acre-hr	acre-yr (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Selenium	7782492	2.05E-04	lb/acre-hr		
		Total HAPs	--	1.68E-03	lb/acre-hr		
AWindT	Wind Erosion of Tailings (annual basis)	Antimony	7440360	7.75E-04	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.29E-03	lb/acre-yr		
		Beryllium	7440417	1.72E-04	lb/acre-yr		
		Cadmium	7440439	8.61E-05	lb/acre-yr		
		Chromium	7440473	2.07E-03	lb/acre-yr		
		Cobalt	7440484	6.23E-04	lb/acre-yr		
		Lead	7439921	2.12E-03	lb/acre-yr		
		Manganese	7439965	2.45E-02	lb/acre-yr		
		Mercury	7439976	1.38E-05	lb/acre-yr		
		Nickel	7440020	2.07E-03	lb/acre-yr		
		Selenium	7782492	3.44E-03	lb/acre-yr		
		Total HAPs	--	3.71E-02	lb/acre-yr		
HWindT	Wind Erosion of Tailings (hourly basis)	Antimony	7440360	8.85E-08	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.47E-07	lb/acre-hr		
		Beryllium	7440417	1.97E-08	lb/acre-hr		
		Cadmium	7440439	9.83E-09	lb/acre-hr		
		Chromium	7440473	2.36E-07	lb/acre-hr		
		Cobalt	7440484	7.12E-08	lb/acre-hr		
		Lead	7439921	2.42E-07	lb/acre-hr		
		Manganese	7439965	2.79E-06	lb/acre-hr		
		Mercury	7439976	1.57E-09	lb/acre-hr		
		Nickel	7440020	2.36E-07	lb/acre-hr		
		Selenium	7782492	3.93E-07	lb/acre-hr		
		Total HAPs	--	4.24E-06	lb/acre-hr		
AWindFO	Wind Erosion of the FOIS (annual basis)	Antimony	7440360	3.10E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	4.38E-02	lb/acre-yr		
		Beryllium	7440417	3.20E-03	lb/acre-yr		
		Cadmium	7440439	5.37E-03	lb/acre-yr		
		Chromium	7440473	1.37E-02	lb/acre-yr		
		Cobalt	7440484	1.52E-02	lb/acre-yr		
		Lead	7439921	2.47E-01	lb/acre-yr		
		Manganese	7439965	7.15E-02	lb/acre-yr		
		Mercury	7439976	9.36E-04	lb/acre-yr		
		Nickel	7440020	2.25E-02	lb/acre-yr		
		Selenium	7782492	2.83E-02	lb/acre-yr		
		Total HAPs	--	4.82E-01	lb/acre-yr		
HWindFO	Wind Erosion of the FOIS (hourly basis)	Antimony	7440360	3.54E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	5.00E-06	lb/acre-hr		
		Beryllium	7440417	3.66E-07	lb/acre-hr		
		Cadmium	7440439	6.13E-07	lb/acre-hr		
		Chromium	7440473	1.56E-06	lb/acre-hr		
		Cobalt	7440484	1.74E-06	lb/acre-hr		
		Lead	7439921	2.81E-05	lb/acre-hr		
		Manganese	7439965	8.17E-06	lb/acre-hr		
		Mercury	7439976	1.07E-07	lb/acre-hr		
		Nickel	7440020	2.57E-06	lb/acre-hr		
		Selenium	7782492	3.23E-06	lb/acre-hr		
		Total HAPs	--	5.50E-05	lb/acre-hr		
AWindConG	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	3.33E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	4.17E-02	lb/acre-yr		
		Beryllium	7440417	8.05E-03	lb/acre-yr		
		Cadmium	7440439	1.91E-01	lb/acre-yr		
		Chromium	7440473	1.90E-02	lb/acre-yr		
		Cobalt	7440484	2.58E-01	lb/acre-yr		
		Lead	7439921	3.11E-01	lb/acre-yr		
		Manganese	7439965	5.42E-02	lb/acre-yr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
AWindConG (cont'd)	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles (annual basis) (cont'd)	Mercury	7439976	1.57E-03	lb/acre-yr	acre-yr (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Nickel	7440020	7.47E-02	lb/acre-yr		
		Selenium	7782492	1.48E-01	lb/acre-yr		
		Total HAPs	--	1.14E+00	lb/acre-yr		
HWindConG	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	3.80E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	4.76E-06	lb/acre-hr		
		Beryllium	7440417	9.18E-07	lb/acre-hr		
		Cadmium	7440439	2.18E-05	lb/acre-hr		
		Chromium	7440473	2.16E-06	lb/acre-hr		
		Cobalt	7440484	2.95E-05	lb/acre-hr		
		Lead	7439921	3.55E-05	lb/acre-hr		
		Manganese	7439965	6.19E-06	lb/acre-hr		
		Mercury	7439976	1.80E-07	lb/acre-hr		
		Nickel	7440020	8.53E-06	lb/acre-hr		
		Selenium	7782492	1.69E-05	lb/acre-hr		
		Total HAPs	--	1.30E-04	lb/acre-hr		
AWindCG1	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	6.75E-04	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.75E-03	lb/acre-yr		
		Beryllium	7440417	4.42E-03	lb/acre-yr		
		Cadmium	7440439	2.21E-04	lb/acre-yr		
		Chromium	7440473	1.74E-01	lb/acre-yr		
		Cobalt	7440484	4.20E-02	lb/acre-yr		
		Lead	7439921	2.20E-02	lb/acre-yr		
		Manganese	7439965	2.10E+00	lb/acre-yr		
		Mercury	7439976	1.17E-04	lb/acre-yr		
		Nickel	7440020	1.35E-01	lb/acre-yr		
		Selenium	7782492	1.28E-04	lb/acre-yr		
		Total HAPs	--	2.48E+00	lb/acre-yr		
HWindCG1	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	7.71E-08	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	3.14E-07	lb/acre-hr		
		Beryllium	7440417	5.05E-07	lb/acre-hr		
		Cadmium	7440439	2.52E-08	lb/acre-hr		
		Chromium	7440473	1.98E-05	lb/acre-hr		
		Cobalt	7440484	4.79E-06	lb/acre-hr		
		Lead	7439921	2.51E-06	lb/acre-hr		
		Manganese	7439965	2.39E-04	lb/acre-hr		
		Mercury	7439976	1.33E-08	lb/acre-hr		
		Nickel	7440020	1.55E-05	lb/acre-hr		
		Selenium	7782492	1.46E-08	lb/acre-hr		
		Total HAPs	--	2.83E-04	lb/acre-hr		
AWindCG2	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	6.75E-04	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.75E-03	lb/acre-yr		
		Beryllium	7440417	4.42E-03	lb/acre-yr		
		Cadmium	7440439	2.21E-04	lb/acre-yr		
		Chromium	7440473	1.74E-01	lb/acre-yr		
		Cobalt	7440484	4.20E-02	lb/acre-yr		
		Lead	7439921	2.20E-02	lb/acre-yr		
		Manganese	7439965	2.10E+00	lb/acre-yr		
		Mercury	7439976	1.17E-04	lb/acre-yr		
		Nickel	7440020	1.35E-01	lb/acre-yr		
		Selenium	7782492	1.28E-04	lb/acre-yr		
		Total HAPs	--	2.48E+00	lb/acre-yr		
HWindCG2	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	7.71E-08	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	3.14E-07	lb/acre-hr		
		Beryllium	7440417	5.05E-07	lb/acre-hr		
		Cadmium	7440439	2.52E-08	lb/acre-hr		
		Chromium	7440473	1.98E-05	lb/acre-hr		
		Cobalt	7440484	4.79E-06	lb/acre-hr		
		Lead	7439921	2.51E-06	lb/acre-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
HWindCG2 (cont'd)	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles (hourly basis) (cont'd)	Manganese	7439965	2.39E-04	lb/acre-hr	acre-yr (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Mercury	7439976	1.33E-08	lb/acre-hr		
		Nickel	7440020	1.55E-05	lb/acre-hr		
		Selenium	7782492	1.46E-08	lb/acre-hr		
		Total HAPs	--	2.83E-04	lb/acre-hr		
AWindCG3	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	6.75E-04	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.75E-03	lb/acre-yr		
		Beryllium	7440417	4.42E-03	lb/acre-yr		
		Cadmium	7440439	2.21E-04	lb/acre-yr		
		Chromium	7440473	1.74E-01	lb/acre-yr		
		Cobalt	7440484	4.20E-02	lb/acre-yr		
		Lead	7439921	2.20E-02	lb/acre-yr		
		Manganese	7439965	2.10E+00	lb/acre-yr		
		Mercury	7439976	1.17E-04	lb/acre-yr		
		Nickel	7440020	1.35E-01	lb/acre-yr		
		Selenium	7782492	1.28E-04	lb/acre-yr		
		Total HAPs	--	2.48E+00	lb/acre-yr		
HWindCG3	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	7.71E-08	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	3.14E-07	lb/acre-hr		
		Beryllium	7440417	5.05E-07	lb/acre-hr		
		Cadmium	7440439	2.52E-08	lb/acre-hr		
		Chromium	7440473	1.98E-05	lb/acre-hr		
		Cobalt	7440484	4.79E-06	lb/acre-hr		
		Lead	7439921	2.51E-06	lb/acre-hr		
		Manganese	7439965	2.39E-04	lb/acre-hr		
		Mercury	7439976	1.33E-08	lb/acre-hr		
		Nickel	7440020	1.55E-05	lb/acre-hr		
		Selenium	7782492	1.46E-08	lb/acre-hr		
		Total HAPs	--	2.83E-04	lb/acre-hr		
AWindSG1	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	1.53E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.16E-02	lb/acre-yr		
		Beryllium	7440417	1.58E-03	lb/acre-yr		
		Cadmium	7440439	2.65E-03	lb/acre-yr		
		Chromium	7440473	6.75E-03	lb/acre-yr		
		Cobalt	7440484	7.50E-03	lb/acre-yr		
		Lead	7439921	1.22E-01	lb/acre-yr		
		Manganese	7439965	3.53E-02	lb/acre-yr		
		Mercury	7439976	4.62E-04	lb/acre-yr		
		Nickel	7440020	1.11E-02	lb/acre-yr		
		Selenium	7782492	1.40E-02	lb/acre-yr		
		Total HAPs	--	2.38E-01	lb/acre-yr		
HWindSG1	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	1.75E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.47E-06	lb/acre-hr		
		Beryllium	7440417	1.80E-07	lb/acre-hr		
		Cadmium	7440439	3.02E-07	lb/acre-hr		
		Chromium	7440473	7.70E-07	lb/acre-hr		
		Cobalt	7440484	8.56E-07	lb/acre-hr		
		Lead	7439921	1.39E-05	lb/acre-hr		
		Manganese	7439965	4.03E-06	lb/acre-hr		
		Mercury	7439976	5.27E-08	lb/acre-hr		
		Nickel	7440020	1.27E-06	lb/acre-hr		
		Selenium	7782492	1.60E-06	lb/acre-hr		
		Total HAPs	--	2.72E-05	lb/acre-hr		
AWindSG2	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (annual basis)	Antimony	7440360	1.53E-02	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.16E-02	lb/acre-yr		
		Beryllium	7440417	1.58E-03	lb/acre-yr		
		Cadmium	7440439	2.65E-03	lb/acre-yr		
		Chromium	7440473	6.75E-03	lb/acre-yr		
		Cobalt	7440484	7.50E-03	lb/acre-yr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
AWindSG2 (cont'd)	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (annual basis) (cont'd)	Lead	7439921	1.22E-01	lb/acre-yr	acre-yr (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Manganese	7439965	3.53E-02	lb/acre-yr		
		Mercury	7439976	4.62E-04	lb/acre-yr		
		Nickel	7440020	1.11E-02	lb/acre-yr		
		Selenium	7782492	1.40E-02	lb/acre-yr		
		Total HAPs	--	2.38E-01	lb/acre-yr		
HWindSG2	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (hourly basis)	Antimony	7440360	1.75E-06	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	2.47E-06	lb/acre-hr		
		Beryllium	7440417	1.80E-07	lb/acre-hr		
		Cadmium	7440439	3.02E-07	lb/acre-hr		
		Chromium	7440473	7.70E-07	lb/acre-hr		
		Cobalt	7440484	8.56E-07	lb/acre-hr		
		Lead	7439921	1.39E-05	lb/acre-hr		
		Manganese	7439965	4.03E-06	lb/acre-hr		
		Mercury	7439976	5.27E-08	lb/acre-hr		
		Nickel	7440020	1.27E-06	lb/acre-hr		
		Selenium	7782492	1.60E-06	lb/acre-hr		
		Total HAPs	--	2.72E-05	lb/acre-hr		
AWindAgg	Wind Erosion of the Aggregate Stockpiles (annual basis)	Antimony	7440360	2.37E-04	lb/acre-yr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	9.65E-04	lb/acre-yr		
		Beryllium	7440417	1.55E-03	lb/acre-yr		
		Cadmium	7440439	7.76E-05	lb/acre-yr		
		Chromium	7440473	6.11E-02	lb/acre-yr		
		Cobalt	7440484	1.48E-02	lb/acre-yr		
		Lead	7439921	7.72E-03	lb/acre-yr		
		Manganese	7439965	7.37E-01	lb/acre-yr		
		Mercury	7439976	4.10E-05	lb/acre-yr		
		Nickel	7440020	4.76E-02	lb/acre-yr		
		Selenium	7782492	4.50E-05	lb/acre-yr		
		Total HAPs	--	8.71E-01	lb/acre-yr		
HWindAgg	Wind Erosion of the Aggregate Stockpiles (hourly basis)	Antimony	7440360	2.71E-08	lb/acre-hr	acre-yr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.10E-07	lb/acre-hr		
		Beryllium	7440417	1.77E-07	lb/acre-hr		
		Cadmium	7440439	8.86E-09	lb/acre-hr		
		Chromium	7440473	6.97E-06	lb/acre-hr		
		Cobalt	7440484	1.68E-06	lb/acre-hr		
		Lead	7439921	8.81E-07	lb/acre-hr		
		Manganese	7439965	8.41E-05	lb/acre-hr		
		Mercury	7439976	4.69E-09	lb/acre-hr		
		Nickel	7440020	5.43E-06	lb/acre-hr		
		Selenium	7782492	5.14E-09	lb/acre-hr		
		Total HAPs	--	9.94E-05	lb/acre-hr		
Screening Operations							
G1ScreenC	Concentrate Grizzly Screening (moisture content of material processed >1.3%)	Antimony	7440360	1.54E-08	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.93E-08	lb/ton		
		Beryllium	7440417	3.72E-09	lb/ton		
		Cadmium	7440439	8.83E-08	lb/ton		
		Chromium	7440473	8.77E-09	lb/ton		
		Cobalt	7440484	1.19E-07	lb/ton		
		Lead	7439921	1.44E-07	lb/ton		
		Manganese	7439965	2.51E-08	lb/ton		
		Mercury	7439976	7.28E-10	lb/ton		
		Nickel	7440020	3.46E-08	lb/ton		
		Selenium	7782492	6.84E-08	lb/ton		
		Total HAPs	--	5.28E-07	lb/ton		
G2ScreenC	Construction Grizzly Screening (moisture content of material processed >1.3%)	Antimony	7440360	3.12E-10	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.27E-09	lb/ton		
		Beryllium	7440417	2.05E-09	lb/ton		
		Cadmium	7440439	1.02E-10	lb/ton		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
G2ScreenC (cont'd)	Construction Grizzly Screening (moisture content of material processed >1.3%) (cont'd)	Chromium	7440473	8.04E-08	lb/ton	tons (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Cobalt	7440484	1.94E-08	lb/ton		
		Lead	7439921	1.02E-08	lb/ton		
		Manganese	7439965	9.70E-07	lb/ton		
		Mercury	7439976	5.40E-11	lb/ton		
		Nickel	7440020	6.26E-08	lb/ton		
		Selenium	7782492	5.92E-11	lb/ton		
		Total HAPs	--	1.15E-06	lb/ton		
G3ScreenC	Stockpile Grizzly Screening (moisture content of material processed >1.3%)	Antimony	7440360	7.08E-09	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	1.00E-08	lb/ton		
		Beryllium	7440417	7.31E-10	lb/ton		
		Cadmium	7440439	1.22E-09	lb/ton		
		Chromium	7440473	3.12E-09	lb/ton		
		Cobalt	7440484	3.47E-09	lb/ton		
		Lead	7439921	5.62E-08	lb/ton		
		Manganese	7439965	1.63E-08	lb/ton		
		Mercury	7439976	2.13E-10	lb/ton		
		Nickel	7440020	5.14E-09	lb/ton		
		Selenium	7782492	6.46E-09	lb/ton		
		Total HAPs	--	1.10E-07	lb/ton		
Bulk Flotation Operations							
BFO	Bulk Flotation Operations	Benzene	71432	4.47E-03	lb/ton	tons	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Ethylbenzene	100414	7.52E-03	lb/ton		
		n-Hexane	110543	9.40E-04	lb/ton		
		Toluene	108883	5.38E-02	lb/ton		
		m-Xylene	1330207	1.40E-01	lb/ton		
		Total HAPs	--	2.07E-01	lb/ton		
Solution Extraction/Electrowinning Operations							
SXC	Central SX (21,175 ft2)	Benzene	71432	1.11E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.88E-02	lb/hr		
		Ethylbenzene	100414	9.16E-02	lb/hr		
		Xylenes	1330207	1.20E-01	lb/hr		
		Total HAPs	--	2.31E-01	lb/hr		
Tank462	Central Backwash Bleed Tank (33,000 gallons)	Benzene	71432	2.88E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.88E-04	lb/hr		
		Ethylbenzene	100414	2.37E-03	lb/hr		
		Xylenes	1330207	3.10E-03	lb/hr		
		Total HAPs	--	5.99E-03	lb/hr		
Tank463	Central Barren Organic Tank (60,900 gallons)	Benzene	71432	2.16E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.66E-04	lb/hr		
		Ethylbenzene	100414	1.78E-03	lb/hr		
		Xylenes	1330207	2.32E-03	lb/hr		
		Total HAPs	--	4.49E-03	lb/hr		
Tank464	Central Bead Separator Tank (5,000 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.91E-04	lb/hr		
		Ethylbenzene	100414	9.27E-04	lb/hr		
		Xylenes	1330207	1.21E-03	lb/hr		
		Total HAPs	--	2.34E-03	lb/hr		
Tank465	Central High Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.91E-04	lb/hr		
		Ethylbenzene	100414	9.27E-04	lb/hr		
		Xylenes	1330207	1.21E-03	lb/hr		
		Total HAPs	--	2.34E-03	lb/hr		
Tank466	Central Low Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.91E-04	lb/hr		
		Ethylbenzene	100414	9.27E-04	lb/hr		
		Xylenes	1330207	1.21E-03	lb/hr		
		Total HAPs	--	2.34E-03	lb/hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Tank467	Central Gunk Tank 1 (7,600 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.91E-04	lb/hr		
		Ethylbenzene	100414	9.27E-04	lb/hr		
		Xylenes	1330207	1.21E-03	lb/hr		
		Total HAPs	--	2.34E-03	lb/hr		
Tank468	Central Gunk Tank 2 (7,600 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.91E-04	lb/hr		
		Ethylbenzene	100414	9.27E-04	lb/hr		
		Xylenes	1330207	1.21E-03	lb/hr		
		Total HAPs	--	2.34E-03	lb/hr		
Tank469	Central Gunk Tank 3 (23,800 gallons)	Benzene	71432	1.90E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.22E-04	lb/hr		
		Ethylbenzene	100414	1.57E-03	lb/hr		
		Xylenes	1330207	2.04E-03	lb/hr		
		Total HAPs	--	3.95E-03	lb/hr		
Tank470	Central Organic Recovery Tank (306,700 gallons)	Benzene	71432	4.05E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	6.86E-03	lb/hr		
		Ethylbenzene	100414	3.34E-02	lb/hr		
		Xylenes	1330207	4.35E-02	lb/hr		
		Total HAPs	--	8.42E-02	lb/hr		
Pond471	Central Raffinate Pond (9,905 ft2)	Benzene	71432	1.42E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.40E-02	lb/hr		
		Ethylbenzene	100414	1.17E-01	lb/hr		
		Xylenes	1330207	1.53E-01	lb/hr		
		Total HAPs	--	2.95E-01	lb/hr		
SXMe	Metcalf SX (40,585.41 ft2)	Benzene	71432	2.14E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.70E-02	lb/hr		
		Ethylbenzene	100414	1.81E-01	lb/hr		
		Xylenes	1330207	2.36E-01	lb/hr		
		Total HAPs	--	4.56E-01	lb/hr		
Tank472	Metcalf Barren Organic Tank (82,900 gallons)	Benzene	71432	2.95E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	5.10E-04	lb/hr		
		Ethylbenzene	100414	2.49E-03	lb/hr		
		Xylenes	1330207	3.25E-03	lb/hr		
		Total HAPs	--	6.29E-03	lb/hr		
Tank473	Metcalf High A Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.95E-04	lb/hr		
		Ethylbenzene	100414	9.54E-04	lb/hr		
		Xylenes	1330207	1.25E-03	lb/hr		
		Total HAPs	--	2.41E-03	lb/hr		
Tank474	Metcalf High B Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.95E-04	lb/hr		
		Ethylbenzene	100414	9.54E-04	lb/hr		
		Xylenes	1330207	1.25E-03	lb/hr		
		Total HAPs	--	2.41E-03	lb/hr		
Tank475	Metcalf Low A Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.95E-04	lb/hr		
		Ethylbenzene	100414	9.54E-04	lb/hr		
		Xylenes	1330207	1.25E-03	lb/hr		
		Total HAPs	--	2.41E-03	lb/hr		
Tank476	Metcalf Low B Decant Tank (4,700 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.95E-04	lb/hr		
		Ethylbenzene	100414	9.54E-04	lb/hr		
		Xylenes	1330207	1.25E-03	lb/hr		
		Total HAPs	--	2.41E-03	lb/hr		
Tank477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Benzene	71432	1.82E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.15E-04	lb/hr		
		Ethylbenzene	100414	1.54E-03	lb/hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Tank477 (cont'd)	Metcalf SX-7 Diluent Tank (51,200 gallons) (cont'd)	Xylenes	1330207	2.01E-03	lb/hr	hours (cont'd)	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas) (cont'd)
		Total HAPs	--	3.88E-03	lb/hr		
Tank478	Metcalf Gunk Tank 1 (15,200 gallons)	Benzene	71432	1.62E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.81E-04	lb/hr		
		Ethylbenzene	100414	1.37E-03	lb/hr		
		Xylenes	1330207	1.79E-03	lb/hr		
		Total HAPs	--	3.47E-03	lb/hr		
Tank479	Metcalf Gunk Tank 2 (7,600 gallons)	Benzene	71432	1.13E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.95E-04	lb/hr		
		Ethylbenzene	100414	9.54E-04	lb/hr		
		Xylenes	1330207	1.25E-03	lb/hr		
		Total HAPs	--	2.41E-03	lb/hr		
Tank480	Metcalf Gunk Tank 3 (23,100 gallons)	Benzene	71432	1.90E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.30E-04	lb/hr		
		Ethylbenzene	100414	1.61E-03	lb/hr		
		Xylenes	1330207	2.10E-03	lb/hr		
		Total HAPs	--	4.07E-03	lb/hr		
Tank481	Metcalf Holding Tank (122,200 gallons)	Benzene	71432	4.34E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	7.53E-04	lb/hr		
		Ethylbenzene	100414	3.68E-03	lb/hr		
		Xylenes	1330207	4.80E-03	lb/hr		
		Total HAPs	--	9.27E-03	lb/hr		
Tank482	Metcalf Organic Recovery A Tank (302,500 gallons)	Benzene	71432	4.06E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	7.03E-03	lb/hr		
		Ethylbenzene	100414	3.44E-02	lb/hr		
		Xylenes	1330207	4.48E-02	lb/hr		
		Total HAPs	--	8.66E-02	lb/hr		
Tank483	Metcalf Organic Recovery B Tank (302,500 gallons)	Benzene	71432	4.06E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	7.03E-03	lb/hr		
		Ethylbenzene	100414	3.44E-02	lb/hr		
		Xylenes	1330207	4.48E-02	lb/hr		
		Total HAPs	--	8.66E-02	lb/hr		
Tank484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Benzene	71432	4.34E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	7.53E-04	lb/hr		
		Ethylbenzene	100414	3.68E-03	lb/hr		
		Xylenes	1330207	4.80E-03	lb/hr		
		Total HAPs	--	9.27E-03	lb/hr		
Pond485	Metcalf Raffinate Pond (10,236 ft2)	Benzene	71432	1.47E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.55E-02	lb/hr		
		Ethylbenzene	100414	1.24E-01	lb/hr		
		Xylenes	1330207	1.62E-01	lb/hr		
		Total HAPs	--	3.14E-01	lb/hr		
SXMo	Modoc SX (88,229.16 ft2)	Benzene	71432	3.32E-02	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.84E-02	lb/hr		
		Ethylbenzene	100414	4.19E-02	lb/hr		
		Xylenes	1330207	4.50E-02	lb/hr		
		Total HAPs	--	1.59E-01	lb/hr		
Tank486	Modoc Loaded Organic F Tank (81,400 gallons)	Benzene	71432	2.42E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.80E-04	lb/hr		
		Ethylbenzene	100414	3.06E-04	lb/hr		
		Xylenes	1330207	3.28E-04	lb/hr		
		Total HAPs	--	1.15E-03	lb/hr		
Tank487	Modoc Loaded Organic G Tank (81,400 gallons)	Benzene	71432	2.42E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.80E-04	lb/hr		
		Ethylbenzene	100414	3.06E-04	lb/hr		
		Xylenes	1330207	3.28E-04	lb/hr		
		Total HAPs	--	1.15E-03	lb/hr		
Tank488	Modoc High A Decant Tank (4,700 gallons)	Benzene	71432	8.06E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	9.33E-05	lb/hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Tank488 (cont'd)	Modoc High A Decant Tank (4,700 gallons) (cont'd)	Ethylbenzene	100414	1.02E-04	lb/hr	hours (cont'd)	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas) (cont'd)
		Xylenes	1330207	1.09E-04	lb/hr		
		Total HAPs	--	3.85E-04	lb/hr		
Tank489	Modoc High B Decant Tank (4,700 gallons)	Benzene	71432	8.06E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	9.33E-05	lb/hr		
		Ethylbenzene	100414	1.02E-04	lb/hr		
		Xylenes	1330207	1.09E-04	lb/hr		
		Total HAPs	--	3.85E-04	lb/hr		
Tank490	Modoc Low A Decant Tank (4,700 gallons)	Benzene	71432	8.06E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	9.33E-05	lb/hr		
		Ethylbenzene	100414	1.02E-04	lb/hr		
		Xylenes	1330207	1.09E-04	lb/hr		
		Total HAPs	--	3.85E-04	lb/hr		
Tank491	Modoc Low B Decant Tank (4,700 gallons)	Benzene	71432	8.06E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	9.33E-05	lb/hr		
		Ethylbenzene	100414	1.02E-04	lb/hr		
		Xylenes	1330207	1.09E-04	lb/hr		
		Total HAPs	--	3.85E-04	lb/hr		
Tank492	Modoc SX-7 Diluent Tank (49,700 gallons)	Benzene	71432	1.30E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.51E-04	lb/hr		
		Ethylbenzene	100414	1.64E-04	lb/hr		
		Xylenes	1330207	1.76E-04	lb/hr		
		Total HAPs	--	6.21E-04	lb/hr		
Tank493	Modoc Gunk Tank 1 (15,400 gallons)	Benzene	71432	1.36E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.58E-04	lb/hr		
		Ethylbenzene	100414	1.72E-04	lb/hr		
		Xylenes	1330207	1.85E-04	lb/hr		
		Total HAPs	--	6.51E-04	lb/hr		
Tank494	Modoc Gunk Tank 2 (7,600 gallons)	Benzene	71432	8.06E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	9.33E-05	lb/hr		
		Ethylbenzene	100414	1.02E-04	lb/hr		
		Xylenes	1330207	1.09E-04	lb/hr		
		Total HAPs	--	3.85E-04	lb/hr		
Tank495	Modoc Gunk Tank 3 (21,700 gallons)	Benzene	71432	1.36E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.58E-04	lb/hr		
		Ethylbenzene	100414	1.72E-04	lb/hr		
		Xylenes	1330207	1.85E-04	lb/hr		
		Total HAPs	--	6.51E-04	lb/hr		
Tank496	Modoc Holding Tank (118,000 gallons)	Benzene	71432	3.48E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.03E-04	lb/hr		
		Ethylbenzene	100414	4.40E-04	lb/hr		
		Xylenes	1330207	4.72E-04	lb/hr		
		Total HAPs	--	1.66E-03	lb/hr		
Tank497	Modoc Organic Recovery A Tank (302,400 gallons)	Benzene	71432	2.90E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.36E-03	lb/hr		
		Ethylbenzene	100414	3.67E-03	lb/hr		
		Xylenes	1330207	3.93E-03	lb/hr		
		Total HAPs	--	1.39E-02	lb/hr		
Tank498	Modoc Organic Recovery B Tank (302,400 gallons)	Benzene	71432	2.90E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.36E-03	lb/hr		
		Ethylbenzene	100414	3.67E-03	lb/hr		
		Xylenes	1330207	3.93E-03	lb/hr		
		Total HAPs	--	1.39E-02	lb/hr		
Pond499	Modoc Raffinate Pond (15,678 ft2)	Benzene	71432	1.61E-02	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.86E-02	lb/hr		
		Ethylbenzene	100414	2.03E-02	lb/hr		
		Xylenes	1330207	2.18E-02	lb/hr		
		Total HAPs	--	7.68E-02	lb/hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
SXSt	Stargo SX (48,846.87 ft2)	Benzene	71432	2.57E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.39E-02	lb/hr		
		Ethylbenzene	100414	2.14E-01	lb/hr		
		Xylenes	1330207	2.79E-01	lb/hr		
		Total HAPs	--	5.40E-01	lb/hr		
Tank500	Stargo Recovered Solution Tank (5,920 gallons)	Benzene	71432	1.62E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.77E-04	lb/hr		
		Ethylbenzene	100414	1.35E-03	lb/hr		
		Xylenes	1330207	1.76E-03	lb/hr		
		Total HAPs	--	3.41E-03	lb/hr		
Tank501	Stargo Gunk Tank 1 (16,955 gallons)	Benzene	71432	2.53E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.33E-04	lb/hr		
		Ethylbenzene	100414	2.11E-03	lb/hr		
		Xylenes	1330207	2.76E-03	lb/hr		
		Total HAPs	--	5.33E-03	lb/hr		
Tank502	Stargo Gunk Tank 2 (16,955 gallons)	Benzene	71432	2.53E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.33E-04	lb/hr		
		Ethylbenzene	100414	2.11E-03	lb/hr		
		Xylenes	1330207	2.76E-03	lb/hr		
		Total HAPs	--	5.33E-03	lb/hr		
Tank503	Stargo Gunk Tank 3 (16,955 gallons)	Benzene	71432	2.53E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.33E-04	lb/hr		
		Ethylbenzene	100414	2.11E-03	lb/hr		
		Xylenes	1330207	2.76E-03	lb/hr		
		Total HAPs	--	5.33E-03	lb/hr		
Tank504	Stargo Loaded Organic Tank (98,515 gallons)	Benzene	71432	2.74E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	4.68E-04	lb/hr		
		Ethylbenzene	100414	2.28E-03	lb/hr		
		Xylenes	1330207	2.98E-03	lb/hr		
		Total HAPs	--	5.75E-03	lb/hr		
Tank505	Stargo Holding Tank (108,900 gallons)	Benzene	71432	3.16E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	5.40E-04	lb/hr		
		Ethylbenzene	100414	2.63E-03	lb/hr		
		Xylenes	1330207	3.43E-03	lb/hr		
		Total HAPs	--	6.64E-03	lb/hr		
Tank506	Stargo Stormwater Tank (772,190 gallons)	Benzene	71432	6.17E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.05E-02	lb/hr		
		Ethylbenzene	100414	5.14E-02	lb/hr		
		Xylenes	1330207	6.71E-02	lb/hr		
		Total HAPs	--	1.30E-01	lb/hr		
Tank507	Stargo Tricanter Feed Tank (250 gallons)	Benzene	71432	2.29E-06	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.92E-05	lb/hr		
		Ethylbenzene	100414	1.91E-04	lb/hr		
		Xylenes	1330207	2.50E-04	lb/hr		
		Total HAPs	--	4.82E-04	lb/hr		
Tank508	Stargo Slurry Tank (500 gallons)	Benzene	71432	1.51E-06	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	2.59E-05	lb/hr		
		Ethylbenzene	100414	1.26E-04	lb/hr		
		Xylenes	1330207	1.64E-04	lb/hr		
		Total HAPs	--	3.18E-04	lb/hr		
EWC	Central EW (548 cells)	Cobalt Compounds	7440484	7.13E-04	lb/hr	hours	Assumes the fraction of cobalt sulfate in the electrolyte (~150 ppm) is equal to cobalt compounds in the H_2SO_4 emitted
		Total HAPs	--	7.13E-04	lb/hr		
EWSS	Southside EW (220 cells)	Cobalt Compounds	7440484	2.50E-04	lb/hr	hours	Assumes the fraction of cobalt sulfate in the electrolyte (~150 ppm) is equal to cobalt compounds in the H_2SO_4 emitted
		Total HAPs	--	2.50E-04	lb/hr		
EWSt	Stargo EW (324 cells)	Cobalt Compounds	7440484	4.44E-04	lb/hr	hours	Assumes the fraction of cobalt sulfate in the electrolyte (~150 ppm) is equal to cobalt compounds in the H_2SO_4 emitted
		Total HAPs	--	4.44E-04	lb/hr		
SXM-MTF	Modoc Test Facility SX (1,418.72 ft2)	Benzene	71432	1.16E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	1.34E-03	lb/hr		
		Ethylbenzene	100414	1.47E-03	lb/hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
SXM-MTF (cont'd)	Modoc Test Facility SX (1,418.72 ft2) (cont'd)	Xylenes	1330207	1.57E-03	lb/hr	hours (cont'd)	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas) (cont'd)
		Total HAPs	--	5.54E-03	lb/hr		
Tank424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Benzene	71432	5.39E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	6.24E-05	lb/hr		
		Ethylbenzene	100414	6.81E-05	lb/hr		
		Xylenes	1330207	7.31E-05	lb/hr		
		Total HAPs	--	2.58E-04	lb/hr		
Tank425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Benzene	71432	5.39E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	6.24E-05	lb/hr		
		Ethylbenzene	100414	6.81E-05	lb/hr		
		Xylenes	1330207	7.31E-05	lb/hr		
		Total HAPs	--	2.58E-04	lb/hr		
Tank426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Benzene	71432	2.90E-05	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	108883	3.36E-05	lb/hr		
		Ethylbenzene	100414	3.67E-05	lb/hr		
		Xylenes	1330207	3.93E-05	lb/hr		
		Total HAPs	--	1.39E-04	lb/hr		
Cooling Towers and the Dust Suppression Fan							
PCT	PLV Cooling Tower	Antimony	7440360	0.00E+00	lb/1000 gal	1000 gal	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	0.00E+00	lb/1000 gal		
		Beryllium	7440417	0.00E+00	lb/1000 gal		
		Cadmium	7440439	0.00E+00	lb/1000 gal		
		Chromium	7440473	1.45E-12	lb/1000 gal		
		Cobalt	7440484	0.00E+00	lb/1000 gal		
		Lead	7439921	3.63E-12	lb/1000 gal		
		Manganese	7439965	1.80E-10	lb/1000 gal		
		Mercury	7439976	0.00E+00	lb/1000 gal		
		Nickel	7440020	0.00E+00	lb/1000 gal		
		Selenium	7782492	0.00E+00	lb/1000 gal		
		Total HAPs	--	1.85E-10	lb/1000 gal		
OCT1	Oxygen Plant Cooling Tower 1	Antimony	7440360	0.00E+00	lb/1000 gal	1000 gal	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	0.00E+00	lb/1000 gal		
		Beryllium	7440417	0.00E+00	lb/1000 gal		
		Cadmium	7440439	0.00E+00	lb/1000 gal		
		Chromium	7440473	7.26E-13	lb/1000 gal		
		Cobalt	7440484	0.00E+00	lb/1000 gal		
		Lead	7439921	1.82E-12	lb/1000 gal		
		Manganese	7439965	8.99E-11	lb/1000 gal		
		Mercury	7439976	0.00E+00	lb/1000 gal		
		Nickel	7440020	0.00E+00	lb/1000 gal		
		Selenium	7782492	0.00E+00	lb/1000 gal		
		Total HAPs	--	9.24E-11	lb/1000 gal		
OCT2 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	Antimony	7440360	0.00E+00	lb/1000 gal	1000 gal	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	0.00E+00	lb/1000 gal		
		Beryllium	7440417	0.00E+00	lb/1000 gal		
		Cadmium	7440439	0.00E+00	lb/1000 gal		
		Chromium	7440473	3.63E-12	lb/1000 gal		
		Cobalt	7440484	0.00E+00	lb/1000 gal		
		Lead	7439921	9.08E-12	lb/1000 gal		
		Manganese	7439965	4.50E-10	lb/1000 gal		
		Mercury	7439976	0.00E+00	lb/1000 gal		
		Nickel	7440020	0.00E+00	lb/1000 gal		
		Selenium	7782492	0.00E+00	lb/1000 gal		
		Total HAPs	--	4.62E-10	lb/1000 gal		
DSF	Dust Suppression Fan	Antimony	7440360	0.00E+00	lb/1000 gal	1000 gal	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
		Arsenic	7440382	0.00E+00	lb/1000 gal		
		Beryllium	7440417	1.83E-12	lb/1000 gal		
		Cadmium	7440439	1.83E-13	lb/1000 gal		
		Chromium	7440473	5.50E-11	lb/1000 gal		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
DSF (cont'd)	Dust Suppression Fan (cont'd)	Cobalt	7440484	0.00E+00	lb/1000 gal	1000 gal (cont'd)	PM10 emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM10 emissions) (cont'd)
		Lead	7439921	0.00E+00	lb/1000 gal		
		Manganese	7439965	0.00E+00	lb/1000 gal		
		Mercury	7439976	0.00E+00	lb/1000 gal		
		Nickel	7440020	2.75E-11	lb/1000 gal		
		Selenium	7782492	0.00E+00	lb/1000 gal		
		Total HAPs	--	8.46E-11	lb/1000 gal		
External Combustion							
NGC	General Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100	Lead	7439921	4.90E-07	lb/MMBtu	MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf
		2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu		
		Acenaphthene	83329	1.76E-09	lb/MMBtu		
		Acenaphthylene	208968	1.76E-09	lb/MMBtu		
		Anthracene	120127	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	56553	1.76E-09	lb/MMBtu		
		Benzene	71432	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu		
		Chrysene	218019	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu		
		Dichlorobenzene	106467	1.18E-06	lb/MMBtu		
		Fluoranthene	206440	2.94E-09	lb/MMBtu		
		Fluorene	86737	2.75E-09	lb/MMBtu		
		Formaldehyde	50000	7.35E-05	lb/MMBtu		
		Hexane	110543	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu		
		Naphthalene	91203	5.98E-07	lb/MMBtu		
		Phenanthrene	85018	1.67E-08	lb/MMBtu		
		Pyrene	129000	4.90E-09	lb/MMBtu		
		Toluene	108883	3.33E-06	lb/MMBtu		
		Arsenic	7440382	1.96E-07	lb/MMBtu		
		Beryllium	7440417	1.18E-08	lb/MMBtu		
		Cadmium	7440439	1.08E-06	lb/MMBtu		
		Chromium	7440473	1.37E-06	lb/MMBtu		
		Cobalt	7440484	8.24E-08	lb/MMBtu		
		Manganese	7439965	3.73E-07	lb/MMBtu		
		Mercury	7439976	2.55E-07	lb/MMBtu		
		Nickel	7440020	2.06E-06	lb/MMBtu		
		Selenium	7782492	2.35E-08	lb/MMBtu		
		Total HAPs	--	1.85E-03	lb/MMBtu		
DCI	General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr	Lead	7439921	9.00E-06	lb/MMBtu	MMBtu	AP-42 Tables 1.3-8 and 1.3-10 (05/10) and 137,000 Btu/gallon
		POM	250	2.41E-05	lb/MMBtu		
		Formaldehyde	50000	4.45E-04	lb/MMBtu		
		Arsenic	7440382	4.00E-06	lb/MMBtu		
		Beryllium	7440417	3.00E-06	lb/MMBtu		
		Cadmium	7440439	3.00E-06	lb/MMBtu		
		Chromium	7440473	3.00E-06	lb/MMBtu		
		Mercury	7439976	3.00E-06	lb/MMBtu		
		Manganese	7439965	6.00E-06	lb/MMBtu		
		Nickel	7440020	3.00E-06	lb/MMBtu		
		Selenium	7782492	1.50E-05	lb/MMBtu		
		Total HAPs	--	5.18E-04	lb/MMBtu		
PCI	General Uncontrolled Propane Combustion in Industrial Boilers	Lead	7439921	4.90E-07	lb/MMBtu	MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98), a Propane Heating value of 91.5 MMBtu/10^3 gallons, a Natural Gas Heating Value of 1,020 Btu/scf
		2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
PCI (cont'd)	General Uncontrolled Propane Combustion in Industrial Boilers (cont'd)	Acenaphthene	83329	1.76E-09	lb/MMBtu	MMBtu (cont'd)	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98), a Propane Heating value of 91.5 MMBtu/103 gallons, a Natural Gas Heating Value of 1,020 Btu/scf (cont'd)
		Acenaphthylene	208968	1.76E-09	lb/MMBtu		
		Anthracene	120127	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	56553	1.76E-09	lb/MMBtu		
		Benzene	71432	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu		
		Chrysene	218019	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu		
		Dichlorobenzene	106467	1.18E-06	lb/MMBtu		
		Fluoranthene	206440	2.94E-09	lb/MMBtu		
		Fluorene	86737	2.75E-09	lb/MMBtu		
		Formaldehyde	50000	7.35E-05	lb/MMBtu		
		Hexane	110543	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu		
		Naphthalene	91203	5.98E-07	lb/MMBtu		
		Phenanthrene	85018	1.67E-08	lb/MMBtu		
		Pyrene	129000	4.90E-09	lb/MMBtu		
		Toluene	108883	3.33E-06	lb/MMBtu		
		Arsenic	7440382	1.96E-07	lb/MMBtu		
		Beryllium	7440417	1.18E-08	lb/MMBtu		
		Cadmium	7440439	1.08E-06	lb/MMBtu		
		Chromium	7440473	1.37E-06	lb/MMBtu		
		Cobalt	7440484	8.24E-08	lb/MMBtu		
		Manganese	7439965	3.73E-07	lb/MMBtu		
		Mercury	7439976	2.55E-07	lb/MMBtu		
		Nickel	7440020	2.06E-06	lb/MMBtu		
		Selenium	7782492	2.35E-08	lb/MMBtu		
		Total HAPs	--	1.85E-03	lb/MMBtu		
SGB	Natural Gas Startup Boiler (17.64 MMBtu/hr)	Lead	7439921	4.90E-07	lb/MMBtu	MMBtu	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf
		2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu		
		Acenaphthene	83329	1.76E-09	lb/MMBtu		
		Acenaphthylene	208968	1.76E-09	lb/MMBtu		
		Anthracene	120127	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	56553	1.76E-09	lb/MMBtu		
		Benzene	71432	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu		
		Chrysene	218019	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu		
		Dichlorobenzene	106467	1.18E-06	lb/MMBtu		
		Fluoranthene	206440	2.94E-09	lb/MMBtu		
		Fluorene	86737	2.75E-09	lb/MMBtu		
		Formaldehyde	50000	7.35E-05	lb/MMBtu		
		Hexane	110543	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu		
		Naphthalene	91203	5.98E-07	lb/MMBtu		
		Phenanthrene	85018	1.67E-08	lb/MMBtu		
		Pyrene	129000	4.90E-09	lb/MMBtu		
		Toluene	108883	3.33E-06	lb/MMBtu		
		Arsenic	7440382	1.96E-07	lb/MMBtu		
		Beryllium	7440417	1.18E-08	lb/MMBtu		
		Cadmium	7440439	1.08E-06	lb/MMBtu		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
SGB (cont'd)	Natural Gas Startup Boiler (17.64 MMBtu/hr) (cont'd)	Chromium	7440473	1.37E-06	lb/MMBtu	MMBtu (cont'd)	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf (cont'd)
		Cobalt	7440484	8.24E-08	lb/MMBtu		
		Manganese	7439965	3.73E-07	lb/MMBtu		
		Mercury	7439976	2.55E-07	lb/MMBtu		
		Nickel	7440020	2.06E-06	lb/MMBtu		
		Selenium	7782492	2.35E-08	lb/MMBtu		
		Total HAPs	--	1.85E-03	lb/MMBtu		
Turbines							
MGT1	Natural Gas Turbine 1 (204.89 MMBtu/hr)	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	MMBtu	AP-42 Table 3.1-3 (04/00) for Stationary Natural Gas-Fired Turbines
		Acetaldehyde	75070	4.00E-05	lb/MMBtu		
		Acrolein	107028	6.40E-06	lb/MMBtu		
		Benzene	71432	1.20E-05	lb/MMBtu		
		Ethylbenzene	100414	3.20E-05	lb/MMBtu		
		Formaldehyde	50000	7.10E-04	lb/MMBtu		
		Naphthalene	91203	1.30E-06	lb/MMBtu		
		Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu		
		Propylene Oxide	75569	2.90E-05	lb/MMBtu		
		Toluene	108883	1.30E-04	lb/MMBtu		
		Xylenes	1330207	6.40E-05	lb/MMBtu		
		Total HAPs	--	1.03E-03	lb/MMBtu		
MGT2	Natural Gas Turbine 2 (204.89 MMBtu/hr)	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	MMBtu	AP-42 Table 3.1-3 (04/00) for Stationary Natural Gas-Fired Turbines
		Acetaldehyde	75070	4.00E-05	lb/MMBtu		
		Acrolein	107028	6.40E-06	lb/MMBtu		
		Benzene	71432	1.20E-05	lb/MMBtu		
		Ethylbenzene	100414	3.20E-05	lb/MMBtu		
		Formaldehyde	50000	7.10E-04	lb/MMBtu		
		Naphthalene	91203	1.30E-06	lb/MMBtu		
		Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu		
		Propylene Oxide	75569	2.90E-05	lb/MMBtu		
		Toluene	108883	1.30E-04	lb/MMBtu		
		Xylenes	1330207	6.40E-05	lb/MMBtu		
		Total HAPs	--	1.03E-03	lb/MMBtu		
Stationary Engines							
Diesel Emergency and Black Start Engines							
DES	Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Tier3-130/225	Tier 3 Diesel Engines (130 ≤ kW < 225)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
Tier3-225/450	Tier 3 Diesel Engines (225 ≤ kW < 450)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
Tier4-19/37	Tier 4 Diesel Engines (19 ≤ kW < 37)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Tier4-19/37 (cont'd)	Tier 4 Diesel Engines (19 ≤ kW < 37) (cont'd)	Phenanthrene	85018	2.06E-07	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr (cont'd)
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
GNO37A	GO Diesel Emergency Generator GNO37A (809 hp engine)	Benzene	71432	5.43E-06	lb/hp-hr	hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	1.97E-06	lb/hp-hr		
		Xylenes	1330207	1.35E-06	lb/hp-hr		
		Formaldehyde	50000	5.52E-07	lb/hp-hr		
		Acetaldehyde	75070	1.76E-07	lb/hp-hr		
		Acrolein	107028	5.52E-08	lb/hp-hr		
		Naphthalene	91203	9.10E-07	lb/hp-hr		
		Acenaphthylene	208968	6.46E-08	lb/hp-hr		
		Acenaphthene	83329	3.28E-08	lb/hp-hr		
		Fluorene	86737	8.96E-08	lb/hp-hr		
		Phenanthrene	85018	2.86E-07	lb/hp-hr		
		Anthracene	120127	8.61E-09	lb/hp-hr		
		Fluoranthene	206440	2.82E-08	lb/hp-hr		
		Pyrene	129000	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	56553	4.35E-09	lb/hp-hr		
		Chrysene	218019	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr		
		Total HAPs	--	1.10E-05	lb/hp-hr		
GNO38A	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	Benzene	71432	5.43E-06	lb/hp-hr	hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	1.97E-06	lb/hp-hr		
		Xylenes	1330207	1.35E-06	lb/hp-hr		
		Formaldehyde	50000	5.52E-07	lb/hp-hr		
		Acetaldehyde	75070	1.76E-07	lb/hp-hr		
		Acrolein	107028	5.52E-08	lb/hp-hr		
		Naphthalene	91203	9.10E-07	lb/hp-hr		
		Acenaphthylene	208968	6.46E-08	lb/hp-hr		
		Acenaphthene	83329	3.28E-08	lb/hp-hr		
		Fluorene	86737	8.96E-08	lb/hp-hr		
		Phenanthrene	85018	2.86E-07	lb/hp-hr		
		Anthracene	120127	8.61E-09	lb/hp-hr		
		Fluoranthene	206440	2.82E-08	lb/hp-hr		
		Pyrene	129000	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	56553	4.35E-09	lb/hp-hr		
		Chrysene	218019	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr		
		Total HAPs	--	1.10E-05	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
GNO36A	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
GNO46A	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
GNO95A	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	Benzene	71432	3.96E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	1.74E-06	lb/hp-hr		
		Xylenes	1330207	1.21E-06	lb/hp-hr		
		1,3-Butadiene	106990	1.66E-07	lb/hp-hr		
		Formaldehyde	50000	5.01E-06	lb/hp-hr		
		Acetaldehyde	75070	3.26E-06	lb/hp-hr		
		Acrolein	107028	3.93E-07	lb/hp-hr		
		Naphthalene	91203	3.60E-07	lb/hp-hr		
		Acenaphthylene	208968	2.15E-08	lb/hp-hr		
		Acenaphthene	83329	6.03E-09	lb/hp-hr		
		Fluorene	86737	1.24E-07	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
GNO95A (cont'd)	Central SX Diesel Emergency Generator GNO95A (66 hp engine) (cont'd)	Phenanthrene	85018	1.25E-07	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr (cont'd)
		Anthracene	120127	7.94E-09	lb/hp-hr		
		Fluoranthene	206440	3.23E-08	lb/hp-hr		
		Pyrene	129000	2.03E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr		
		Chrysene	218019	1.50E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr		
		Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr		
		Total HAPs	--	1.64E-05	lb/hp-hr		
MFPE	Metcalf Diesel Fire Pump Engine (350 hp engine)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
GNO61A	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	Benzene	71432	5.43E-06	lb/hp-hr	hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	1.97E-06	lb/hp-hr		
		Xylenes	1330207	1.35E-06	lb/hp-hr		
		Formaldehyde	50000	5.52E-07	lb/hp-hr		
		Acetaldehyde	75070	1.76E-07	lb/hp-hr		
		Acrolein	107028	5.52E-08	lb/hp-hr		
		Naphthalene	91203	9.10E-07	lb/hp-hr		
		Acenaphthylene	208968	6.46E-08	lb/hp-hr		
		Acenaphthene	83329	3.28E-08	lb/hp-hr		
		Fluorene	86737	8.96E-08	lb/hp-hr		
		Phenanthrene	85018	2.86E-07	lb/hp-hr		
		Anthracene	120127	8.61E-09	lb/hp-hr		
		Fluoranthene	206440	2.82E-08	lb/hp-hr		
		Pyrene	129000	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	56553	4.35E-09	lb/hp-hr		
		Chrysene	218019	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
GNO61A (cont'd)	Emergency Diesel Generator WWTP GNO61A (1141 hp engine) (cont'd)	Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	hp-hr (cont'd)	AP-42 Tables 3.4-3 and 3.4-4 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr (cont'd)
		Total HAPs	--	1.10E-05	lb/hp-hr		
MCR	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
Propane Emergency Engines							
P1CII	Propane 4-Stroke Rich Burn Phase 1 Class II Engines	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Generac1	Generac Propane Emergency Generators with Engine Family Number 7GNXS.4072DA	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Generac1 (cont'd)	Generac Propane Emergency Generators with Engine Family Number 7GNXS.4072DA (cont'd)	Acetaldehyde	75070	2.93E-05	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr (cont'd)
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Generac2	Generac Propane Emergency Generators with Engine Family Number 8GNXS.4072DA	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Generac3	Generac Propane Emergency Generators with Engine Family Number CGNXS.4072DC	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
Generac3 (cont'd)	Generac Propane Emergency Generators with Engine Family Number CGNXS.4072DC (cont'd)	Methanol	67561	3.21E-05	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr (cont'd)
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Cummins1	Cummins Propane Emergency Generators with Manufacturer's Information	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Cummins2	Cummins Propane Emergency Generators with Engine Family Number CCEXB06.8GDC	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
GNO85A	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
GNO24B	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr		
		1,3-Butadiene	106990	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr		
		Acetaldehyde	75070	2.93E-05	lb/hp-hr		
		Acrolein	107028	2.76E-05	lb/hp-hr		
		Benzene	71432	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr		
		Chlorobenzene	108907	1.35E-07	lb/hp-hr		
		Chloroform	67663	1.44E-07	lb/hp-hr		
		Ethylbenzene	100414	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	106934	2.24E-07	lb/hp-hr		
		Formaldehyde	50000	2.15E-04	lb/hp-hr		
		Methanol	67561	3.21E-05	lb/hp-hr		
		Methylene Chloride	75092	4.33E-07	lb/hp-hr		
		Naphthalene	91203	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr		
		Styrene	100425	1.25E-07	lb/hp-hr		
		Toluene	108883	5.86E-06	lb/hp-hr		
		Vinyl Chloride	75014	7.54E-08	lb/hp-hr		
		Xylene	1330207	2.05E-06	lb/hp-hr		
		Total HAPs	--	3.41E-04	lb/hp-hr		
Natural Gas Emergency Engines							
GSC-NG	GSC Natural Gas Emergency Generator (460 hp engine)	1,1,2,2-Tetrachloroethane	79345	1.28E-08	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr
		1,1,2-Trichloroethane	79005	7.75E-09	lb/hp-hr		
		1,1-Dichloroethane	75343	5.72E-09	lb/hp-hr		
		1,2-Dichloroethane	107062	5.72E-09	lb/hp-hr		
		1,2-Dichloropropane	78875	6.59E-09	lb/hp-hr		
		1,3-Butadiene	106990	3.36E-07	lb/hp-hr		
		1,3-Dichloropropene	542756	6.43E-09	lb/hp-hr		
		Acetaldehyde	75070	1.41E-06	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
GSC-NG (cont'd)	GSC Natural Gas Emergency Generator (460 hp engine) (cont'd)	Acrolein	107028	1.33E-06	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr (cont'd)
		Benzene	71432	8.00E-07	lb/hp-hr		
		Carbon Tetrachloride	56235	8.97E-09	lb/hp-hr		
		Chlorobenzene	108907	6.53E-09	lb/hp-hr		
		Chloroform	67663	6.94E-09	lb/hp-hr		
		Ethylbenzene	100414	1.26E-08	lb/hp-hr		
		Ethylene Dibromide	106934	1.08E-08	lb/hp-hr		
		Formaldehyde	50000	1.04E-05	lb/hp-hr		
		Methanol	67561	1.55E-06	lb/hp-hr		
		Methylene Chloride	75092	2.09E-08	lb/hp-hr		
		Naphthalene	91203	4.92E-08	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	250	7.14E-08	lb/hp-hr		
		Styrene	100425	6.03E-09	lb/hp-hr		
		Toluene	108883	2.83E-07	lb/hp-hr		
		Vinyl Chloride	75014	3.64E-09	lb/hp-hr		
		Xylene	1330207	9.88E-08	lb/hp-hr		
		Total HAPs	--	1.64E-05	lb/hp-hr		
Diesel Non-Emergency Engines							
Tier3-75/130-DN	Tier 3 Diesel Engines (75 ≤ kW < 130)	Benzene	71432	6.53E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	2.86E-06	lb/hp-hr		
		Xylenes	1330207	2.00E-06	lb/hp-hr		
		1,3-Butadiene	106990	2.74E-07	lb/hp-hr		
		Formaldehyde	50000	8.26E-06	lb/hp-hr		
		Acetaldehyde	75070	5.37E-06	lb/hp-hr		
		Acrolein	107028	6.48E-07	lb/hp-hr		
		Naphthalene	91203	5.94E-07	lb/hp-hr		
		Acenaphthylene	208968	3.54E-08	lb/hp-hr		
		Acenaphthene	83329	9.94E-09	lb/hp-hr		
		Fluorene	86737	2.04E-07	lb/hp-hr		
		Phenanthrene	85018	2.06E-07	lb/hp-hr		
		Anthracene	120127	1.31E-08	lb/hp-hr		
		Fluoranthene	206440	5.33E-08	lb/hp-hr		
		Pyrene	129000	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr		
		Chrysene	218019	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr		
		Total HAPs	--	2.71E-05	lb/hp-hr		
S12-DN	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	Benzene	71432	3.96E-06	lb/hp-hr	hp-hr	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr
		Toluene	108883	1.74E-06	lb/hp-hr		
		Xylenes	1330207	1.21E-06	lb/hp-hr		
		1,3-Butadiene	106990	1.66E-07	lb/hp-hr		
		Formaldehyde	50000	5.01E-06	lb/hp-hr		
		Acetaldehyde	75070	3.26E-06	lb/hp-hr		
		Acrolein	107028	3.93E-07	lb/hp-hr		
		Naphthalene	91203	3.60E-07	lb/hp-hr		
		Acenaphthylene	208968	2.15E-08	lb/hp-hr		
		Acenaphthene	83329	6.03E-09	lb/hp-hr		
		Fluorene	86737	1.24E-07	lb/hp-hr		
		Phenanthrene	85018	1.25E-07	lb/hp-hr		
		Anthracene	120127	7.94E-09	lb/hp-hr		
		Fluoranthene	206440	3.23E-08	lb/hp-hr		
		Pyrene	129000	2.03E-08	lb/hp-hr		
		Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr		
		Chrysene	218019	1.50E-09	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information				Emission Rate Units	Reference
		Name	Code	EF	EF Units		
S12-DN (cont'd)	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine) (cont'd)	Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.3-2 (10/96), and a diesel brake-specific fuel consumption of 7,000 Btu/hp-hr (cont'd)
		Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr		
		Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr		
		Total HAPs	--	1.64E-05	lb/hp-hr		
Tanks							
Tank150	Diesel Tank D1 (177,850 gallons)	Benzene	71432	3.84E-05	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	6.35E-05	lb/hr		
		n-Hexane	110543	7.70E-06	lb/hr		
		Toluene	108883	4.54E-04	lb/hr		
		m-Xylene	1330207	1.19E-03	lb/hr		
		Total HAPs	--	1.75E-03	lb/hr		
Tank151	Diesel Tank D2 (200,434 gallons)	Benzene	71432	5.05E-05	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	8.35E-05	lb/hr		
		n-Hexane	110543	1.01E-05	lb/hr		
		Toluene	108883	5.97E-04	lb/hr		
		m-Xylene	1330207	1.56E-03	lb/hr		
		Total HAPs	--	2.30E-03	lb/hr		
Tank154	Diesel Tank D5 (47,255 gallons)	Benzene	71432	1.65E-05	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	2.72E-05	lb/hr		
		n-Hexane	110543	3.30E-06	lb/hr		
		Toluene	108883	1.95E-04	lb/hr		
		m-Xylene	1330207	5.08E-04	lb/hr		
		Total HAPs	--	7.50E-04	lb/hr		
Tank161	Diesel Tank Pit 95 (101,690 gallons)	Benzene	71432	7.21E-05	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	1.19E-04	lb/hr		
		n-Hexane	110543	1.45E-05	lb/hr		
		Toluene	108883	8.52E-04	lb/hr		
		m-Xylene	1330207	2.22E-03	lb/hr		
		Total HAPs	--	3.28E-03	lb/hr		
Tank155	Gasoline Tank G1 (12,000 gallons)	Benzene	71432	9.49E-03	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	4.87E-04	lb/hr		
		n-Hexane	110543	1.40E-02	lb/hr		
		Naphthalene	91203	3.06E-06	lb/hr		
		Cumene	98828	3.58E-04	lb/hr		
		Toluene	108883	1.18E-02	lb/hr		
		m-Xylene	1330207	1.95E-03	lb/hr		
		Total HAPs	--	3.81E-02	lb/hr		
Tank156	Gasoline Tank G2 (12,000 gallons)	Benzene	71432	9.49E-03	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	4.87E-04	lb/hr		
		n-Hexane	110543	1.40E-02	lb/hr		
		Naphthalene	91203	3.06E-06	lb/hr		
		Cumene	98828	3.58E-04	lb/hr		
		Toluene	108883	1.18E-02	lb/hr		
		m-Xylene	1330207	1.95E-03	lb/hr		
		Total HAPs	--	3.81E-02	lb/hr		
Tank157	Gasoline Tank G3 (12,000 gallons)	Benzene	71432	5.65E-03	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	100414	2.90E-04	lb/hr		
		n-Hexane	110543	8.32E-03	lb/hr		
		Naphthalene	91203	1.82E-06	lb/hr		
		Cumene	98828	2.13E-04	lb/hr		
		Toluene	108883	7.04E-03	lb/hr		
		m-Xylene	1330207	1.16E-03	lb/hr		
		Total HAPs	--	2.27E-02	lb/hr		

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
Operation 001: Mining Operations											
001-004	Drilling	Drilling	F	211,174	holes	Antimony	7440360	6.29E-06	lb/hole	0%	6.64E-04
						Arsenic	7440382	9.02E-06	lb/hole	0%	9.53E-04
						Beryllium	7440417	9.98E-07	lb/hole	0%	1.05E-04
						Cadmium	7440439	1.10E-06	lb/hole	0%	1.16E-04
						Chromium	7440473	1.67E-05	lb/hole	0%	1.76E-03
						Cobalt	7440484	6.42E-06	lb/hole	0%	6.78E-04
						Lead	7439921	5.13E-05	lb/hole	0%	5.42E-03
						Manganese	7439965	1.83E-04	lb/hole	0%	1.93E-02
						Mercury	7439976	1.97E-07	lb/hole	0%	2.08E-05
						Nickel	7440020	1.54E-05	lb/hole	0%	1.62E-03
						Selenium	7782492	5.70E-06	lb/hole	0%	6.02E-04
001-003	Blasting	ABlasting	F	2,136	blasts	POM	250	3.72E-03	lb/blast	0%	3.97E-03
						Formaldehyde	50000	6.87E-02	lb/blast	0%	7.34E-02
						Antimony	7440360	7.16E-04	lb/blast	0%	7.65E-04
						Arsenic	7440382	1.64E-03	lb/blast	0%	1.75E-03
						Beryllium	7440417	5.73E-04	lb/blast	0%	6.12E-04
						Cadmium	7440439	5.85E-04	lb/blast	0%	6.24E-04
						Chromium	7440473	2.36E-03	lb/blast	0%	2.52E-03
						Cobalt	7440484	7.31E-04	lb/blast	0%	7.81E-04
						Lead	7439921	7.22E-03	lb/blast	0%	7.71E-03
						Manganese	7439965	2.17E-02	lb/blast	0%	2.32E-02
						Mercury	7439976	4.82E-04	lb/blast	0%	5.15E-04
						Nickel	7440020	2.21E-03	lb/blast	0%	2.36E-03
						Selenium	7782492	2.95E-03	lb/blast	0%	3.15E-03
001-001a	Vehicle Travel on Unpaved Roads	ATravel	F	21,707,209	VMT	Antimony	7440360	3.12E-05	lb/VMT	90%	3.38E-02
						Arsenic	7440382	4.47E-05	lb/VMT	90%	4.86E-02
						Beryllium	7440417	4.95E-06	lb/VMT	90%	5.37E-03
						Cadmium	7440439	5.44E-06	lb/VMT	90%	5.90E-03
						Chromium	7440473	8.27E-05	lb/VMT	90%	8.98E-02
						Cobalt	7440484	3.18E-05	lb/VMT	90%	3.45E-02
						Lead	7439921	2.54E-04	lb/VMT	90%	2.76E-01
						Manganese	7439965	9.05E-04	lb/VMT	90%	9.82E-01
						Mercury	7439976	9.79E-07	lb/VMT	90%	1.06E-03
						Nickel	7440020	7.63E-05	lb/VMT	90%	8.28E-02
						Selenium	7782492	2.83E-05	lb/VMT	90%	3.07E-02
001-001b	Dozer Operation	Dozer	F	446,760	hours	Antimony	7440360	9.49E-06	lb/hr	0%	2.12E-03
						Arsenic	7440382	1.36E-05	lb/hr	0%	3.04E-03
						Beryllium	7440417	1.51E-06	lb/hr	0%	3.37E-04
						Cadmium	7440439	1.65E-06	lb/hr	0%	3.70E-04
						Chromium	7440473	2.52E-05	lb/hr	0%	5.62E-03
						Cobalt	7440484	9.69E-06	lb/hr	0%	2.16E-03
						Lead	7439921	7.74E-05	lb/hr	0%	1.73E-02
						Manganese	7439965	2.76E-04	lb/hr	0%	6.16E-02
						Mercury	7439976	2.98E-07	lb/hr	0%	6.66E-05
						Nickel	7440020	2.32E-05	lb/hr	0%	5.19E-03
						Selenium	7782492	8.61E-06	lb/hr	0%	1.92E-03
001-001c	Road Grader Operation	Grader	F	420,480	VMT	Antimony	7440360	3.95E-06	lb/VMT	0%	8.30E-04
						Arsenic	7440382	5.66E-06	lb/VMT	0%	1.19E-03
						Beryllium	7440417	6.27E-07	lb/VMT	0%	1.32E-04
						Cadmium	7440439	6.88E-07	lb/VMT	0%	1.45E-04
						Chromium	7440473	1.05E-05	lb/VMT	0%	2.20E-03
						Cobalt	7440484	4.03E-06	lb/VMT	0%	8.47E-04
						Lead	7439921	3.22E-05	lb/VMT	0%	6.77E-03
						Manganese	7439965	1.15E-04	lb/VMT	0%	2.41E-02
						Mercury	7439976	1.24E-07	lb/VMT	0%	2.60E-05
						Nickel	7440020	9.66E-06	lb/VMT	0%	2.03E-03
						Selenium	7782492	3.58E-06	lb/VMT	0%	7.53E-04
001-002a	Loading Ore into Haul Trucks	Ore1TrUnprt	F	401,500,000	tons	Antimony	7440360	7.08E-09	lb/ton	0%	1.42E-03
						Arsenic	7440382	1.02E-08	lb/ton	0%	2.04E-03
						Beryllium	7440417	1.13E-09	lb/ton	0%	2.26E-04
						Cadmium	7440439	1.24E-09	lb/ton	0%	2.48E-04
						Chromium	7440473	1.88E-08	lb/ton	0%	3.77E-03
						Cobalt	7440484	7.24E-09	lb/ton	0%	1.45E-03
						Lead	7439921	5.78E-08	lb/ton	0%	1.16E-02
						Manganese	7439965	2.06E-07	lb/ton	0%	4.13E-02
						Mercury	7439976	2.22E-10	lb/ton	0%	4.47E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
001-002a (cont'd)	Loading Ore into Haul Trucks (cont'd)	Ore1TrUnprt (cont'd)	F (cont'd)	401,500,000	tons (cont'd)	Nickel	7440020	1.73E-08	lb/ton	0%	3.48E-03
						Selenium	7782492	6.43E-09	lb/ton	0%	1.29E-03
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Ore5TrUnprt	F	124,830,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	5.25E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	7.41E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	5.42E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	9.08E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	2.31E-05
						Cobalt	7440484	4.12E-09	lb/ton	90%	2.57E-05
						Lead	7439921	6.68E-08	lb/ton	90%	4.17E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	1.21E-04
						Mercury	7439976	2.54E-10	lb/ton	90%	1.58E-06
						Nickel	7440020	6.11E-09	lb/ton	90%	3.81E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	4.79E-05
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Ore6TrUnprt	F	276,670,000	tons	Antimony	7440360	6.49E-09	lb/ton	0%	8.98E-04
						Arsenic	7440382	9.40E-09	lb/ton	0%	1.30E-03
						Beryllium	7440417	1.24E-09	lb/ton	0%	1.72E-04
						Cadmium	7440439	1.14E-09	lb/ton	0%	1.57E-04
						Chromium	7440473	2.56E-08	lb/ton	0%	3.54E-03
						Cobalt	7440484	8.64E-09	lb/ton	0%	1.20E-03
						Lead	7439921	5.37E-08	lb/ton	0%	7.43E-03
						Manganese	7439965	2.90E-07	lb/ton	0%	4.01E-02
						Mercury	7439976	2.08E-10	lb/ton	0%	2.88E-05
						Nickel	7440020	2.24E-08	lb/ton	0%	3.10E-03
						Selenium	7782492	5.86E-09	lb/ton	0%	8.11E-04
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Ore5TrUnprt	F	65,700,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	2.76E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	3.90E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	2.85E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	4.78E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	1.22E-05
						Cobalt	7440484	4.12E-09	lb/ton	90%	1.35E-05
						Lead	7439921	6.68E-08	lb/ton	90%	2.19E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	6.37E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	8.33E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	2.01E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	2.52E-05
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Ore5TrUnprt	F	59,130,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	2.49E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	3.51E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	2.57E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	4.30E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	1.10E-05
						Cobalt	7440484	4.12E-09	lb/ton	90%	1.22E-05
						Lead	7439921	6.68E-08	lb/ton	90%	1.98E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	5.73E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	7.50E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	1.81E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	2.27E-05
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	FFDC006	NF	9,408,240,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	6.43E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	9.08E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	6.64E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.11E-06
						Chromium	7440473	6.02E-13	lb/dscf	0%	2.83E-06
						Cobalt	7440484	6.69E-13	lb/dscf	0%	3.15E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	5.11E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	1.48E-05
						Mercury	7439976	4.12E-14	lb/dscf	0%	1.94E-07
						Nickel	7440020	9.92E-13	lb/dscf	0%	4.67E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	5.87E-06
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	FFDC250	NF	6,307,200,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	50%	8.62E-06
						Arsenic	7440382	7.72E-12	lb/dscf	50%	1.22E-05
						Beryllium	7440417	5.64E-13	lb/dscf	50%	8.90E-07
						Cadmium	7440439	9.46E-13	lb/dscf	50%	1.49E-06
						Chromium	7440473	2.41E-12	lb/dscf	50%	3.80E-06
						Cobalt	7440484	2.68E-12	lb/dscf	50%	4.22E-06
						Lead	7439921	4.34E-11	lb/dscf	50%	6.85E-05
						Manganese	7439965	1.26E-11	lb/dscf	50%	1.99E-05
						Mercury	7439976	1.65E-13	lb/dscf	50%	2.60E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
001-250 (cont'd)	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside) (cont'd)	FFDC250 (cont'd)	NF (cont'd)	6,307,200,000	dscf (cont'd)	Nickel	7440020	3.97E-12	lb/dscf	50%	6.26E-06
						Selenium	7782492	4.99E-12	lb/dscf	50%	7.87E-06
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	FFDC251	NF	8,041,680,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	2.20E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	3.10E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	2.27E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	3.80E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	9.68E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	1.08E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	1.75E-04
						Manganese	7439965	1.26E-11	lb/dscf	0%	5.07E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	6.63E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	1.60E-05
						Selenium	7782492	4.99E-12	lb/dscf	0%	2.01E-05
001-344	Conveyor Belt P12 to Conveyor Belt P10	Ore3TrPrt	NF	61,320,000	tons	Antimony	7440360	9.63E-10	lb/ton	90%	2.95E-06
						Arsenic	7440382	1.36E-09	lb/ton	90%	4.17E-06
						Beryllium	7440417	9.94E-11	lb/ton	90%	3.05E-07
						Cadmium	7440439	1.67E-10	lb/ton	90%	5.11E-07
						Chromium	7440473	4.24E-10	lb/ton	90%	1.30E-06
						Cobalt	7440484	4.72E-10	lb/ton	90%	1.45E-06
						Lead	7439921	7.65E-09	lb/ton	90%	2.35E-05
						Manganese	7439965	2.22E-09	lb/ton	90%	6.81E-06
						Mercury	7439976	2.90E-11	lb/ton	90%	8.90E-08
						Nickel	7440020	6.99E-10	lb/ton	90%	2.14E-06
						Selenium	7782492	8.79E-10	lb/ton	90%	2.70E-06
001-015	Processes Controlled by P5/P6 FFDC	FFDC015	NF	6,727,680,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.84E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	2.60E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.90E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	3.18E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	8.10E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	9.01E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.46E-04
						Manganese	7439965	1.26E-11	lb/dscf	0%	4.24E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	5.55E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	1.33E-05
						Selenium	7782492	4.99E-12	lb/dscf	0%	1.68E-05
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Ore4TrUnprt	F	79,716,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	3.35E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	4.73E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	3.46E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	5.80E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	1.48E-05
						Cobalt	7440484	4.12E-09	lb/ton	90%	1.64E-05
						Lead	7439921	6.68E-08	lb/ton	90%	2.66E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	7.73E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	1.01E-06
						Nickel	7440020	6.11E-09	lb/ton	90%	2.43E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	3.06E-05
001-017	Wind Erosion of Mill IOS	AWindIOS1	F	4.00	acre-yr	Antimony	7440360	1.53E-02	lb/acre-yr	0%	3.06E-05
						Arsenic	7440382	2.16E-02	lb/acre-yr	0%	4.32E-05
						Beryllium	7440417	1.58E-03	lb/acre-yr	0%	3.16E-06
						Cadmium	7440439	2.65E-03	lb/acre-yr	0%	5.30E-06
						Chromium	7440473	6.75E-03	lb/acre-yr	0%	1.35E-05
						Cobalt	7440484	7.50E-03	lb/acre-yr	0%	1.50E-05
						Lead	7439921	1.22E-01	lb/acre-yr	0%	2.43E-04
						Manganese	7439965	3.53E-02	lb/acre-yr	0%	7.06E-05
						Mercury	7439976	4.62E-04	lb/acre-yr	0%	9.23E-07
						Nickel	7440020	1.11E-02	lb/acre-yr	0%	2.22E-05
						Selenium	7782492	1.40E-02	lb/acre-yr	0%	2.80E-05
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	FFDC225	NF	9,671,040,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	6.61E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	9.33E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	6.82E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.14E-06
						Chromium	7440473	6.02E-13	lb/dscf	0%	2.91E-06
						Cobalt	7440484	6.69E-13	lb/dscf	0%	3.24E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	5.25E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	1.52E-05
						Mercury	7439976	4.12E-14	lb/dscf	0%	1.99E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
001-225 (cont'd)	Processes Controlled by DC2/P9 and P9/P10 FFDC (cont'd)	FFDC225 (cont'd)	NF (cont'd)	9,671,040,000	dscf (cont'd)	Nickel	7440020	9.92E-13	lb/dscf	0%	4.80E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	6.03E-06
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Ore3TrUnprt	F	61,320,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	2.58E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	3.64E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	2.66E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	4.46E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	1.14E-05
						Cobalt	7440484	4.12E-09	lb/ton	90%	1.26E-05
						Lead	7439921	6.68E-08	lb/ton	90%	2.05E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	5.94E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	7.78E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	1.87E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	2.35E-05
001-227	Wind Erosion of MFL IOS	AWindIOS2	F	4.50	acre-yr	Antimony	7440360	1.53E-02	lb/acre-yr	0%	3.44E-05
						Arsenic	7440382	2.16E-02	lb/acre-yr	0%	4.86E-05
						Beryllium	7440417	1.58E-03	lb/acre-yr	0%	3.56E-06
						Cadmium	7440439	2.65E-03	lb/acre-yr	0%	5.96E-06
						Chromium	7440473	6.75E-03	lb/acre-yr	0%	1.52E-05
						Cobalt	7440484	7.50E-03	lb/acre-yr	0%	1.69E-05
						Lead	7439921	1.22E-01	lb/acre-yr	0%	2.74E-04
						Manganese	7439965	3.53E-02	lb/acre-yr	0%	7.94E-05
						Mercury	7439976	4.62E-04	lb/acre-yr	0%	1.04E-06
						Nickel	7440020	1.11E-02	lb/acre-yr	0%	2.50E-05
						Selenium	7782492	1.40E-02	lb/acre-yr	0%	3.15E-05
001-325	Processes Controlled by DC2/P5 FFDC	FFDC325	NF	3,836,880,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	2.62E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	3.70E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	2.71E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	4.54E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	1.16E-06
						Cobalt	7440484	6.69E-13	lb/dscf	0%	1.28E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	2.08E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	6.04E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	7.91E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	1.90E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	2.39E-06
001-299	Processes Controlled by Mill IOS/R1A FFDC	FFDC299	NF	6,570,000,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.80E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	2.54E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.85E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	3.11E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	7.91E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	8.79E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.43E-04
						Manganese	7439965	1.26E-11	lb/dscf	0%	4.14E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	5.42E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	1.30E-05
						Selenium	7782492	4.99E-12	lb/dscf	0%	1.64E-05
001-300	Processes Controlled by Mill IOS/R1B FFDC	FFDC300	NF	5,256,000,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.44E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	2.03E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.48E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	2.49E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	6.33E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	7.04E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.14E-04
						Manganese	7439965	1.26E-11	lb/dscf	0%	3.31E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	4.33E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	1.04E-05
						Selenium	7782492	4.99E-12	lb/dscf	0%	1.31E-05
001-272	Processes Controlled by R1A and R1B/R7 FFDC	FFDC272	NF	1,576,800,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	1.69E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	5.50E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	1.01E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	7.03E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	2.22E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	1.63E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.42E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.85E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	3.60E-08

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
001-272 (cont'd)	Processes Controlled by R1A and R1B/R7 FFDC (cont'd)	FFDC272 (cont'd)	NF (cont'd)	1,576,800,000	dscf (cont'd)	Nickel	7440020	9.37E-13	lb/dscf	0%	7.39E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	8.88E-07
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	BC277	NF	1,629,360,000	dscf	Antimony	7440360	1.88E-11	lb/dscf	0%	1.53E-05
						Arsenic	7440382	2.58E-11	lb/dscf	0%	2.10E-05
						Beryllium	7440417	1.75E-12	lb/dscf	0%	1.43E-06
						Cadmium	7440439	1.75E-12	lb/dscf	0%	1.43E-06
						Chromium	7440473	3.50E-12	lb/dscf	0%	2.85E-06
						Cobalt	7440484	5.75E-12	lb/dscf	0%	4.68E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	6.19E-05
						Manganese	7439965	3.00E-12	lb/dscf	0%	2.44E-06
						Mercury	7439976	4.97E-13	lb/dscf	0%	4.05E-07
						Nickel	7440020	1.23E-11	lb/dscf	0%	9.98E-06
						Selenium	7782492	1.55E-11	lb/dscf	0%	1.26E-05
001-278	Processes Controlled by R2/R11 FFDC	FFDC278	NF	2,417,760,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.30E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.78E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.21E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.21E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.42E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.97E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	5.25E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.07E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.43E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	8.46E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.07E-05
001-228	Processes Controlled by MFL IOS/R8 FFDC	FFDC228	NF	6,727,680,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	4.60E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	6.49E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	4.75E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	7.95E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	2.03E-06
						Cobalt	7440484	6.69E-13	lb/dscf	0%	2.25E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	3.65E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	1.06E-05
						Mercury	7439976	4.12E-14	lb/dscf	0%	1.39E-07
						Nickel	7440020	9.92E-13	lb/dscf	0%	3.34E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	4.20E-06
001-229	Processes Controlled by R8/R9 FFDC	FFDC229	NF	5,571,360,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	3.81E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	5.38E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	3.93E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	6.59E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	1.68E-06
						Cobalt	7440484	6.69E-13	lb/dscf	0%	1.86E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	3.02E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	8.77E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	1.15E-07
						Nickel	7440020	9.92E-13	lb/dscf	0%	2.76E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	3.48E-06
001-323a	Loading to the Portable Cleanup Conveyor	Ore5TrUnprt	F	438,000	tons	Antimony	7440360	8.41E-09	lb/ton	0%	1.84E-06
						Arsenic	7440382	1.19E-08	lb/ton	0%	2.60E-06
						Beryllium	7440417	8.68E-10	lb/ton	0%	1.90E-07
						Cadmium	7440439	1.45E-09	lb/ton	0%	3.19E-07
						Chromium	7440473	3.71E-09	lb/ton	0%	8.12E-07
						Cobalt	7440484	4.12E-09	lb/ton	0%	9.02E-07
						Lead	7439921	6.68E-08	lb/ton	0%	1.46E-05
						Manganese	7439965	1.94E-08	lb/ton	0%	4.25E-06
						Mercury	7439976	2.54E-10	lb/ton	0%	5.55E-08
						Nickel	7440020	6.11E-09	lb/ton	0%	1.34E-06
						Selenium	7782492	7.68E-09	lb/ton	0%	1.68E-06
001-323b	Unloading from the Portable Cleanup Conveyor	Ore5TrUnprt	NF	438,000	tons	Antimony	7440360	8.41E-09	lb/ton	0%	1.84E-06
						Arsenic	7440382	1.19E-08	lb/ton	0%	2.60E-06
						Beryllium	7440417	8.68E-10	lb/ton	0%	1.90E-07
						Cadmium	7440439	1.45E-09	lb/ton	0%	3.19E-07
						Chromium	7440473	3.71E-09	lb/ton	0%	8.12E-07
						Cobalt	7440484	4.12E-09	lb/ton	0%	9.02E-07
						Lead	7439921	6.68E-08	lb/ton	0%	1.46E-05
						Manganese	7439965	1.94E-08	lb/ton	0%	4.25E-06
						Mercury	7439976	2.54E-10	lb/ton	0%	5.55E-08

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
001-323b (cont'd)	Unloading from the Portable Cleanup Conveyor (cont'd)	Ore5TrUnprt (cont'd)	NF (cont'd)	438,000	tons (cont'd)	Nickel	7440020	6.11E-09	lb/ton	0%	1.34E-06
						Selenium	7782492	7.68E-09	lb/ton	0%	1.68E-06
Total of Non-Fugitive Emissions for Operation 001:											*2.02E-03*
Total of Fugitive Emissions for Operation 001:											*2.01E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:											*2.01E+00*
Operation 002: Morenci Concentrator											
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	FFDC030	NF	12,456,720,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	3.34E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.09E-06
						Beryllium	7440417	3.21E-14	lb/dscf	0%	2.00E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	1.39E-06
						Chromium	7440473	7.04E-13	lb/dscf	0%	4.39E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	3.22E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	6.76E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	3.66E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	7.12E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.46E-06
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.75E-06
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	FFDC031	NF	13,192,560,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	3.53E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.15E-06
						Beryllium	7440417	3.21E-14	lb/dscf	0%	2.12E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	1.47E-06
						Chromium	7440473	7.04E-13	lb/dscf	0%	4.65E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	3.41E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	7.16E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	3.87E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	7.54E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.55E-06
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.86E-06
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	FFDC035	NF	7,305,840,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	1.96E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	6.37E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	1.17E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	8.14E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	2.57E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	1.89E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	3.97E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	2.14E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	4.17E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	8.56E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.03E-06
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	FFDC036	NF	8,672,400,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	2.32E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	7.56E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	1.39E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	9.66E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	3.05E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	2.24E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	4.71E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	2.55E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	4.96E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.02E-06
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.22E-06
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	FFDC032	NF	12,456,720,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	3.34E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.09E-06
						Beryllium	7440417	3.21E-14	lb/dscf	0%	2.00E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	1.39E-06
						Chromium	7440473	7.04E-13	lb/dscf	0%	4.39E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	3.22E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	6.76E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	3.66E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	7.12E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.46E-06
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.75E-06
002-352	Morenci Concentrator Bulk Flotation	BFO	F	542.14	tons	Benzene	71432	4.47E-03	lb/ton	0%	1.21E-03
						Ethylbenzene	100414	7.52E-03	lb/ton	0%	2.04E-03
						n-Hexane	110543	9.40E-04	lb/ton	0%	2.55E-04
						Toluene	108883	5.38E-02	lb/ton	0%	1.46E-02
						m-Xylene	1330207	1.40E-01	lb/ton	0%	3.80E-02
Total of Non-Fugitive Emissions for Operation 002:											*5.13E-04*

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
Total of Fugitive Emissions for Operation 002:											*5.61E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:											*5.66E-02*
Operation 003: MFL Fine Crushing Plant											
003-273	Processes Controlled by R9/R10 FFDC	FFDC273	NF	1,576,800,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	1.08E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	1.52E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	1.11E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.86E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	4.75E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	5.28E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	8.56E-06
						Manganese	7439965	3.15E-12	lb/dscf	0%	2.48E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	3.25E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	7.82E-07
						Selenium	7782492	1.25E-12	lb/dscf	0%	9.84E-07
003-330	Processes Controlled by R10/R3 FFDC	FFDC330	NF	1,576,800,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	4.31E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	6.09E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	4.45E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	7.46E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.90E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.11E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.42E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	9.93E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.30E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.13E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	3.94E-06
003-079	Processes Controlled by R3/R4 Bag Collector 3	BC079	NF	1,681,920,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	8.04E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	1.14E-05
						Beryllium	7440417	9.88E-13	lb/dscf	0%	8.30E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	1.39E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	3.54E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	6.39E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	1.85E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	2.43E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	5.84E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	7.35E-06
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	BC080	NF	4,362,480,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	2.09E-05
						Arsenic	7440382	1.35E-11	lb/dscf	0%	2.95E-05
						Beryllium	7440417	9.88E-13	lb/dscf	0%	2.15E-06
						Cadmium	7440439	1.66E-12	lb/dscf	0%	3.61E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	9.19E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	1.02E-05
						Lead	7439921	7.60E-11	lb/dscf	0%	1.66E-04
						Manganese	7439965	2.21E-11	lb/dscf	0%	4.81E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	6.29E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	1.51E-05
						Selenium	7782492	8.74E-12	lb/dscf	0%	1.91E-05
003-082	Processes Controlled by Scrubber 3C	SC082	NF	18,606,240,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	1.27E-04
						Arsenic	7440382	1.93E-11	lb/dscf	0%	1.80E-04
						Beryllium	7440417	1.41E-12	lb/dscf	0%	1.31E-05
						Cadmium	7440439	2.36E-12	lb/dscf	0%	2.20E-05
						Chromium	7440473	6.02E-12	lb/dscf	0%	5.60E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	6.23E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	1.01E-03
						Manganese	7439965	3.15E-11	lb/dscf	0%	2.93E-04
						Mercury	7439976	4.12E-13	lb/dscf	0%	3.83E-06
						Nickel	7440020	9.92E-12	lb/dscf	0%	9.23E-05
						Selenium	7782492	1.25E-11	lb/dscf	0%	1.16E-04
003-317	Processes Controlled by FFDC 3A	FFDC317	NF	19,972,800,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	5.46E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	7.71E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	5.64E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	9.44E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	2.41E-05
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.67E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	4.34E-04
						Manganese	7439965	1.26E-11	lb/dscf	0%	1.26E-04
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.65E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
003-317 (cont'd)	Processes Controlled by FFDC 3A (cont'd)	FFDC317 (cont'd)	NF (cont'd)	19,972,800,000	dscf (cont'd)	Nickel	7440020	3.97E-12	lb/dscf	0%	3.96E-05
						Selenium	7782492	4.99E-12	lb/dscf	0%	4.98E-05
003-301	Processes Controlled by FFDC 6A	FFDC301	NF	16,346,160,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	5.58E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	7.89E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	5.76E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	9.66E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	2.46E-05
						Cobalt	7440484	3.35E-12	lb/dscf	0%	2.74E-05
						Lead	7439921	5.43E-11	lb/dscf	0%	4.44E-04
						Manganese	7439965	1.58E-11	lb/dscf	0%	1.29E-04
						Mercury	7439976	2.06E-13	lb/dscf	0%	1.68E-06
						Nickel	7440020	4.96E-12	lb/dscf	0%	4.05E-05
						Selenium	7782492	6.24E-12	lb/dscf	0%	5.10E-05
003-302	Processes Controlled by FFDC 6B	FFDC302	NF	14,454,000,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	4.94E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	6.97E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	5.10E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	8.54E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	2.18E-05
						Cobalt	7440484	3.35E-12	lb/dscf	0%	2.42E-05
						Lead	7439921	5.43E-11	lb/dscf	0%	3.92E-04
						Manganese	7439965	1.58E-11	lb/dscf	0%	1.14E-04
						Mercury	7439976	2.06E-13	lb/dscf	0%	1.49E-06
						Nickel	7440020	4.96E-12	lb/dscf	0%	3.59E-05
						Selenium	7782492	6.24E-12	lb/dscf	0%	4.51E-05
003-304	Processes Controlled by FFDC 1	FFDC304	NF	14,559,120,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	4.97E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	7.02E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	5.13E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	8.61E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	2.19E-05
						Cobalt	7440484	3.35E-12	lb/dscf	0%	2.44E-05
						Lead	7439921	5.43E-11	lb/dscf	0%	3.95E-04
						Manganese	7439965	1.58E-11	lb/dscf	0%	1.15E-04
						Mercury	7439976	2.06E-13	lb/dscf	0%	1.50E-06
						Nickel	7440020	4.96E-12	lb/dscf	0%	3.61E-05
						Selenium	7782492	6.24E-12	lb/dscf	0%	4.54E-05
003-089	Processes Controlled by Scrubber 5	SC089	NF	21,759,840,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	1.49E-04
						Arsenic	7440382	1.93E-11	lb/dscf	0%	2.10E-04
						Beryllium	7440417	1.41E-12	lb/dscf	0%	1.53E-05
						Cadmium	7440439	2.36E-12	lb/dscf	0%	2.57E-05
						Chromium	7440473	6.02E-12	lb/dscf	0%	6.55E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	7.28E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	1.18E-03
						Manganese	7439965	3.15E-11	lb/dscf	0%	3.43E-04
						Mercury	7439976	4.12E-13	lb/dscf	0%	4.48E-06
						Nickel	7440020	9.92E-12	lb/dscf	0%	1.08E-04
						Selenium	7782492	1.25E-11	lb/dscf	0%	1.36E-04
003-303	Processes Controlled by FFDC 8	FFDC303	NF	10,722,240,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	3.66E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	5.17E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	3.78E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	6.34E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	1.61E-05
						Cobalt	7440484	3.35E-12	lb/dscf	0%	1.79E-05
						Lead	7439921	5.43E-11	lb/dscf	0%	2.91E-04
						Manganese	7439965	1.58E-11	lb/dscf	0%	8.44E-05
						Mercury	7439976	2.06E-13	lb/dscf	0%	1.10E-06
						Nickel	7440020	4.96E-12	lb/dscf	0%	2.66E-05
						Selenium	7782492	6.24E-12	lb/dscf	0%	3.34E-05
003-088	Processes Controlled by Scrubber 4	SC088	NF	24,125,040,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	1.65E-04
						Arsenic	7440382	1.93E-11	lb/dscf	0%	2.33E-04
						Beryllium	7440417	1.41E-12	lb/dscf	0%	1.70E-05
						Cadmium	7440439	2.36E-12	lb/dscf	0%	2.85E-05
						Chromium	7440473	6.02E-12	lb/dscf	0%	7.26E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	8.07E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	1.31E-03
						Manganese	7439965	3.15E-11	lb/dscf	0%	3.80E-04
						Mercury	7439976	4.12E-13	lb/dscf	0%	4.97E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
003-088 (cont'd)	Processes Controlled by Scrubber 4 (cont'd)	SC088 (cont'd)	NF (cont'd)	24,125,040,000	dscf (cont'd)	Nickel	7440020	9.92E-12	lb/dscf	0%	1.20E-04
						Selenium	7782492	1.25E-11	lb/dscf	0%	1.51E-04
003-320	Processes Controlled by 14/15 FFDC	FFDC320	NF	1,839,600,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	5.03E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	7.10E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	5.19E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	8.70E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	2.22E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.46E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.99E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	1.16E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.52E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.65E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	4.59E-06
003-331	Processes Controlled by 15/16 FFDC	FFDC331	NF	1,629,360,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	4.45E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	6.29E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	4.60E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	7.70E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.96E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.18E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.54E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	1.03E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.34E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.23E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	4.07E-06
003-309	Processes Controlled by 16/S11 FFDC	FFDC309	NF	1,576,800,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	4.31E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	6.09E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	4.45E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	7.46E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.90E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.11E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.42E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	9.93E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.30E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.13E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	3.94E-06
003-199	Conveyor Belt S11 (transfer to FOIS)	Ore3TrUnpr t	F	52,560,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	2.21E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	3.12E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	2.28E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	3.82E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	9.74E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	1.08E-05
						Lead	7439921	6.68E-08	lb/ton	90%	1.76E-04
						Manganese	7439965	1.94E-08	lb/ton	90%	5.09E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	6.67E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	1.60E-05
						Selenium	7782492	7.68E-09	lb/ton	90%	2.02E-05
003-200	Wind Erosion of the FOIS	AWindFO	F	1.00	acre-yr	Antimony	7440360	3.10E-02	lb/acre-yr	0%	1.55E-05
						Arsenic	7440382	4.38E-02	lb/acre-yr	0%	2.19E-05
						Beryllium	7440417	3.20E-03	lb/acre-yr	0%	1.60E-06
						Cadmium	7440439	5.37E-03	lb/acre-yr	0%	2.68E-06
						Chromium	7440473	1.37E-02	lb/acre-yr	0%	6.84E-06
						Cobalt	7440484	1.52E-02	lb/acre-yr	0%	7.60E-06
						Lead	7439921	2.47E-01	lb/acre-yr	0%	1.23E-04
						Manganese	7439965	7.15E-02	lb/acre-yr	0%	3.58E-05
						Mercury	7439976	9.36E-04	lb/acre-yr	0%	4.68E-07
						Nickel	7440020	2.25E-02	lb/acre-yr	0%	1.13E-05
						Selenium	7782492	2.83E-02	lb/acre-yr	0%	1.42E-05
003-441	Dust Suppression Fan	DSF	F	210,240	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	1.83E-12	lb/1000 gal	0%	1.93E-10
						Cadmium	7440439	1.83E-13	lb/1000 gal	0%	1.93E-11
						Chromium	7440473	5.50E-11	lb/1000 gal	0%	5.79E-09
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	0.00E+00	lb/1000 gal	0%	0.00E+00
						Manganese	7439965	0.00E+00	lb/1000 gal	0%	0.00E+00
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
003-441 (cont'd)	Dust Suppression Fan (cont'd)	DSF (cont'd)	F (cont'd)	210,240	1000 gal (cont'd)	Nickel	7440020	2.75E-11	lb/1000 gal	0%	2.89E-09
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	BC201	NF	5,886,720,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	2.81E-05
						Arsenic	7440382	1.35E-11	lb/dscf	0%	3.98E-05
						Beryllium	7440417	9.88E-13	lb/dscf	0%	2.91E-06
						Cadmium	7440439	1.66E-12	lb/dscf	0%	4.87E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	1.24E-05
						Cobalt	7440484	4.69E-12	lb/dscf	0%	1.38E-05
						Lead	7439921	7.60E-11	lb/dscf	0%	2.24E-04
						Manganese	7439965	2.21E-11	lb/dscf	0%	6.49E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	8.49E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	2.04E-05
						Selenium	7782492	8.74E-12	lb/dscf	0%	2.57E-05
003-202	Processes Controlled by A1A/A2A Bag Collector 8	BC202	NF	1,681,920,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	8.04E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	1.14E-05
						Beryllium	7440417	9.88E-13	lb/dscf	0%	8.30E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	1.39E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	3.54E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	6.39E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	1.85E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	2.43E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	5.84E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	7.35E-06
003-203	Processes Controlled by A1A/A2C Bag Collector 9	BC203	NF	1,681,920,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	8.04E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	1.14E-05
						Beryllium	7440417	9.88E-13	lb/dscf	0%	8.30E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	1.39E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	3.54E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	6.39E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	1.85E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	2.43E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	5.84E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	7.35E-06
Total of Non-Fugitive Emissions for Operation 003:											*1.21E-02*
Total of Fugitive Emissions for Operation 003:											*5.85E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:											*1.27E-02*
Operation 004: Lime Slaking Plants and Lime Transloading											
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	416,976	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.36E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	5.97E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	4.16E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	5.71E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.72E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.12E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.35E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.24E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	7.38E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	2.07E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	4.26E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	4.29E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	2.73E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.11E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	6.98E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	2.45E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	5.15E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	1.45E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	2.26E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	2.74E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	5.47E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	8.51E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	7.14E-07
Total of Non-Fugitive Emissions for Operation 004:											*5.65E-03*
Total of Fugitive Emissions for Operation 004:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:											*5.65E-03*

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
Operation 005: Metcalf Power Plant											
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	268,570	MMBtu	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	0%	5.77E-05
						Acetaldehyde	75070	4.00E-05	lb/MMBtu	0%	5.37E-03
						Acrolein	107028	6.40E-06	lb/MMBtu	0%	8.59E-04
						Benzene	71432	1.20E-05	lb/MMBtu	0%	1.61E-03
						Ethylbenzene	100414	3.20E-05	lb/MMBtu	0%	4.30E-03
						Formaldehyde	50000	7.10E-04	lb/MMBtu	0%	9.53E-02
						Naphthalene	91203	1.30E-06	lb/MMBtu	0%	1.75E-04
						Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu	0%	2.95E-04
						Propylene Oxide	75569	2.90E-05	lb/MMBtu	0%	3.89E-03
						Toluene	108883	1.30E-04	lb/MMBtu	0%	1.75E-02
						Xylenes	1330207	6.40E-05	lb/MMBtu	0%	8.59E-03
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	268,570	MMBtu	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	0%	5.77E-05
						Acetaldehyde	75070	4.00E-05	lb/MMBtu	0%	5.37E-03
						Acrolein	107028	6.40E-06	lb/MMBtu	0%	8.59E-04
						Benzene	71432	1.20E-05	lb/MMBtu	0%	1.61E-03
						Ethylbenzene	100414	3.20E-05	lb/MMBtu	0%	4.30E-03
						Formaldehyde	50000	7.10E-04	lb/MMBtu	0%	9.53E-02
						Naphthalene	91203	1.30E-06	lb/MMBtu	0%	1.75E-04
						Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu	0%	2.95E-04
						Propylene Oxide	75569	2.90E-05	lb/MMBtu	0%	3.89E-03
						Toluene	108883	1.30E-04	lb/MMBtu	0%	1.75E-02
						Xylenes	1330207	6.40E-05	lb/MMBtu	0%	8.59E-03
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	150,000	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	4.90E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	2.15E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.50E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	2.05E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	6.20E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	4.03E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	4.86E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	4.45E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	2.66E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	7.46E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.53E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.54E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	9.82E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	4.00E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.51E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	8.82E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.85E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	5.20E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	8.14E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	9.87E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.97E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	3.06E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	2.57E-07
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	150,000	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	4.90E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	2.15E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.50E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	2.05E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	6.20E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	4.03E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	4.86E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	4.45E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	2.66E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	7.46E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.53E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.54E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	9.82E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	4.00E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.51E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	8.82E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.85E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	5.20E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	8.14E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	9.87E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.97E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
005-433 (cont'd)	Diesel Black Start Turbine Engine 2 (300 hp engine) (cont'd)	DES (cont'd)	NF (cont'd)	150,000	hp-hr (cont'd)	Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	3.06E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	2.57E-07
Total of Non-Fugitive Emissions for Operation 005:											*2.80E-01*
Total of Fugitive Emissions for Operation 005:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:											*2.80E-01*
Operation 006: Copper Concentrate Processing Operations											
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
006-044b (cont'd)	Conveyor Belt 10A South to Conveyor Belt BA (cont'd)	CCTrPrt (cont'd)	NF (cont'd)	4,380,000	tons (cont'd)	Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	CCTrPrt	F	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044d	Conveyor Belt BA to Conveyor Belt BB	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044e	Conveyor Belt BB to Conveyor Belt BC	CCTrPrt	NF	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	CCTrPrt	F	4,380,000	tons	Antimony	7440360	4.11E-10	lb/ton	0%	9.01E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	1.24E-06
						Beryllium	7440417	1.10E-10	lb/ton	0%	2.40E-07
						Cadmium	7440439	2.65E-09	lb/ton	0%	5.81E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	5.68E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	7.85E-06
						Lead	7439921	4.32E-09	lb/ton	0%	9.47E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	1.64E-06
						Mercury	7439976	1.82E-11	lb/ton	0%	3.99E-08
						Nickel	7440020	1.02E-09	lb/ton	0%	2.24E-06
						Selenium	7782492	1.90E-09	lb/ton	0%	4.16E-06
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	AWindCC	F	0.25	acre-yr	Antimony	7440360	3.89E-01	lb/acre-yr	75%	1.22E-05
						Arsenic	7440382	5.36E-01	lb/acre-yr	75%	1.67E-05
						Beryllium	7440417	1.04E-01	lb/acre-yr	75%	3.24E-06
						Cadmium	7440439	2.51E+00	lb/acre-yr	75%	7.84E-05
						Chromium	7440473	2.45E-01	lb/acre-yr	75%	7.67E-06
						Cobalt	7440484	3.39E+00	lb/acre-yr	75%	1.06E-04
						Lead	7439921	4.09E+00	lb/acre-yr	75%	1.28E-04
						Manganese	7439965	7.09E-01	lb/acre-yr	75%	2.22E-05
						Mercury	7439976	1.72E-02	lb/acre-yr	75%	5.38E-07
						Nickel	7440020	9.69E-01	lb/acre-yr	75%	3.03E-05
						Selenium	7782492	1.80E+00	lb/acre-yr	75%	5.62E-05
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	CCTrUnprt	F	4,380,000	tons	Antimony	7440360	3.59E-09	lb/ton	0%	7.87E-06
						Arsenic	7440382	4.94E-09	lb/ton	0%	1.08E-05
						Beryllium	7440417	9.58E-10	lb/ton	0%	2.10E-06
						Cadmium	7440439	2.32E-08	lb/ton	0%	5.07E-05
						Chromium	7440473	2.26E-09	lb/ton	0%	4.96E-06
						Cobalt	7440484	3.13E-08	lb/ton	0%	6.85E-05
						Lead	7439921	3.78E-08	lb/ton	0%	8.27E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
006-335b (cont'd)	Copper Concentrate Storage Piles to Railcars/Trucks (cont'd)	CCTrUnprt (cont'd)	F (cont'd)	4,380,000	tons (cont'd)	Manganese	7439965	6.55E-09	lb/ton	0%	1.43E-05
						Mercury	7439976	1.59E-10	lb/ton	0%	3.48E-07
						Nickel	7440020	8.94E-09	lb/ton	0%	1.96E-05
						Selenium	7782492	1.66E-08	lb/ton	0%	3.64E-05
Total of Non-Fugitive Emissions for Operation 006:											*2.73E-04*
Total of Fugitive Emissions for Operation 006:											*8.28E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 006:											*1.10E-03*
Operation 009: Solution Extraction/Electrowinning Operations											
009-117	Central SX (21,175 ft2)	SXC	F	8,760	hours	Benzene	71432	1.11E-03	lb/hr	0%	4.87E-03
						Toluene	108883	1.88E-02	lb/hr	0%	8.25E-02
						Ethylbenzene	100414	9.16E-02	lb/hr	0%	4.01E-01
						Xylenes	1330207	1.20E-01	lb/hr	0%	5.24E-01
009-462	Central Backwash Bleed Tank (33,000 gallons)	Tank462	NF	8,760	hours	Benzene	71432	2.88E-05	lb/hr	0%	1.26E-04
						Toluene	108883	4.88E-04	lb/hr	0%	2.14E-03
						Ethylbenzene	100414	2.37E-03	lb/hr	0%	1.04E-02
						Xylenes	1330207	3.10E-03	lb/hr	0%	1.36E-02
009-463	Central Barren Organic Tank (60,900 gallons)	Tank463	NF	8,760	hours	Benzene	71432	2.16E-05	lb/hr	0%	9.46E-05
						Toluene	108883	3.66E-04	lb/hr	0%	1.60E-03
						Ethylbenzene	100414	1.78E-03	lb/hr	0%	7.79E-03
						Xylenes	1330207	2.32E-03	lb/hr	0%	1.02E-02
009-464	Central Bead Separator Tank (5,000 gallons)	Tank464	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.93E-05
						Toluene	108883	1.91E-04	lb/hr	0%	8.35E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	4.06E-03
						Xylenes	1330207	1.21E-03	lb/hr	0%	5.30E-03
009-465	Central High Decant Tank (4,700 gallons)	Tank465	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.93E-05
						Toluene	108883	1.91E-04	lb/hr	0%	8.35E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	4.06E-03
						Xylenes	1330207	1.21E-03	lb/hr	0%	5.30E-03
009-466	Central Low Decant Tank (4,700 gallons)	Tank466	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.93E-05
						Toluene	108883	1.91E-04	lb/hr	0%	8.35E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	4.06E-03
						Xylenes	1330207	1.21E-03	lb/hr	0%	5.30E-03
009-467	Central Gunk Tank 1 (7,600 gallons)	Tank467	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.93E-05
						Toluene	108883	1.91E-04	lb/hr	0%	8.35E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	4.06E-03
						Xylenes	1330207	1.21E-03	lb/hr	0%	5.30E-03
009-468	Central Gunk Tank 2 (7,600 gallons)	Tank468	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.93E-05
						Toluene	108883	1.91E-04	lb/hr	0%	8.35E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	4.06E-03
						Xylenes	1330207	1.21E-03	lb/hr	0%	5.30E-03
009-469	Central Gunk Tank 3 (23,800 gallons)	Tank469	NF	8,760	hours	Benzene	71432	1.90E-05	lb/hr	0%	8.33E-05
						Toluene	108883	3.22E-04	lb/hr	0%	1.41E-03
						Ethylbenzene	100414	1.57E-03	lb/hr	0%	6.86E-03
						Xylenes	1330207	2.04E-03	lb/hr	0%	8.95E-03
009-470	Central Organic Recovery Tank (306,700 gallons)	Tank470	NF	8,760	hours	Benzene	71432	4.05E-04	lb/hr	0%	1.77E-03
						Toluene	108883	6.86E-03	lb/hr	0%	3.00E-02
						Ethylbenzene	100414	3.34E-02	lb/hr	0%	1.46E-01
						Xylenes	1330207	4.35E-02	lb/hr	0%	1.91E-01
009-471	Central Raffinate Pond (9,905 ft2)	Pond471	F	8,760	hours	Benzene	71432	1.42E-03	lb/hr	0%	6.22E-03
						Toluene	108883	2.40E-02	lb/hr	0%	1.05E-01
						Ethylbenzene	100414	1.17E-01	lb/hr	0%	5.12E-01
						Xylenes	1330207	1.53E-01	lb/hr	0%	6.68E-01
009-118	Metcalf SX (40,585.41 ft2)	SXMe	F	8,760	hours	Benzene	71432	2.14E-03	lb/hr	0%	9.35E-03
						Toluene	108883	3.70E-02	lb/hr	0%	1.62E-01
						Ethylbenzene	100414	1.81E-01	lb/hr	0%	7.92E-01
						Xylenes	1330207	2.36E-01	lb/hr	0%	1.03E+00
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Tank472	NF	8,760	hours	Benzene	71432	2.95E-05	lb/hr	0%	1.29E-04
						Toluene	108883	5.10E-04	lb/hr	0%	2.24E-03
						Ethylbenzene	100414	2.49E-03	lb/hr	0%	1.09E-02
						Xylenes	1330207	3.25E-03	lb/hr	0%	1.43E-02
009-473	Metcalf High A Decant Tank (4,700 gallons)	Tank473	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.94E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.55E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	4.18E-03
						Xylenes	1330207	1.25E-03	lb/hr	0%	5.45E-03
009-474	Metcalf High B Decant Tank (4,700 gallons)	Tank474	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.94E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.55E-04

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
009-474 (cont'd)	Metcalf High B Decant Tank (4,700 gallons) (cont'd)	Tank474 (cont'd)	NF (cont'd)	8,760	hours (cont'd)	Ethylbenzene	100414	9.54E-04	lb/hr	0%	4.18E-03
						Xylenes	1330207	1.25E-03	lb/hr	0%	5.45E-03
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Tank475	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.94E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.55E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	4.18E-03
						Xylenes	1330207	1.25E-03	lb/hr	0%	5.45E-03
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Tank476	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.94E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.55E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	4.18E-03
						Xylenes	1330207	1.25E-03	lb/hr	0%	5.45E-03
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Tank477	NF	8,760	hours	Benzene	71432	1.82E-05	lb/hr	0%	7.96E-05
						Toluene	108883	3.15E-04	lb/hr	0%	1.38E-03
						Ethylbenzene	100414	1.54E-03	lb/hr	0%	6.74E-03
						Xylenes	1330207	2.01E-03	lb/hr	0%	8.80E-03
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Tank478	NF	8,760	hours	Benzene	71432	1.62E-05	lb/hr	0%	7.11E-05
						Toluene	108883	2.81E-04	lb/hr	0%	1.23E-03
						Ethylbenzene	100414	1.37E-03	lb/hr	0%	6.02E-03
						Xylenes	1330207	1.79E-03	lb/hr	0%	7.85E-03
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Tank479	NF	8,760	hours	Benzene	71432	1.13E-05	lb/hr	0%	4.94E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.55E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	4.18E-03
						Xylenes	1330207	1.25E-03	lb/hr	0%	5.45E-03
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Tank480	NF	8,760	hours	Benzene	71432	1.90E-05	lb/hr	0%	8.34E-05
						Toluene	108883	3.30E-04	lb/hr	0%	1.45E-03
						Ethylbenzene	100414	1.61E-03	lb/hr	0%	7.06E-03
						Xylenes	1330207	2.10E-03	lb/hr	0%	9.22E-03
009-481	Metcalf Holding Tank (122,200 gallons)	Tank481	NF	8,760	hours	Benzene	71432	4.34E-05	lb/hr	0%	1.90E-04
						Toluene	108883	7.53E-04	lb/hr	0%	3.30E-03
						Ethylbenzene	100414	3.68E-03	lb/hr	0%	1.61E-02
						Xylenes	1330207	4.80E-03	lb/hr	0%	2.10E-02
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Tank482	NF	8,760	hours	Benzene	71432	4.06E-04	lb/hr	0%	1.78E-03
						Toluene	108883	7.03E-03	lb/hr	0%	3.08E-02
						Ethylbenzene	100414	3.44E-02	lb/hr	0%	1.50E-01
						Xylenes	1330207	4.48E-02	lb/hr	0%	1.96E-01
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Tank483	NF	8,760	hours	Benzene	71432	4.06E-04	lb/hr	0%	1.78E-03
						Toluene	108883	7.03E-03	lb/hr	0%	3.08E-02
						Ethylbenzene	100414	3.44E-02	lb/hr	0%	1.50E-01
						Xylenes	1330207	4.48E-02	lb/hr	0%	1.96E-01
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Tank484	NF	8,760	hours	Benzene	71432	4.34E-05	lb/hr	0%	1.90E-04
						Toluene	108883	7.53E-04	lb/hr	0%	3.30E-03
						Ethylbenzene	100414	3.68E-03	lb/hr	0%	1.61E-02
						Xylenes	1330207	4.80E-03	lb/hr	0%	2.10E-02
009-485	Metcalf Raffinate Pond (10,236 ft2)	Pond485	F	8,760	hours	Benzene	71432	1.47E-03	lb/hr	0%	6.43E-03
						Toluene	108883	2.55E-02	lb/hr	0%	1.12E-01
						Ethylbenzene	100414	1.24E-01	lb/hr	0%	5.45E-01
						Xylenes	1330207	1.62E-01	lb/hr	0%	7.11E-01
009-119	Modoc SX (88,229.16 ft2)	SXMo	F	8,760	hours	Benzene	71432	3.32E-02	lb/hr	0%	1.45E-01
						Toluene	108883	3.84E-02	lb/hr	0%	1.68E-01
						Ethylbenzene	100414	4.19E-02	lb/hr	0%	1.84E-01
						Xylenes	1330207	4.50E-02	lb/hr	0%	1.97E-01
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Tank486	NF	8,760	hours	Benzene	71432	2.42E-04	lb/hr	0%	1.06E-03
						Toluene	108883	2.80E-04	lb/hr	0%	1.23E-03
						Ethylbenzene	100414	3.06E-04	lb/hr	0%	1.34E-03
						Xylenes	1330207	3.28E-04	lb/hr	0%	1.43E-03
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Tank487	NF	8,760	hours	Benzene	71432	2.42E-04	lb/hr	0%	1.06E-03
						Toluene	108883	2.80E-04	lb/hr	0%	1.23E-03
						Ethylbenzene	100414	3.06E-04	lb/hr	0%	1.34E-03
						Xylenes	1330207	3.28E-04	lb/hr	0%	1.43E-03
009-488	Modoc High A Decant Tank (4,700 gallons)	Tank488	NF	8,760	hours	Benzene	71432	8.06E-05	lb/hr	0%	3.53E-04
						Toluene	108883	9.33E-05	lb/hr	0%	4.09E-04
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	4.46E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	4.78E-04
009-489	Modoc High B Decant Tank (4,700 gallons)	Tank489	NF	8,760	hours	Benzene	71432	8.06E-05	lb/hr	0%	3.53E-04
						Toluene	108883	9.33E-05	lb/hr	0%	4.09E-04
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	4.46E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	4.78E-04
009-490	Modoc Low A Decant Tank (4,700 gallons)	Tank490	NF	8,760	hours	Benzene	71432	8.06E-05	lb/hr	0%	3.53E-04

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
009-490 (cont'd)	Modoc Low A Decant Tank (4,700 gallons) (cont'd)	Tank490 (cont'd)	NF (cont'd)	8,760	hours (cont'd)	Toluene	108883	9.33E-05	lb/hr	0%	4.09E-04
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	4.46E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	4.78E-04
009-491	Modoc Low B Decant Tank (4,700 gallons)	Tank491	NF	8,760	hours	Benzene	71432	8.06E-05	lb/hr	0%	3.53E-04
						Toluene	108883	9.33E-05	lb/hr	0%	4.09E-04
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	4.46E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	4.78E-04
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Tank492	NF	8,760	hours	Benzene	71432	1.30E-04	lb/hr	0%	5.70E-04
						Toluene	108883	1.51E-04	lb/hr	0%	6.59E-04
						Ethylbenzene	100414	1.64E-04	lb/hr	0%	7.20E-04
						Xylenes	1330207	1.76E-04	lb/hr	0%	7.72E-04
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Tank493	NF	8,760	hours	Benzene	71432	1.36E-04	lb/hr	0%	5.97E-04
						Toluene	108883	1.58E-04	lb/hr	0%	6.91E-04
						Ethylbenzene	100414	1.72E-04	lb/hr	0%	7.54E-04
						Xylenes	1330207	1.85E-04	lb/hr	0%	8.08E-04
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Tank494	NF	8,760	hours	Benzene	71432	8.06E-05	lb/hr	0%	3.53E-04
						Toluene	108883	9.33E-05	lb/hr	0%	4.09E-04
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	4.46E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	4.78E-04
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Tank495	NF	8,760	hours	Benzene	71432	1.36E-04	lb/hr	0%	5.97E-04
						Toluene	108883	1.58E-04	lb/hr	0%	6.91E-04
						Ethylbenzene	100414	1.72E-04	lb/hr	0%	7.54E-04
						Xylenes	1330207	1.85E-04	lb/hr	0%	8.08E-04
009-496	Modoc Holding Tank (118,000 gallons)	Tank496	NF	8,760	hours	Benzene	71432	3.48E-04	lb/hr	0%	1.53E-03
						Toluene	108883	4.03E-04	lb/hr	0%	1.77E-03
						Ethylbenzene	100414	4.40E-04	lb/hr	0%	1.93E-03
						Xylenes	1330207	4.72E-04	lb/hr	0%	2.07E-03
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Tank497	NF	8,760	hours	Benzene	71432	2.90E-03	lb/hr	0%	1.27E-02
						Toluene	108883	3.36E-03	lb/hr	0%	1.47E-02
						Ethylbenzene	100414	3.67E-03	lb/hr	0%	1.61E-02
						Xylenes	1330207	3.93E-03	lb/hr	0%	1.72E-02
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Tank498	NF	8,760	hours	Benzene	71432	2.90E-03	lb/hr	0%	1.27E-02
						Toluene	108883	3.36E-03	lb/hr	0%	1.47E-02
						Ethylbenzene	100414	3.67E-03	lb/hr	0%	1.61E-02
						Xylenes	1330207	3.93E-03	lb/hr	0%	1.72E-02
009-499	Modoc Raffinate Pond (15,678 ft2)	Pond499	F	8,760	hours	Benzene	71432	1.61E-02	lb/hr	0%	7.05E-02
						Toluene	108883	1.86E-02	lb/hr	0%	8.16E-02
						Ethylbenzene	100414	2.03E-02	lb/hr	0%	8.90E-02
						Xylenes	1330207	2.18E-02	lb/hr	0%	9.55E-02
009-349	Stargo SX (48,846.87 ft2)	SXSt	F	8,760	hours	Benzene	71432	2.57E-03	lb/hr	0%	1.12E-02
						Toluene	108883	4.39E-02	lb/hr	0%	1.92E-01
						Ethylbenzene	100414	2.14E-01	lb/hr	0%	9.38E-01
						Xylenes	1330207	2.79E-01	lb/hr	0%	1.22E+00
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Tank500	NF	8,760	hours	Benzene	71432	1.62E-05	lb/hr	0%	7.10E-05
						Toluene	108883	2.77E-04	lb/hr	0%	1.21E-03
						Ethylbenzene	100414	1.35E-03	lb/hr	0%	5.92E-03
						Xylenes	1330207	1.76E-03	lb/hr	0%	7.73E-03
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Tank501	NF	8,760	hours	Benzene	71432	2.53E-05	lb/hr	0%	1.11E-04
						Toluene	108883	4.33E-04	lb/hr	0%	1.90E-03
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	9.25E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	1.21E-02
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Tank502	NF	8,760	hours	Benzene	71432	2.53E-05	lb/hr	0%	1.11E-04
						Toluene	108883	4.33E-04	lb/hr	0%	1.90E-03
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	9.25E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	1.21E-02
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Tank503	NF	8,760	hours	Benzene	71432	2.53E-05	lb/hr	0%	1.11E-04
						Toluene	108883	4.33E-04	lb/hr	0%	1.90E-03
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	9.25E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	1.21E-02
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Tank504	NF	8,760	hours	Benzene	71432	2.74E-05	lb/hr	0%	1.20E-04
						Toluene	108883	4.68E-04	lb/hr	0%	2.05E-03
						Ethylbenzene	100414	2.28E-03	lb/hr	0%	9.99E-03
						Xylenes	1330207	2.98E-03	lb/hr	0%	1.30E-02
009-505	Stargo Holding Tank (108,900 gallons)	Tank505	NF	8,760	hours	Benzene	71432	3.16E-05	lb/hr	0%	1.38E-04
						Toluene	108883	5.40E-04	lb/hr	0%	2.37E-03
						Ethylbenzene	100414	2.63E-03	lb/hr	0%	1.15E-02
						Xylenes	1330207	3.43E-03	lb/hr	0%	1.50E-02

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
009-506	Stargo Stormwater Tank (772,190 gallons)	Tank506	NF	8,760	hours	Benzene	71432	6.17E-04	lb/hr	0%	2.70E-03
						Toluene	108883	1.05E-02	lb/hr	0%	4.62E-02
						Ethylbenzene	100414	5.14E-02	lb/hr	0%	2.25E-01
						Xylenes	1330207	6.71E-02	lb/hr	0%	2.94E-01
009-507	Stargo Tricanter Feed Tank (250 gallons)	Tank507	NF	8,760	hours	Benzene	71432	2.29E-06	lb/hr	0%	1.00E-05
						Toluene	108883	3.92E-05	lb/hr	0%	1.72E-04
						Ethylbenzene	100414	1.91E-04	lb/hr	0%	8.38E-04
						Xylenes	1330207	2.50E-04	lb/hr	0%	1.09E-03
009-508	Stargo Slurry Tank (500 gallons)	Tank508	NF	8,760	hours	Benzene	71432	1.51E-06	lb/hr	0%	6.62E-06
						Toluene	108883	2.59E-05	lb/hr	0%	1.13E-04
						Ethylbenzene	100414	1.26E-04	lb/hr	0%	5.52E-04
						Xylenes	1330207	1.64E-04	lb/hr	0%	7.20E-04
009-121	Central EW (548 cells)	EWC	F	8,760	hours	Cobalt Compounds	7440484	7.13E-04	lb/hr	0%	3.12E-03
009-122	Southside EW (220 cells)	EWSS	F	8,760	hours	Cobalt Compounds	7440484	2.50E-04	lb/hr	0%	1.10E-03
009-221	Stargo EW (324 cells)	EWSt	F	8,760	hours	Cobalt Compounds	7440484	4.44E-04	lb/hr	0%	1.95E-03
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	3.06E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.47E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.10E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.80E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.10E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.10E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.47E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.29E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.10E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.10E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.35E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.35E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.84E-07
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.72E-07
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.60E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.10E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.10E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.74E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.04E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	3.06E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.08E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.23E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.35E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.74E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.58E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	5.15E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.33E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.59E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.29E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.47E-06
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	3.06E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.47E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.10E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.80E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.10E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.10E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.47E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.29E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.10E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.10E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.35E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.35E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.84E-07
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.72E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
009-184 (cont'd)	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	125,000	MMBtu (cont'd)	Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.60E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.10E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.10E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.74E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.04E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	3.06E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.08E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.23E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.35E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.74E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.58E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	5.15E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.33E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.59E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.29E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.47E-06
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	3.06E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.47E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.10E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.80E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.10E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.10E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.47E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.29E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.10E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.10E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.35E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.35E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.84E-07
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.72E-07
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.60E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.10E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.10E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.74E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.04E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	3.06E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.08E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.23E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.35E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.74E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.58E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	5.15E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.33E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.59E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.29E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.47E-06
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	3.06E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.47E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.10E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.80E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.10E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.10E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.47E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.29E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.10E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.10E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.35E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.35E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.84E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
009-222 (cont'd)	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	125,000	MMBtu (cont'd)	Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.72E-07
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.60E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.10E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.10E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.74E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.04E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	3.06E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.08E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.23E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.35E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.74E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.58E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	5.15E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.33E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.59E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.29E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.47E-06
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	125,000	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	3.06E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.47E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.10E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.80E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.10E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.10E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.47E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.29E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.10E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.35E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.10E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.10E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.35E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.35E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.84E-07
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.72E-07
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.60E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.10E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.10E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.74E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.04E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	3.06E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.08E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.23E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.35E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.74E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.58E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	5.15E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.33E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.59E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.29E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.47E-06
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	Lead	7439921	9.00E-06	lb/MMBtu	0%	2.17E-05
						POM	250	2.41E-05	lb/MMBtu	0%	5.80E-05
						Formaldehyde	50000	4.45E-04	lb/MMBtu	0%	1.07E-03
						Arsenic	7440382	4.00E-06	lb/MMBtu	0%	9.64E-06
						Beryllium	7440417	3.00E-06	lb/MMBtu	0%	7.23E-06
						Cadmium	7440439	3.00E-06	lb/MMBtu	0%	7.23E-06
						Chromium	7440473	3.00E-06	lb/MMBtu	0%	7.23E-06
						Mercury	7439976	3.00E-06	lb/MMBtu	0%	7.23E-06
						Manganese	7439965	6.00E-06	lb/MMBtu	0%	1.45E-05
						Nickel	7440020	3.00E-06	lb/MMBtu	0%	7.23E-06
						Selenium	7782492	1.50E-05	lb/MMBtu	0%	3.61E-05
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	4,818	MMBtu	Lead	7439921	9.00E-06	lb/MMBtu	0%	2.17E-05
						POM	250	2.41E-05	lb/MMBtu	0%	5.80E-05
						Formaldehyde	50000	4.45E-04	lb/MMBtu	0%	1.07E-03
						Arsenic	7440382	4.00E-06	lb/MMBtu	0%	9.64E-06
						Beryllium	7440417	3.00E-06	lb/MMBtu	0%	7.23E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
009-347 (cont'd)	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr) (cont'd)	DCI (cont'd)	NF (cont'd)	4,818	MMBtu (cont'd)	Cadmium	7440439	3.00E-06	lb/MMBtu	0%	7.23E-06
						Chromium	7440473	3.00E-06	lb/MMBtu	0%	7.23E-06
						Mercury	7439976	3.00E-06	lb/MMBtu	0%	7.23E-06
						Manganese	7439965	6.00E-06	lb/MMBtu	0%	1.45E-05
						Nickel	7440020	3.00E-06	lb/MMBtu	0%	7.23E-06
						Selenium	7782492	1.50E-05	lb/MMBtu	0%	3.61E-05
009-422	Modoc Test Facility SX (1,418.72 ft2)	SXM-MTF	F	8,760	hours	Benzene	71432	1.16E-03	lb/hr	0%	5.08E-03
						Toluene	108883	1.34E-03	lb/hr	0%	5.88E-03
						Ethylbenzene	100414	1.47E-03	lb/hr	0%	6.42E-03
						Xylenes	1330207	1.57E-03	lb/hr	0%	6.88E-03
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Tank424	NF	8,760	hours	Benzene	71432	5.39E-05	lb/hr	0%	2.36E-04
						Toluene	108883	6.24E-05	lb/hr	0%	2.73E-04
						Ethylbenzene	100414	6.81E-05	lb/hr	0%	2.98E-04
						Xylenes	1330207	7.31E-05	lb/hr	0%	3.20E-04
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Tank425	NF	8,760	hours	Benzene	71432	5.39E-05	lb/hr	0%	2.36E-04
						Toluene	108883	6.24E-05	lb/hr	0%	2.73E-04
						Ethylbenzene	100414	6.81E-05	lb/hr	0%	2.98E-04
						Xylenes	1330207	7.31E-05	lb/hr	0%	3.20E-04
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Tank426	NF	8,760	hours	Benzene	71432	2.90E-05	lb/hr	0%	1.27E-04
						Toluene	108883	3.36E-05	lb/hr	0%	1.47E-04
						Ethylbenzene	100414	3.67E-05	lb/hr	0%	1.61E-04
						Xylenes	1330207	3.93E-05	lb/hr	0%	1.72E-04
Total of Non-Fugitive Emissions for Operation 009:											*2.90E+00*
Total of Fugitive Emissions for Operation 009:											*9.10E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:											*1.20E+01*
Operation 010: Concrete Batch Plant											
010-144a	Unloading Aggregate to the Aggregate Stockpiles	AggTrUnprt	F	95,445	tons	Antimony	7440360	8.50E-10	lb/ton	0%	4.06E-08
						Arsenic	7440382	3.46E-09	lb/ton	0%	1.65E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	2.66E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	1.33E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	1.04E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	2.52E-06
						Lead	7439921	2.77E-08	lb/ton	0%	1.32E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	1.26E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	7.02E-09
						Nickel	7440020	1.70E-07	lb/ton	0%	8.14E-06
						Selenium	7782492	1.61E-10	lb/ton	0%	7.69E-09
010-144b	Wind Erosion of the Aggregate Stockpiles	AWindAgg	F	1.00	acre-yr	Antimony	7440360	2.37E-04	lb/acre-yr	0%	1.19E-07
						Arsenic	7440382	9.65E-04	lb/acre-yr	0%	4.82E-07
						Beryllium	7440417	1.55E-03	lb/acre-yr	0%	7.77E-07
						Cadmium	7440439	7.76E-05	lb/acre-yr	0%	3.88E-08
						Chromium	7440473	6.11E-02	lb/acre-yr	0%	3.05E-05
						Cobalt	7440484	1.48E-02	lb/acre-yr	0%	7.38E-06
						Lead	7439921	7.72E-03	lb/acre-yr	0%	3.86E-06
						Manganese	7439965	7.37E-01	lb/acre-yr	0%	3.69E-04
						Mercury	7439976	4.10E-05	lb/acre-yr	0%	2.05E-08
						Nickel	7440020	4.76E-02	lb/acre-yr	0%	2.38E-05
						Selenium	7782492	4.50E-05	lb/acre-yr	0%	2.25E-08
010-144c	Loading Aggregate to the Feed Hopper	AggTrUnprt	F	95,445	tons	Antimony	7440360	8.50E-10	lb/ton	0%	4.06E-08
						Arsenic	7440382	3.46E-09	lb/ton	0%	1.65E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	2.66E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	1.33E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	1.04E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	2.52E-06
						Lead	7439921	2.77E-08	lb/ton	0%	1.32E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	1.26E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	7.02E-09
						Nickel	7440020	1.70E-07	lb/ton	0%	8.14E-06
						Selenium	7782492	1.61E-10	lb/ton	0%	7.69E-09
010-145	Feed Hopper to Aggregate Conveyor Belt	AggTrUnprt	NF	95,445	tons	Antimony	7440360	8.50E-10	lb/ton	0%	4.06E-08
						Arsenic	7440382	3.46E-09	lb/ton	0%	1.65E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	2.66E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	1.33E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	1.04E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	2.52E-06
						Lead	7439921	2.77E-08	lb/ton	0%	1.32E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	1.26E-04

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
010-145 (cont'd)	Feed Hopper to Aggregate Conveyor Belt (cont'd)	AggTrUnprt (cont'd)	NF (cont'd)	95,445	tons (cont'd)	Mercury	7439976	1.47E-10	lb/ton	0%	7.02E-09
						Nickel	7440020	1.70E-07	lb/ton	0%	8.14E-06
						Selenium	7782492	1.61E-10	lb/ton	0%	7.69E-09
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	FATr	NF	3,516.39	tons	Arsenic	7440382	5.00E-05	lb/ton	90%	8.79E-06
						Beryllium	7440417	4.52E-06	lb/ton	90%	7.95E-07
						Cadmium	7440439	9.90E-09	lb/ton	90%	1.74E-09
						Chromium	7440473	6.10E-05	lb/ton	90%	1.07E-05
						Lead	7439921	2.60E-05	lb/ton	90%	4.57E-06
						Manganese	7439965	1.28E-05	lb/ton	90%	2.25E-06
						Nickel	7440020	1.14E-04	lb/ton	90%	2.00E-05
						Selenium	7782492	3.62E-06	lb/ton	90%	6.36E-07
010-147	Pneumatic Transfer of Cement to the Cement Silo	CemTr	NF	17,612.51	tons	Arsenic	7440382	1.68E-06	lb/ton	90%	1.48E-06
						Beryllium	7440417	1.79E-08	lb/ton	90%	1.58E-08
						Cadmium	7440439	2.34E-07	lb/ton	90%	2.06E-07
						Chromium	7440473	2.52E-07	lb/ton	90%	2.22E-07
						Lead	7439921	7.36E-07	lb/ton	90%	6.48E-07
						Manganese	7439965	2.02E-04	lb/ton	90%	1.78E-04
						Nickel	7440020	1.76E-05	lb/ton	90%	1.55E-05
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	FATr	NF	3,516.39	tons	Arsenic	7440382	5.00E-05	lb/ton	0%	8.79E-05
						Beryllium	7440417	4.52E-06	lb/ton	0%	7.95E-06
						Cadmium	7440439	9.90E-09	lb/ton	0%	1.74E-08
						Chromium	7440473	6.10E-05	lb/ton	0%	1.07E-04
						Lead	7439921	2.60E-05	lb/ton	0%	4.57E-05
						Manganese	7439965	1.28E-05	lb/ton	0%	2.25E-05
						Nickel	7440020	1.14E-04	lb/ton	0%	2.00E-04
						Selenium	7782492	3.62E-06	lb/ton	0%	6.36E-06
010-148b	Cement Screw Conveyor to Weigh Hopper	CemTr	NF	17,612.51	tons	Arsenic	7440382	1.68E-06	lb/ton	0%	1.48E-05
						Beryllium	7440417	1.79E-08	lb/ton	0%	1.58E-07
						Cadmium	7440439	2.34E-07	lb/ton	0%	2.06E-06
						Chromium	7440473	2.52E-07	lb/ton	0%	2.22E-06
						Lead	7439921	7.36E-07	lb/ton	0%	6.48E-06
						Manganese	7439965	2.02E-04	lb/ton	0%	1.78E-03
						Nickel	7440020	1.76E-05	lb/ton	0%	1.55E-04
010-148c	Aggregate Conveyor Belt to Weigh Hopper	AggTrUnprt	NF	95,444.54	tons	Antimony	7440360	8.50E-10	lb/ton	0%	4.06E-08
						Arsenic	7440382	3.46E-09	lb/ton	0%	1.65E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	2.66E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	1.33E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	1.04E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	2.52E-06
						Lead	7439921	2.77E-08	lb/ton	0%	1.32E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	1.26E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	7.02E-09
						Nickel	7440020	1.70E-07	lb/ton	0%	8.14E-06
						Selenium	7782492	1.61E-10	lb/ton	0%	7.69E-09
010-148d	Weigh Hopper to Concrete Mixing Truck	LoadCMT	NF	21,128.90	tons	Arsenic	7440382	1.22E-05	lb/ton	0%	1.29E-04
						Beryllium	7440417	2.44E-07	lb/ton	0%	2.58E-06
						Cadmium	7440439	3.42E-08	lb/ton	0%	3.61E-07
						Chromium	7440473	1.14E-05	lb/ton	0%	1.20E-04
						Lead	7439921	3.62E-06	lb/ton	0%	3.82E-05
						Manganese	7439965	6.12E-05	lb/ton	0%	6.47E-04
						Nickel	7440020	1.19E-05	lb/ton	0%	1.26E-04
						Selenium	7782492	2.62E-06	lb/ton	0%	2.77E-05
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.17E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.04E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	7.81E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	6.94E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	7.81E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	7.81E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.04E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	9.11E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	7.81E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	7.81E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	5.20E-09

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information: Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
010-270 (cont'd)	Propane Hot Water Heater 1 (1.01 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	8,847.60	MMBtu (cont'd)	Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	5.20E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.30E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.21E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.25E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	7.81E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	7.81E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	2.65E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	7.37E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.17E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.47E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	8.67E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	5.20E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	4.77E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	6.07E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	3.64E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.65E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.13E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	9.11E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.04E-07
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.17E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.04E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	7.81E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	6.94E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	7.81E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	7.81E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.04E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	9.11E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	7.81E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	7.81E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	5.20E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	5.20E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.30E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.21E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.25E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	7.81E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	7.81E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	2.65E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	7.37E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.17E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.47E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	8.67E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	5.20E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	4.77E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	6.07E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	3.64E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.65E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.13E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	9.11E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.04E-07
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	8,847.60	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.17E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.04E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	7.81E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	6.94E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	7.81E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	7.81E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.04E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	9.11E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	7.81E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	5.20E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	7.81E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	7.81E-09

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information: Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
010-310 (cont'd)	Propane Hot Water Heater 3 (1.01 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	8,847.60	MMBtu (cont'd)	Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	5.20E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	5.20E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.30E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.21E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.25E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	7.81E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	7.81E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	2.65E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	7.37E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.17E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.47E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	8.67E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	5.20E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	4.77E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	6.07E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	3.64E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.65E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.13E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	9.11E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.04E-07
Total of Non-Fugitive Emissions for Operation 010:											*2.86E-02*
Total of Fugitive Emissions for Operation 010:											*7.33E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:											*2.94E-02*
Operation 011: Storage Tanks											
011-150	Diesel Tank D1 (177,850 gallons)	Tank150	NF	8,760	hours	Benzene	71432	3.84E-05	lb/hr	0%	1.68E-04
						Ethylbenzene	100414	6.35E-05	lb/hr	0%	2.78E-04
						n-Hexane	110543	7.70E-06	lb/hr	0%	3.37E-05
						Toluene	108883	4.54E-04	lb/hr	0%	1.99E-03
						m-Xylene	1330207	1.19E-03	lb/hr	0%	5.19E-03
011-151	Diesel Tank D2 (200,434 gallons)	Tank151	NF	8,760	hours	Benzene	71432	5.05E-05	lb/hr	0%	2.21E-04
						Ethylbenzene	100414	8.35E-05	lb/hr	0%	3.66E-04
						n-Hexane	110543	1.01E-05	lb/hr	0%	4.43E-05
						Toluene	108883	5.97E-04	lb/hr	0%	2.61E-03
						m-Xylene	1330207	1.56E-03	lb/hr	0%	6.82E-03
011-154	Diesel Tank D5 (47,255 gallons)	Tank154	NF	8,760	hours	Benzene	71432	1.65E-05	lb/hr	0%	7.22E-05
						Ethylbenzene	100414	2.72E-05	lb/hr	0%	1.19E-04
						n-Hexane	110543	3.30E-06	lb/hr	0%	1.45E-05
						Toluene	108883	1.95E-04	lb/hr	0%	8.53E-04
						m-Xylene	1330207	5.08E-04	lb/hr	0%	2.23E-03
011-161	Diesel Tank Pit 95 (101,690 gallons)	Tank161	NF	8,760	hours	Benzene	71432	7.21E-05	lb/hr	0%	3.16E-04
						Ethylbenzene	100414	1.19E-04	lb/hr	0%	5.22E-04
						n-Hexane	110543	1.45E-05	lb/hr	0%	6.33E-05
						Toluene	108883	8.52E-04	lb/hr	0%	3.73E-03
						m-Xylene	1330207	2.22E-03	lb/hr	0%	9.74E-03
011-155	Gasoline Tank G1 (12,000 gallons)	Tank155	NF	8,760	hours	Benzene	71432	9.49E-03	lb/hr	0%	4.16E-02
						Ethylbenzene	100414	4.87E-04	lb/hr	0%	2.13E-03
						n-Hexane	110543	1.40E-02	lb/hr	0%	6.12E-02
						Naphthalene	91203	3.06E-06	lb/hr	0%	1.34E-05
						Cumene	98828	3.58E-04	lb/hr	0%	1.57E-03
						Toluene	108883	1.18E-02	lb/hr	0%	5.18E-02
						m-Xylene	1330207	1.95E-03	lb/hr	0%	8.56E-03
011-156	Gasoline Tank G2 (12,000 gallons)	Tank156	NF	8,760	hours	Benzene	71432	9.49E-03	lb/hr	0%	4.16E-02
						Ethylbenzene	100414	4.87E-04	lb/hr	0%	2.13E-03
						n-Hexane	110543	1.40E-02	lb/hr	0%	6.12E-02
						Naphthalene	91203	3.06E-06	lb/hr	0%	1.34E-05
						Cumene	98828	3.58E-04	lb/hr	0%	1.57E-03
						Toluene	108883	1.18E-02	lb/hr	0%	5.18E-02
						m-Xylene	1330207	1.95E-03	lb/hr	0%	8.56E-03
011-157	Gasoline Tank G3 (12,000 gallons)	Tank157	NF	8,760	hours	Benzene	71432	5.65E-03	lb/hr	0%	2.48E-02
						Ethylbenzene	100414	2.90E-04	lb/hr	0%	1.27E-03
						n-Hexane	110543	8.32E-03	lb/hr	0%	3.64E-02
						Naphthalene	91203	1.82E-06	lb/hr	0%	7.97E-06
						Cumene	98828	2.13E-04	lb/hr	0%	9.34E-04
						Toluene	108883	7.04E-03	lb/hr	0%	3.08E-02
						m-Xylene	1330207	1.16E-03	lb/hr	0%	5.10E-03
Total of Non-Fugitive Emissions for Operation 011:											*4.68E-01*
Total of Fugitive Emissions for Operation 011:											*0.00E+00*

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
Total of Non-Fugitive and Fugitive Emissions for Operation 011:											*4.68E-01*
Operation 013: Grizzly Operations											
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	G1ScreenC	F	525,600	tons	Antimony	7440360	1.54E-08	lb/ton	0%	4.04E-06
						Arsenic	7440382	1.93E-08	lb/ton	0%	5.07E-06
						Beryllium	7440417	3.72E-09	lb/ton	0%	9.78E-07
						Cadmium	7440439	8.83E-08	lb/ton	0%	2.32E-05
						Chromium	7440473	8.77E-09	lb/ton	0%	2.30E-06
						Cobalt	7440484	1.19E-07	lb/ton	0%	3.14E-05
						Lead	7439921	1.44E-07	lb/ton	0%	3.78E-05
						Manganese	7439965	2.51E-08	lb/ton	0%	6.59E-06
						Mercury	7439976	7.28E-10	lb/ton	0%	1.91E-07
						Nickel	7440020	3.46E-08	lb/ton	0%	9.08E-06
						Selenium	7782492	6.84E-08	lb/ton	0%	1.80E-05
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	ConGTrUnprt	F	525,600	tons	Antimony	7440360	1.83E-08	lb/ton	0%	4.80E-06
						Arsenic	7440382	2.29E-08	lb/ton	0%	6.02E-06
						Beryllium	7440417	4.42E-09	lb/ton	0%	1.16E-06
						Cadmium	7440439	1.05E-07	lb/ton	0%	2.76E-05
						Chromium	7440473	1.04E-08	lb/ton	0%	2.74E-06
						Cobalt	7440484	1.42E-07	lb/ton	0%	3.73E-05
						Lead	7439921	1.71E-07	lb/ton	0%	4.50E-05
						Manganese	7439965	2.98E-08	lb/ton	0%	7.82E-06
						Mercury	7439976	8.65E-10	lb/ton	0%	2.27E-07
						Nickel	7440020	4.11E-08	lb/ton	0%	1.08E-05
						Selenium	7782492	8.13E-08	lb/ton	0%	2.14E-05
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	AWindConG	F	0.50	acre-yr	Antimony	7440360	3.33E-02	lb/acre-yr	0%	8.31E-06
						Arsenic	7440382	4.17E-02	lb/acre-yr	0%	1.04E-05
						Beryllium	7440417	8.05E-03	lb/acre-yr	0%	2.01E-06
						Cadmium	7440439	1.91E-01	lb/acre-yr	0%	4.77E-05
						Chromium	7440473	1.90E-02	lb/acre-yr	0%	4.74E-06
						Cobalt	7440484	2.58E-01	lb/acre-yr	0%	6.46E-05
						Lead	7439921	3.11E-01	lb/acre-yr	0%	7.78E-05
						Manganese	7439965	5.42E-02	lb/acre-yr	0%	1.35E-05
						Mercury	7439976	1.57E-03	lb/acre-yr	0%	3.94E-07
						Nickel	7440020	7.47E-02	lb/acre-yr	0%	1.87E-05
						Selenium	7782492	1.48E-01	lb/acre-yr	0%	3.70E-05
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	G2ScreenC	F	4,380,000	tons	Antimony	7440360	3.12E-10	lb/ton	0%	6.84E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	2.78E-06
						Beryllium	7440417	2.05E-09	lb/ton	0%	4.48E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	2.24E-07
						Chromium	7440473	8.04E-08	lb/ton	0%	1.76E-04
						Cobalt	7440484	1.94E-08	lb/ton	0%	4.25E-05
						Lead	7439921	1.02E-08	lb/ton	0%	2.22E-05
						Manganese	7439965	9.70E-07	lb/ton	0%	2.12E-03
						Mercury	7439976	5.40E-11	lb/ton	0%	1.18E-07
						Nickel	7440020	6.26E-08	lb/ton	0%	1.37E-04
						Selenium	7782492	5.92E-11	lb/ton	0%	1.30E-07
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	Antimony	7440360	3.71E-10	lb/ton	0%	8.12E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	3.30E-06
						Beryllium	7440417	2.43E-09	lb/ton	0%	5.32E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	2.66E-07
						Chromium	7440473	9.55E-08	lb/ton	0%	2.09E-04
						Cobalt	7440484	2.31E-08	lb/ton	0%	5.05E-05
						Lead	7439921	1.21E-08	lb/ton	0%	2.64E-05
						Manganese	7439965	1.15E-06	lb/ton	0%	2.52E-03
						Mercury	7439976	6.42E-11	lb/ton	0%	1.41E-07
						Nickel	7440020	7.44E-08	lb/ton	0%	1.63E-04
						Selenium	7782492	7.03E-11	lb/ton	0%	1.54E-07
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	AWindCG1	F	0.50	acre-yr	Antimony	7440360	6.75E-04	lb/acre-yr	0%	1.69E-07
						Arsenic	7440382	2.75E-03	lb/acre-yr	0%	6.87E-07
						Beryllium	7440417	4.42E-03	lb/acre-yr	0%	1.11E-06
						Cadmium	7440439	2.21E-04	lb/acre-yr	0%	5.52E-08
						Chromium	7440473	1.74E-01	lb/acre-yr	0%	4.35E-05
						Cobalt	7440484	4.20E-02	lb/acre-yr	0%	1.05E-05
						Lead	7439921	2.20E-02	lb/acre-yr	0%	5.49E-06
						Manganese	7439965	2.10E+00	lb/acre-yr	0%	5.24E-04
						Mercury	7439976	1.17E-04	lb/acre-yr	0%	2.92E-08

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
013-337c (cont'd)	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (cont'd)	AWindCG1 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.35E-01	lb/acre-yr	0%	3.39E-05
						Selenium	7782492	1.28E-04	lb/acre-yr	0%	3.20E-08
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	G2ScreenC	F	4,380,000	tons	Antimony	7440360	3.12E-10	lb/ton	0%	6.84E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	2.78E-06
						Beryllium	7440417	2.05E-09	lb/ton	0%	4.48E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	2.24E-07
						Chromium	7440473	8.04E-08	lb/ton	0%	1.76E-04
						Cobalt	7440484	1.94E-08	lb/ton	0%	4.25E-05
						Lead	7439921	1.02E-08	lb/ton	0%	2.22E-05
						Manganese	7439965	9.70E-07	lb/ton	0%	2.12E-03
						Mercury	7439976	5.40E-11	lb/ton	0%	1.18E-07
						Nickel	7440020	6.26E-08	lb/ton	0%	1.37E-04
						Selenium	7782492	5.92E-11	lb/ton	0%	1.30E-07
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	Antimony	7440360	3.71E-10	lb/ton	0%	8.12E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	3.30E-06
						Beryllium	7440417	2.43E-09	lb/ton	0%	5.32E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	2.66E-07
						Chromium	7440473	9.55E-08	lb/ton	0%	2.09E-04
						Cobalt	7440484	2.31E-08	lb/ton	0%	5.05E-05
						Lead	7439921	1.21E-08	lb/ton	0%	2.64E-05
						Manganese	7439965	1.15E-06	lb/ton	0%	2.52E-03
						Mercury	7439976	6.42E-11	lb/ton	0%	1.41E-07
						Nickel	7440020	7.44E-08	lb/ton	0%	1.63E-04
						Selenium	7782492	7.03E-11	lb/ton	0%	1.54E-07
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	AWindCG2	F	0.50	acre-yr	Antimony	7440360	6.75E-04	lb/acre-yr	0%	1.69E-07
						Arsenic	7440382	2.75E-03	lb/acre-yr	0%	6.87E-07
						Beryllium	7440417	4.42E-03	lb/acre-yr	0%	1.11E-06
						Cadmium	7440439	2.21E-04	lb/acre-yr	0%	5.52E-08
						Chromium	7440473	1.74E-01	lb/acre-yr	0%	4.35E-05
						Cobalt	7440484	4.20E-02	lb/acre-yr	0%	1.05E-05
						Lead	7439921	2.20E-02	lb/acre-yr	0%	5.49E-06
						Manganese	7439965	2.10E+00	lb/acre-yr	0%	5.24E-04
						Mercury	7439976	1.17E-04	lb/acre-yr	0%	2.92E-08
						Nickel	7440020	1.35E-01	lb/acre-yr	0%	3.39E-05
						Selenium	7782492	1.28E-04	lb/acre-yr	0%	3.20E-08
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	G2ScreenC	F	4,380,000	tons	Antimony	7440360	3.12E-10	lb/ton	0%	6.84E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	2.78E-06
						Beryllium	7440417	2.05E-09	lb/ton	0%	4.48E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	2.24E-07
						Chromium	7440473	8.04E-08	lb/ton	0%	1.76E-04
						Cobalt	7440484	1.94E-08	lb/ton	0%	4.25E-05
						Lead	7439921	1.02E-08	lb/ton	0%	2.22E-05
						Manganese	7439965	9.70E-07	lb/ton	0%	2.12E-03
						Mercury	7439976	5.40E-11	lb/ton	0%	1.18E-07
						Nickel	7440020	6.26E-08	lb/ton	0%	1.37E-04
						Selenium	7782492	5.92E-11	lb/ton	0%	1.30E-07
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	CGTrUnprt	F	4,380,000	tons	Antimony	7440360	3.71E-10	lb/ton	0%	8.12E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	3.30E-06
						Beryllium	7440417	2.43E-09	lb/ton	0%	5.32E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	2.66E-07
						Chromium	7440473	9.55E-08	lb/ton	0%	2.09E-04
						Cobalt	7440484	2.31E-08	lb/ton	0%	5.05E-05
						Lead	7439921	1.21E-08	lb/ton	0%	2.64E-05
						Manganese	7439965	1.15E-06	lb/ton	0%	2.52E-03
						Mercury	7439976	6.42E-11	lb/ton	0%	1.41E-07
						Nickel	7440020	7.44E-08	lb/ton	0%	1.63E-04
						Selenium	7782492	7.03E-11	lb/ton	0%	1.54E-07
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	AWindCG3	F	0.50	acre-yr	Antimony	7440360	6.75E-04	lb/acre-yr	0%	1.69E-07
						Arsenic	7440382	2.75E-03	lb/acre-yr	0%	6.87E-07
						Beryllium	7440417	4.42E-03	lb/acre-yr	0%	1.11E-06
						Cadmium	7440439	2.21E-04	lb/acre-yr	0%	5.52E-08
						Chromium	7440473	1.74E-01	lb/acre-yr	0%	4.35E-05
						Cobalt	7440484	4.20E-02	lb/acre-yr	0%	1.05E-05
						Lead	7439921	2.20E-02	lb/acre-yr	0%	5.49E-06
						Manganese	7439965	2.10E+00	lb/acre-yr	0%	5.24E-04
						Mercury	7439976	1.17E-04	lb/acre-yr	0%	2.92E-08

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
013-339c (cont'd)	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (cont'd)	AWindCG3 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.35E-01	lb/acre-yr	0%	3.39E-05
						Selenium	7782492	1.28E-04	lb/acre-yr	0%	3.20E-08
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	G3ScreenC	F	4,380,000	tons	Antimony	7440360	7.08E-09	lb/ton	0%	1.55E-05
						Arsenic	7440382	1.00E-08	lb/ton	0%	2.19E-05
						Beryllium	7440417	7.31E-10	lb/ton	0%	1.60E-06
						Cadmium	7440439	1.22E-09	lb/ton	0%	2.68E-06
						Chromium	7440473	3.12E-09	lb/ton	0%	6.83E-06
						Cobalt	7440484	3.47E-09	lb/ton	0%	7.59E-06
						Lead	7439921	5.62E-08	lb/ton	0%	1.23E-04
						Manganese	7439965	1.63E-08	lb/ton	0%	3.57E-05
						Mercury	7439976	2.13E-10	lb/ton	0%	4.68E-07
						Nickel	7440020	5.14E-09	lb/ton	0%	1.13E-05
						Selenium	7782492	6.46E-09	lb/ton	0%	1.42E-05
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	SGTrUnprt	F	4,380,000	tons	Antimony	7440360	8.41E-09	lb/ton	0%	1.84E-05
						Arsenic	7440382	1.19E-08	lb/ton	0%	2.60E-05
						Beryllium	7440417	8.68E-10	lb/ton	0%	1.90E-06
						Cadmium	7440439	1.45E-09	lb/ton	0%	3.19E-06
						Chromium	7440473	3.71E-09	lb/ton	0%	8.12E-06
						Cobalt	7440484	4.12E-09	lb/ton	0%	9.02E-06
						Lead	7439921	6.68E-08	lb/ton	0%	1.46E-04
						Manganese	7439965	1.94E-08	lb/ton	0%	4.25E-05
						Mercury	7439976	2.54E-10	lb/ton	0%	5.55E-07
						Nickel	7440020	6.11E-09	lb/ton	0%	1.34E-05
						Selenium	7782492	7.68E-09	lb/ton	0%	1.68E-05
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	AWindSG1	F	0.50	acre-yr	Antimony	7440360	1.53E-02	lb/acre-yr	0%	3.83E-06
						Arsenic	7440382	2.16E-02	lb/acre-yr	0%	5.41E-06
						Beryllium	7440417	1.58E-03	lb/acre-yr	0%	3.95E-07
						Cadmium	7440439	2.65E-03	lb/acre-yr	0%	6.62E-07
						Chromium	7440473	6.75E-03	lb/acre-yr	0%	1.69E-06
						Cobalt	7440484	7.50E-03	lb/acre-yr	0%	1.87E-06
						Lead	7439921	1.22E-01	lb/acre-yr	0%	3.04E-05
						Manganese	7439965	3.53E-02	lb/acre-yr	0%	8.82E-06
						Mercury	7439976	4.62E-04	lb/acre-yr	0%	1.15E-07
						Nickel	7440020	1.11E-02	lb/acre-yr	0%	2.78E-06
						Selenium	7782492	1.40E-02	lb/acre-yr	0%	3.49E-06
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	G3ScreenC	F	4,380,000	tons	Antimony	7440360	7.08E-09	lb/ton	0%	1.55E-05
						Arsenic	7440382	1.00E-08	lb/ton	0%	2.19E-05
						Beryllium	7440417	7.31E-10	lb/ton	0%	1.60E-06
						Cadmium	7440439	1.22E-09	lb/ton	0%	2.68E-06
						Chromium	7440473	3.12E-09	lb/ton	0%	6.83E-06
						Cobalt	7440484	3.47E-09	lb/ton	0%	7.59E-06
						Lead	7439921	5.62E-08	lb/ton	0%	1.23E-04
						Manganese	7439965	1.63E-08	lb/ton	0%	3.57E-05
						Mercury	7439976	2.13E-10	lb/ton	0%	4.68E-07
						Nickel	7440020	5.14E-09	lb/ton	0%	1.13E-05
						Selenium	7782492	6.46E-09	lb/ton	0%	1.42E-05
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	SGTrUnprt	F	4,380,000	tons	Antimony	7440360	8.41E-09	lb/ton	0%	1.84E-05
						Arsenic	7440382	1.19E-08	lb/ton	0%	2.60E-05
						Beryllium	7440417	8.68E-10	lb/ton	0%	1.90E-06
						Cadmium	7440439	1.45E-09	lb/ton	0%	3.19E-06
						Chromium	7440473	3.71E-09	lb/ton	0%	8.12E-06
						Cobalt	7440484	4.12E-09	lb/ton	0%	9.02E-06
						Lead	7439921	6.68E-08	lb/ton	0%	1.46E-04
						Manganese	7439965	1.94E-08	lb/ton	0%	4.25E-05
						Mercury	7439976	2.54E-10	lb/ton	0%	5.55E-07
						Nickel	7440020	6.11E-09	lb/ton	0%	1.34E-05
						Selenium	7782492	7.68E-09	lb/ton	0%	1.68E-05
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	AWindSG2	F	0.50	acre-yr	Antimony	7440360	1.53E-02	lb/acre-yr	0%	3.83E-06
						Arsenic	7440382	2.16E-02	lb/acre-yr	0%	5.41E-06
						Beryllium	7440417	1.58E-03	lb/acre-yr	0%	3.95E-07
						Cadmium	7440439	2.65E-03	lb/acre-yr	0%	6.62E-07
						Chromium	7440473	6.75E-03	lb/acre-yr	0%	1.69E-06
						Cobalt	7440484	7.50E-03	lb/acre-yr	0%	1.87E-06
						Lead	7439921	1.22E-01	lb/acre-yr	0%	3.04E-05
						Manganese	7439965	3.53E-02	lb/acre-yr	0%	8.82E-06
						Mercury	7439976	4.62E-04	lb/acre-yr	0%	1.15E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
013-381c (cont'd)	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (cont'd)	AWindSG2 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.11E-02	lb/acre-yr	0%	2.78E-06
						Selenium	7782492	1.40E-02	lb/acre-yr	0%	3.49E-06
Total of Non-Fugitive Emissions for Operation 013:											*0.00E+00*
Total of Fugitive Emissions for Operation 013:											*2.01E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 013:											*2.01E-02*
Operation 014: Concentrate Leach Plant											
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	61,320	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	1.50E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	7.21E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	5.41E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	4.81E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	5.41E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	5.41E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	7.21E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	5.41E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	6.31E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	3.61E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	5.41E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	3.61E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	5.41E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	5.41E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	3.61E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	3.61E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	9.02E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	8.42E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	2.25E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	5.41E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	5.41E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.83E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	5.11E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	1.50E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.02E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	6.01E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	3.61E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	3.31E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	4.21E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	2.52E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.14E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	7.82E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	6.31E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	7.21E-07
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	8,760	hours	Antimony	7440360	1.41E-05	lb/hr	0%	6.16E-05
						Arsenic	7440382	1.94E-05	lb/hr	0%	8.48E-05
						Beryllium	7440417	3.75E-06	lb/hr	0%	1.64E-05
						Cadmium	7440439	9.06E-05	lb/hr	0%	3.97E-04
						Chromium	7440473	8.86E-06	lb/hr	0%	3.88E-05
						Cobalt	7440484	1.23E-04	lb/hr	0%	5.37E-04
						Lead	7439921	1.48E-04	lb/hr	0%	6.47E-04
						Manganese	7439965	2.56E-05	lb/hr	0%	1.12E-04
						Mercury	7439976	6.22E-07	lb/hr	0%	2.72E-06
						Nickel	7440020	3.50E-05	lb/hr	0%	1.53E-04
						Selenium	7782492	6.50E-05	lb/hr	0%	2.85E-04
014-240	PLV Cooling Tower	PCT	F	5,256,000	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	1.45E-12	lb/1000 gal	0%	3.82E-09
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	3.63E-12	lb/1000 gal	0%	9.55E-09
						Manganese	7439965	1.80E-10	lb/1000 gal	0%	4.73E-07
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
014-241	Oxygen Plant Cooling Tower 1	OCT1	F	2,706,840	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	7.26E-13	lb/1000 gal	0%	9.83E-10

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
014-241 (cont'd)	Oxygen Plant Cooling Tower 1 (cont'd)	OCT1 (cont'd)	F (cont'd)	2,706,840	1000 gal (cont'd)	Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	1.82E-12	lb/1000 gal	0%	2.46E-09
						Manganese	7439965	8.99E-11	lb/1000 gal	0%	1.22E-07
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
Total of Non-Fugitive Emissions for Operation 014:											*5.91E-02*
Total of Fugitive Emissions for Operation 014:											*6.11E-07*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:											*5.91E-02*
Operation 015: Diesel Emergency Engines											
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	242,700	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	6.59E-04
						Toluene	108883	1.97E-06	lb/hp-hr	0%	2.39E-04
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	1.64E-04
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	6.70E-05
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	2.14E-05
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	6.69E-06
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	1.10E-04
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	7.84E-06
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	3.98E-06
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	1.09E-05
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	3.47E-05
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	1.04E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	3.42E-06
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	3.15E-06
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	5.28E-07
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	1.30E-06
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	9.43E-07
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	1.85E-07
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	2.18E-07
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	3.52E-07
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	2.94E-07
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	4.72E-07
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	405,000	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	1.10E-03
						Toluene	108883	1.97E-06	lb/hp-hr	0%	3.98E-04
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	2.74E-04
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	1.12E-04
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	3.57E-05
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	1.12E-05
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	1.84E-04
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	1.31E-05
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	6.63E-06
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	1.81E-05
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	5.78E-05
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	1.74E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	5.71E-06
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	5.26E-06
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	8.82E-07
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	2.17E-06
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	1.57E-06
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	3.09E-07
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	3.64E-07
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	5.87E-07
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	4.90E-07
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	7.88E-07
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	162,000	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	5.29E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	2.32E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.62E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	2.22E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	6.69E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	4.35E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	5.24E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	4.81E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	2.87E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	8.05E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.66E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.67E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	1.06E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
015-415 (cont'd)	ETPS Diesel Emergency Generator GNO36A (324 hp engine) (cont'd)	GNO36A (cont'd)	NF (cont'd)	162,000	hp-hr (cont'd)	Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	4.31E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.71E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	9.53E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	2.00E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	5.62E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	8.79E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	1.07E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	2.13E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	3.31E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	2.77E-07
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	110,000	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	3.59E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.57E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.10E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	1.51E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	4.54E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	2.95E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	3.56E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	3.26E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.95E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	5.47E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.12E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.13E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	7.20E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	2.93E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.84E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	6.47E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.36E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	3.82E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	5.97E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	7.24E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.44E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	2.24E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.88E-07
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	33,000	hp-hr	Benzene	71432	3.96E-06	lb/hp-hr	0%	6.53E-05
						Toluene	108883	1.74E-06	lb/hp-hr	0%	2.86E-05
						Xylenes	1330207	1.21E-06	lb/hp-hr	0%	2.00E-05
						1,3-Butadiene	106990	1.66E-07	lb/hp-hr	0%	2.74E-06
						Formaldehyde	50000	5.01E-06	lb/hp-hr	0%	8.26E-05
						Acetaldehyde	75070	3.26E-06	lb/hp-hr	0%	5.37E-05
						Acrolein	107028	3.93E-07	lb/hp-hr	0%	6.48E-06
						Naphthalene	91203	3.60E-07	lb/hp-hr	0%	5.94E-06
						Acenaphthylene	208968	2.15E-08	lb/hp-hr	0%	3.54E-07
						Acenaphthene	83329	6.03E-09	lb/hp-hr	0%	9.94E-08
						Fluorene	86737	1.24E-07	lb/hp-hr	0%	2.04E-06
						Phenanthrene	85018	1.25E-07	lb/hp-hr	0%	2.06E-06
						Anthracene	120127	7.94E-09	lb/hp-hr	0%	1.31E-07
						Fluoranthene	206440	3.23E-08	lb/hp-hr	0%	5.33E-07
						Pyrene	129000	2.03E-08	lb/hp-hr	0%	3.35E-07
						Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr	0%	1.18E-07
						Chrysene	218019	1.50E-09	lb/hp-hr	0%	2.47E-08
						Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr	0%	6.94E-09
						Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr	0%	1.09E-08
						Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr	0%	1.32E-08
						Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr	0%	2.63E-08
						Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr	0%	4.08E-08
						Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr	0%	3.42E-08
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	112,500	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	3.67E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.61E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.12E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	1.54E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	4.65E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	3.02E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	3.64E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	3.34E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.99E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	5.59E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.15E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
015-429 (cont'd)	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine) (cont'd)	Tier3-130/225 (cont'd)	NF (cont'd)	112,500	hp-hr (cont'd)	Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.16E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	7.36E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	3.00E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.88E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	6.62E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.39E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	3.90E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	6.10E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	7.40E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.48E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	2.30E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.93E-07
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	175,000	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	5.71E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	2.51E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.75E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	2.39E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	7.23E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	4.70E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	5.67E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	5.19E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	3.10E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	8.70E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.79E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.80E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	1.15E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	4.66E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.93E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	1.03E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	2.16E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	6.07E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	9.49E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	1.15E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	2.30E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	3.57E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	3.00E-07
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	570,500	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	1.55E-03
						Toluene	108883	1.97E-06	lb/hp-hr	0%	5.61E-04
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	3.85E-04
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	1.58E-04
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	5.03E-05
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	1.57E-05
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	2.60E-04
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	1.84E-05
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	9.34E-06
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	2.56E-05
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	8.15E-05
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	2.46E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	8.05E-06
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	7.41E-06
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	1.24E-06
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	3.06E-06
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	2.22E-06
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	4.35E-07
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	5.13E-07
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	8.27E-07
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	6.91E-07
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	1.11E-06
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	34,500	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.13E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	4.94E-05
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	3.44E-05
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	4.72E-06
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.42E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	9.26E-05
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.12E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.02E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	6.11E-07
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	1.71E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
015-442 (cont'd)	Metcalf Clean Room Diesel Emergency Generator (69 hp engine) (cont'd)	MCR (cont'd)	NF (cont'd)	34,500	hp-hr (cont'd)	Fluorene	86737	2.04E-07	lb/hp-hr	0%	3.53E-06
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	3.55E-06
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	2.26E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	9.19E-07
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	5.77E-07
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	2.03E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	4.26E-08
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	1.20E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	1.87E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	2.27E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	4.53E-08
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	7.04E-08
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	5.90E-08
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	269,500	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	8.80E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	3.86E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	2.69E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	3.69E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.11E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	7.23E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	8.73E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	8.00E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	4.77E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	1.34E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	2.75E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	2.77E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	1.76E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	7.18E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	4.51E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	1.58E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	3.33E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	9.35E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	1.46E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	1.77E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	3.54E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	5.50E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	4.61E-07
Total of Non-Fugitive Emissions for Operation 015:											*1.87E-02*
Total of Fugitive Emissions for Operation 015:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:											*1.87E-02*
Operation 017: Metcalf Concentrator											
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	FFDC318	NF	3,574,080,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.91E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	2.63E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.79E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.79E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	3.57E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	5.87E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	7.76E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	3.06E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	5.08E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.25E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.58E-05
017-280	Processes Controlled by Secondary Screening FFDC 1	FFDC280	NF	13,770,720,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	7.38E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.02E-04
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.89E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.89E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.38E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	2.26E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.99E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.18E-05
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.96E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.82E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	6.10E-05
017-281	Processes Controlled by Secondary Screening FFDC 2	FFDC281	NF	13,613,040,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	7.29E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.00E-04
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.81E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.81E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.36E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
017-281 (cont'd)	Processes Controlled by Secondary Screening FFDC 2 (cont'd)	FFDC281 (cont'd)	NF (cont'd)	13,613,040,000	dscf (cont'd)	Cobalt	7440484	3.29E-12	lb/dscf	0%	2.24E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.96E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.17E-05
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.93E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.76E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	6.03E-05
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	FFDC319	NF	1,944,720,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.04E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.43E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	9.72E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	9.72E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.94E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.19E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	4.22E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.67E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	2.76E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	6.81E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	8.61E-06
017-283	Processes Controlled by Secondary Crushing FFDC 1	FFDC283	NF	4,625,280,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.48E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.41E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.31E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.31E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	4.63E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	7.60E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.00E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	3.96E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	6.57E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.62E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.05E-05
017-284	Processes Controlled by Secondary Crushing FFDC 2	FFDC284	NF	5,886,720,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	3.15E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	4.34E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.94E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.94E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	5.89E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	9.67E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.28E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	5.05E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	8.36E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	2.06E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.61E-05
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	FFDC285	NF	2,154,960,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.15E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.59E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.08E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.08E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.15E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.54E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	4.68E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.85E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.06E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	7.54E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	9.54E-06
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	FFDC286	NF	10,722,240,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	5.74E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	7.90E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	5.36E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	5.36E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.07E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.76E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.33E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	9.19E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.52E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	3.75E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	4.75E-05
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	FFDC287	NF	12,036,240,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	6.45E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	8.87E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.02E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.02E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.20E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.98E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
017-287 (cont'd)	Processes Controlled by Crushed Ore Bin FFDC 1 (cont'd)	FFDC287 (cont'd)	NF (cont'd)	12,036,240,000	dscf (cont'd)	Lead	7439921	4.34E-11	lb/dscf	0%	2.61E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.03E-05
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.71E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.21E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	5.33E-05
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	FFDC288	NF	10,512,000,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	5.63E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	7.75E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	5.26E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	5.26E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.05E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.73E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.28E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	9.01E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.49E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	3.68E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	4.66E-05
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	FFDC289	NF	10,512,000,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	5.63E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	7.75E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	5.26E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	5.26E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.05E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.73E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.28E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	9.01E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.49E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	3.68E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	4.66E-05
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	FFDC290	NF	10,512,000,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	5.63E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	7.75E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	5.26E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	5.26E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.05E-05
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.73E-05
						Lead	7439921	4.34E-11	lb/dscf	0%	2.28E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	9.01E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.49E-06
						Nickel	7440020	7.00E-12	lb/dscf	0%	3.68E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	4.66E-05
017-291	Processes Controlled by Crushed Ore Transfers FFDC	FFDC291	NF	5,361,120,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.87E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.95E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.68E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.68E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	5.36E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	8.81E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.16E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	4.60E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	7.61E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.88E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.37E-05
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	FFDC292	NF	5,256,000,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.82E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.87E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.63E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.63E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	5.26E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	8.63E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.14E-04
						Manganese	7439965	1.71E-12	lb/dscf	0%	4.51E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	7.46E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.84E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.33E-05
017-294	Processes Controlled by Wet Screen Feed FFDC	FFDC294	NF	1,839,600,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	9.86E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.36E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	9.20E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	9.20E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.84E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.02E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.99E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
017-294 (cont'd)	Processes Controlled by Wet Screen Feed FFDC (cont'd)	FFDC294 (cont'd)	NF (cont'd)	1,839,600,000	dscf (cont'd)	Manganese	7439965	1.71E-12	lb/dscf	0%	1.58E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	2.61E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	6.44E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	8.15E-06
017-327	Metcalf Concentrator Bulk Flotation	BFO	F	542.14	tons	Benzene	71432	4.47E-03	lb/ton	0%	1.21E-03
						Ethylbenzene	100414	7.52E-03	lb/ton	0%	2.04E-03
						n-Hexane	110543	9.40E-04	lb/ton	0%	2.55E-04
						Toluene	108883	5.38E-02	lb/ton	0%	1.46E-02
						m-Xylene	1330207	1.40E-01	lb/ton	0%	3.80E-02
Total of Non-Fugitive Emissions for Operation 017:											*5.28E-03*
Total of Fugitive Emissions for Operation 017:											*5.61E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:											*6.14E-02*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations											
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	MCTrPrt	NF	60,707	tons	Antimony	7440360	4.28E-09	lb/ton	0%	1.30E-07
						Arsenic	7440382	1.18E-09	lb/ton	0%	3.58E-08
						Beryllium	7440417	1.79E-10	lb/ton	0%	5.45E-09
						Cadmium	7440439	1.79E-10	lb/ton	0%	5.45E-09
						Chromium	7440473	3.59E-10	lb/ton	0%	1.09E-08
						Cobalt	7440484	5.90E-10	lb/ton	0%	1.79E-08
						Lead	7439921	4.87E-10	lb/ton	0%	1.48E-08
						Manganese	7439965	3.08E-10	lb/ton	0%	9.34E-09
						Mercury	7439976	3.10E-10	lb/ton	0%	9.42E-09
						Nickel	7440020	1.26E-09	lb/ton	0%	3.81E-08
						Selenium	7782492	1.31E-08	lb/ton	0%	3.96E-07
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	MCTrPrt	F	60,707	tons	Antimony	7440360	4.28E-09	lb/ton	0%	1.30E-07
						Arsenic	7440382	1.18E-09	lb/ton	0%	3.58E-08
						Beryllium	7440417	1.79E-10	lb/ton	0%	5.45E-09
						Cadmium	7440439	1.79E-10	lb/ton	0%	5.45E-09
						Chromium	7440473	3.59E-10	lb/ton	0%	1.09E-08
						Cobalt	7440484	5.90E-10	lb/ton	0%	1.79E-08
						Lead	7439921	4.87E-10	lb/ton	0%	1.48E-08
						Manganese	7439965	3.08E-10	lb/ton	0%	9.34E-09
						Mercury	7439976	3.10E-10	lb/ton	0%	9.42E-09
						Nickel	7440020	1.26E-09	lb/ton	0%	3.81E-08
						Selenium	7782492	1.31E-08	lb/ton	0%	3.96E-07
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	8,760	hours	Antimony	7440360	7.26E-05	lb/hr	0%	3.18E-04
						Arsenic	7440382	2.00E-05	lb/hr	0%	8.76E-05
						Beryllium	7440417	3.04E-06	lb/hr	0%	1.33E-05
						Cadmium	7440439	3.04E-06	lb/hr	0%	1.33E-05
						Chromium	7440473	6.09E-06	lb/hr	0%	2.67E-05
						Cobalt	7440484	1.00E-05	lb/hr	0%	4.38E-05
						Lead	7439921	8.26E-06	lb/hr	0%	3.62E-05
						Manganese	7439965	5.22E-06	lb/hr	0%	2.29E-05
						Mercury	7439976	5.26E-06	lb/hr	0%	2.30E-05
						Nickel	7440020	2.13E-05	lb/hr	0%	9.33E-05
						Selenium	7782492	2.21E-04	lb/hr	0%	9.69E-04
Total of Non-Fugitive Emissions for Operation 018:											*1.65E-03*
Total of Fugitive Emissions for Operation 018:											*6.73E-07*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:											*1.65E-03*
Operation 021: Propane and Natural Gas Emergency Engines											
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	8.40E-07
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.08E-07
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	4.32E-07
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.20E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.22E-07
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	9.26E-05
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	8.73E-05
						Benzene	71432	1.66E-05	lb/hp-hr	0%	5.25E-05
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	5.88E-07
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.28E-07
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	4.55E-07
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	8.24E-07
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	7.07E-07
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	6.81E-04
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.02E-04

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
021-367 (cont'd)	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine) (cont'd)	Generac2 (cont'd)	NF (cont'd)	6,325	hp-hr (cont'd)	Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.37E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.22E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	4.68E-06
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.95E-07
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.85E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.38E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	6.48E-06
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	6.49E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	3.92E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	3.33E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.70E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	3.26E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	7.16E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	6.74E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	4.05E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	4.54E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	3.31E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	3.51E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	6.36E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	5.46E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	5.26E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	7.85E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.06E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	2.49E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	3.62E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.05E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.43E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.84E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	5.00E-05
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	6.49E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	3.92E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	3.33E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.70E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	3.26E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	7.16E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	6.74E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	4.05E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	4.54E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	3.31E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	3.51E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	6.36E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	5.46E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	5.26E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	7.85E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.06E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	2.49E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	3.62E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.05E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.43E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.84E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	5.00E-05
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	48,850	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	6.49E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	3.92E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	3.33E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.70E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	3.26E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	7.16E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	6.74E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	4.05E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	4.54E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	3.31E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
021-371 (cont'd)	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine) (cont'd)	Cummins1 (cont'd)	NF (cont'd)	48,850	hp-hr (cont'd)	Chloroform	67663	1.44E-07	lb/hp-hr	0%	3.51E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	6.36E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	5.46E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	5.26E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	7.85E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.06E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	2.49E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	3.62E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.05E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.43E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.84E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	5.00E-05
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	48,850	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	6.49E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	3.92E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	2.90E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	3.33E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.70E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	3.26E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	7.16E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	6.74E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	4.05E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	4.54E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	3.31E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	3.51E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	6.36E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	5.46E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	5.26E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	7.85E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.06E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	2.49E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	3.62E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.05E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.43E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.84E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	5.00E-05
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	18,070	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.40E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.45E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.07E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.07E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.23E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.29E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.20E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.65E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.50E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.50E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.68E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.22E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.30E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.35E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.02E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	1.94E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	2.90E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	3.91E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.21E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.34E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.13E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.29E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	6.81E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	1.85E-05
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	6,325	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	8.40E-07
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.08E-07
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	4.32E-07
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.20E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.22E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
021-374 (cont'd)	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine) (cont'd)	Generac2 (cont'd)	NF (cont'd)	6,325	hp-hr (cont'd)	Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	9.26E-05
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	8.73E-05
						Benzene	71432	1.66E-05	lb/hp-hr	0%	5.25E-05
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	5.88E-07
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.28E-07
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	4.55E-07
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	8.24E-07
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	7.07E-07
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	6.81E-04
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.02E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.37E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.22E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	4.68E-06
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.95E-07
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.85E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.38E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	6.48E-06
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	6,325	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	8.40E-07
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.08E-07
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	4.32E-07
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.20E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.22E-07
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	9.26E-05
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	8.73E-05
						Benzene	71432	1.66E-05	lb/hp-hr	0%	5.25E-05
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	5.88E-07
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.28E-07
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	4.55E-07
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	8.24E-07
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	7.07E-07
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	6.81E-04
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.02E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.37E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.22E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	4.68E-06
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.95E-07
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.85E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.38E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	6.48E-06
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	6,325	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	8.40E-07
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.08E-07
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	3.75E-07
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	4.32E-07
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.20E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.22E-07
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	9.26E-05
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	8.73E-05
						Benzene	71432	1.66E-05	lb/hp-hr	0%	5.25E-05
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	5.88E-07
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.28E-07
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	4.55E-07
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	8.24E-07
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	7.07E-07
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	6.81E-04
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.02E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.37E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.22E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	4.68E-06
						Styrene	100425	1.25E-07	lb/hp-hr	0%	3.95E-07
						Toluene	108883	5.86E-06	lb/hp-hr	0%	1.85E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.38E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	6.48E-06
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	18,500	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.46E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.49E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
021-435 (cont'd)	GSC Propane Emergency Generator GNO23A (37 hp engine) (cont'd)	P1CII (cont'd)	NF (cont'd)	18,500	hp-hr (cont'd)	1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.10E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.10E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.26E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.44E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.23E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.55E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.53E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.72E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.25E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.33E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.41E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.07E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	1.99E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	2.97E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.00E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.43E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.37E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.16E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.42E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	6.97E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	1.89E-05
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	18,500	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.46E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.49E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.10E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.10E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.26E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.44E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.23E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.55E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.53E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.72E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.25E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.33E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.41E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.07E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	1.99E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	2.97E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.00E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.43E-06
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.37E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.16E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.42E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	6.97E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	1.89E-05
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	73,500	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	9.76E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.90E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	4.36E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	4.36E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	5.02E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.56E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.90E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	1.08E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	1.01E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	6.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	6.83E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.98E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	5.29E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	9.57E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	8.22E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	7.91E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.18E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.59E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.75E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	5.44E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	4.59E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
021-447 (cont'd)	Sunridge Propane Emergency Generator GNO85A (147 hp engine) (cont'd)	GNO85A (cont'd)	NF (cont'd)	73,500	hp-hr (cont'd)	Toluene	108883	5.86E-06	lb/hp-hr	0%	2.15E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.77E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	7.52E-05
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	230,000	hp-hr	1,1,2,2-Tetrachloroethane	79345	1.28E-08	lb/hp-hr	0%	1.47E-06
						1,1,2-Trichloroethane	79005	7.75E-09	lb/hp-hr	0%	8.91E-07
						1,1-Dichloroethane	75343	5.72E-09	lb/hp-hr	0%	6.58E-07
						1,2-Dichloroethane	107062	5.72E-09	lb/hp-hr	0%	6.58E-07
						1,2-Dichloropropane	78875	6.59E-09	lb/hp-hr	0%	7.57E-07
						1,3-Butadiene	106990	3.36E-07	lb/hp-hr	0%	3.86E-05
						1,3-Dichloropropene	542756	6.43E-09	lb/hp-hr	0%	7.40E-07
						Acetaldehyde	75070	1.41E-06	lb/hp-hr	0%	1.63E-04
						Acrolein	107028	1.33E-06	lb/hp-hr	0%	1.53E-04
						Benzene	71432	8.00E-07	lb/hp-hr	0%	9.20E-05
						Carbon Tetrachloride	56235	8.97E-09	lb/hp-hr	0%	1.03E-06
						Chlorobenzene	108907	6.53E-09	lb/hp-hr	0%	7.51E-07
						Chloroform	67663	6.94E-09	lb/hp-hr	0%	7.98E-07
						Ethylbenzene	100414	1.26E-08	lb/hp-hr	0%	1.44E-06
						Ethylene Dibromide	106934	1.08E-08	lb/hp-hr	0%	1.24E-06
						Formaldehyde	50000	1.04E-05	lb/hp-hr	0%	1.19E-03
						Methanol	67561	1.55E-06	lb/hp-hr	0%	1.78E-04
						Methylene Chloride	75092	2.09E-08	lb/hp-hr	0%	2.40E-06
						Naphthalene	91203	4.92E-08	lb/hp-hr	0%	5.66E-06
						Polycyclic Aromatic Hydrocarbons	250	7.14E-08	lb/hp-hr	0%	8.21E-06
						Styrene	100425	6.03E-09	lb/hp-hr	0%	6.93E-07
						Toluene	108883	2.83E-07	lb/hp-hr	0%	3.25E-05
						Vinyl Chloride	75014	3.64E-09	lb/hp-hr	0%	4.18E-07
						Xylene	1330207	9.88E-08	lb/hp-hr	0%	1.14E-05
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	73,500	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	9.76E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.90E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	4.36E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	4.36E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	5.02E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.56E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.90E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	1.08E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	1.01E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	6.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	6.83E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.98E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	5.29E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	9.57E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	8.22E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	7.91E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.18E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.59E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.75E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	5.44E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	4.59E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	2.15E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.77E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	7.52E-05
Total of Non-Fugitive Emissions for Operation 021:											*7.39E-02*
Total of Fugitive Emissions for Operation 021:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:											*7.39E-02*
Operation 023: Tailings Operations											
023-418	Wind Erosion of Tailings	AWindT	F	2,645	acre-yr	Antimony	7440360	7.75E-04	lb/acre-yr	0%	1.02E-03
						Arsenic	7440382	1.29E-03	lb/acre-yr	0%	1.71E-03
						Beryllium	7440417	1.72E-04	lb/acre-yr	0%	2.28E-04
						Cadmium	7440439	8.61E-05	lb/acre-yr	0%	1.14E-04
						Chromium	7440473	2.07E-03	lb/acre-yr	0%	2.73E-03
						Cobalt	7440484	6.23E-04	lb/acre-yr	0%	8.24E-04
						Lead	7439921	2.12E-03	lb/acre-yr	0%	2.80E-03
						Manganese	7439965	2.45E-02	lb/acre-yr	0%	3.23E-02
						Mercury	7439976	1.38E-05	lb/acre-yr	0%	1.82E-05
						Nickel	7440020	2.07E-03	lb/acre-yr	0%	2.73E-03
						Selenium	7782492	3.44E-03	lb/acre-yr	0%	4.55E-03
Total of Non-Fugitive Emissions for Operation 023:											*0.00E+00*

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
Total of Fugitive Emissions for Operation 023:											*4.91E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 023:											*4.91E-02*
Operation 024: Miscellaneous Fuel Burning Equipment											
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	2,785.68	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	6.83E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	3.28E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	2.46E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.18E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	2.46E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	2.46E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	3.28E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	2.46E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	2.87E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	1.64E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	2.46E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	1.64E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	2.46E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	2.46E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	1.64E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	1.64E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	4.10E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	3.82E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.02E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	2.46E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	2.46E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	8.33E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.32E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	6.83E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	4.64E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	2.73E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	1.64E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.50E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	1.91E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.15E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	5.19E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	3.55E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	2.87E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	3.28E-08
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	4,415.04	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	1.08E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	5.19E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.90E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	3.46E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.90E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.90E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	5.19E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.90E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	4.54E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.60E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.90E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.60E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.90E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.90E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.60E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.60E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	6.49E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	6.06E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.62E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.90E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.90E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.32E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	3.68E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	1.08E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	7.36E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	4.33E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.60E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	2.38E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	3.03E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.82E-07

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
024-437 (cont'd)	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	4,415.04	MMBtu (cont'd)	Manganese	7439965	3.73E-07	lb/MMBtu	0%	8.22E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	5.63E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	4.54E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	5.19E-08
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	177,354.96	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	4.35E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	2.09E-06
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.56E-07
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	1.39E-06
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.56E-07
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.56E-07
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	2.09E-07
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.56E-07
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.83E-04
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	1.04E-07
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.56E-07
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	1.04E-07
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.56E-07
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.56E-07
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	1.04E-07
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	1.04E-04
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	2.61E-07
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	2.43E-07
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	6.52E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.56E-01
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.56E-07
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	5.30E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.48E-06
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	4.35E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	2.96E-04
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.74E-05
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	1.04E-06
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	9.56E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	1.22E-04
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	7.30E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	3.30E-05
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	2.26E-05
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.83E-04
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	2.09E-06
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	52,091.16	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	1.28E-05
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	6.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	4.60E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	4.09E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	4.60E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	4.60E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	6.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	4.60E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	5.36E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	3.06E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	4.60E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	3.06E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	4.60E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	4.60E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	3.06E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	3.06E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	7.66E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	7.15E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.92E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	4.60E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	4.60E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.56E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	4.34E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	1.28E-07
						Toluene	108883	3.33E-06	lb/MMBtu	0%	8.68E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	5.11E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	3.06E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	2.81E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	3.57E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
024-443b (cont'd)	Natural Gas Small Boilers (5.95 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	52,091.16	MMBtu (cont'd)	Cobalt	7440484	8.24E-08	lb/MMBtu	0%	2.14E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	9.70E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	6.64E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	5.36E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	6.13E-07
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	36,897.12	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	9.04E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.34E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.26E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.89E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.26E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.26E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.34E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.26E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.80E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.17E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.26E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.17E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.26E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.26E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.17E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.17E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.43E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	5.06E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.36E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.26E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.26E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.10E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	3.07E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	9.04E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	6.15E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.62E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.17E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.99E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.53E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.52E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.87E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.70E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.80E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.34E-07
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	4,108.44	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	1.01E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.83E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.63E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	3.22E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.63E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.63E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.83E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.63E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	4.23E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.42E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.63E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.42E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.63E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.63E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.42E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.42E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	6.04E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	5.64E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.51E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.63E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.63E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.23E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	3.42E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	1.01E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	6.85E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	4.03E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.42E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	2.22E-06

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
024-444b (cont'd)	Propane Small Boilers (0.469 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	4,108.44	MMBtu (cont'd)	Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.82E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.69E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	7.65E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	5.24E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	4.23E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.83E-08
Total of Non-Fugitive Emissions for Operation 024:											*2.57E-01*
Total of Fugitive Emissions for Operation 024:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 024:											*2.57E-01*
Operation 025: Diesel Non-Emergency Engines											
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	1,522,488	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	4.97E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	2.18E-03
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.52E-03
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	2.08E-04
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	6.29E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	4.09E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	4.93E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	4.52E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	2.70E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	7.57E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.56E-04
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.57E-04
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	9.96E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	4.06E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.55E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	8.95E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.88E-06
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	5.28E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	8.26E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	1.00E-06
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	2.00E-06
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	3.11E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	2.61E-06
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	648,240	hp-hr	Benzene	71432	3.96E-06	lb/hp-hr	0%	1.28E-03
						Toluene	108883	1.74E-06	lb/hp-hr	0%	5.63E-04
						Xylenes	1330207	1.21E-06	lb/hp-hr	0%	3.92E-04
						1,3-Butadiene	106990	1.66E-07	lb/hp-hr	0%	5.38E-05
						Formaldehyde	50000	5.01E-06	lb/hp-hr	0%	1.62E-03
						Acetaldehyde	75070	3.26E-06	lb/hp-hr	0%	1.06E-03
						Acrolein	107028	3.93E-07	lb/hp-hr	0%	1.27E-04
						Naphthalene	91203	3.60E-07	lb/hp-hr	0%	1.17E-04
						Acenaphthylene	208968	2.15E-08	lb/hp-hr	0%	6.96E-06
						Acenaphthene	83329	6.03E-09	lb/hp-hr	0%	1.95E-06
						Fluorene	86737	1.24E-07	lb/hp-hr	0%	4.02E-05
						Phenanthrene	85018	1.25E-07	lb/hp-hr	0%	4.04E-05
						Anthracene	120127	7.94E-09	lb/hp-hr	0%	2.57E-06
						Fluoranthene	206440	3.23E-08	lb/hp-hr	0%	1.05E-05
						Pyrene	129000	2.03E-08	lb/hp-hr	0%	6.58E-06
						Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr	0%	2.31E-06
						Chrysene	218019	1.50E-09	lb/hp-hr	0%	4.86E-07
						Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr	0%	1.36E-07
						Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr	0%	2.13E-07
						Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr	0%	2.59E-07
						Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr	0%	5.16E-07
						Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr	0%	8.02E-07
						Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr	0%	6.73E-07
Total of Non-Fugitive Emissions for Operation 025:											*2.60E-02*
Total of Fugitive Emissions for Operation 025:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:											*2.60E-02*
AOS1: Morenci Concentrator Quaternary Crushing Operations											
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	FFDC035 (AOS1)	NF	7,305,840,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	1.96E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	6.37E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	1.17E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	8.14E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	2.57E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	1.89E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	3.97E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (tpy)
002-035 (AOS1) (cont'd)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1) (cont'd)	FFDC035 (AOS1) (cont'd)	NF (cont'd)	7,305,840,000	dscf (cont'd)	Manganese	7439965	5.87E-12	lb/dscf	0%	2.14E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	4.17E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	8.56E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.03E-06
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	FFDC036 (AOS1)	NF	8,672,400,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	2.32E-07
						Arsenic	7440382	1.74E-13	lb/dscf	0%	7.56E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	1.39E-07
						Cadmium	7440439	2.23E-13	lb/dscf	0%	9.66E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	3.05E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	2.24E-06
						Lead	7439921	1.09E-11	lb/dscf	0%	4.71E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	2.55E-05
						Mercury	7439976	1.14E-14	lb/dscf	0%	4.96E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.02E-06
						Selenium	7782492	2.81E-13	lb/dscf	0%	1.22E-06
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	FFDC311 (AOS1)	NF	8,882,640,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	9.52E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	3.10E-06
						Beryllium	7440417	1.29E-13	lb/dscf	0%	5.71E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	3.96E-06
						Chromium	7440473	2.82E-12	lb/dscf	0%	1.25E-05
						Cobalt	7440484	2.07E-12	lb/dscf	0%	9.19E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.93E-04
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.04E-04
						Mercury	7439976	4.57E-14	lb/dscf	0%	2.03E-07
						Nickel	7440020	9.37E-13	lb/dscf	0%	4.16E-06
						Selenium	7782492	1.13E-12	lb/dscf	0%	5.00E-06
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	FFDC312 (AOS1)	NF	1,576,800,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	1.69E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	5.50E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	1.01E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	7.03E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	2.22E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	1.63E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.42E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.85E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	3.60E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	7.39E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	8.88E-07
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	FFDC313 (AOS1)	NF	4,888,080,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	5.24E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	1.70E-06
						Beryllium	7440417	1.29E-13	lb/dscf	0%	3.14E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	2.18E-06
						Chromium	7440473	2.82E-12	lb/dscf	0%	6.89E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	5.06E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.06E-04
						Manganese	7439965	2.35E-11	lb/dscf	0%	5.74E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	1.12E-07
						Nickel	7440020	9.37E-13	lb/dscf	0%	2.29E-06
						Selenium	7782492	1.13E-12	lb/dscf	0%	2.75E-06
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	FFDC314 (AOS1)	NF	8,882,640,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	9.52E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	3.10E-06
						Beryllium	7440417	1.29E-13	lb/dscf	0%	5.71E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	3.96E-06
						Chromium	7440473	2.82E-12	lb/dscf	0%	1.25E-05
						Cobalt	7440484	2.07E-12	lb/dscf	0%	9.19E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.93E-04
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.04E-04
						Mercury	7439976	4.57E-14	lb/dscf	0%	2.03E-07
						Nickel	7440020	9.37E-13	lb/dscf	0%	4.16E-06
						Selenium	7782492	1.13E-12	lb/dscf	0%	5.00E-06
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	FFDC315 (AOS1)	NF	1,576,800,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	1.69E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	5.50E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	1.01E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	7.03E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	2.22E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	1.63E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.42E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.85E-05

Table F.10 Annual HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Annual Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (tpy)
						Name	Code	EF	EF Units		
002-315 (AOS1) (cont'd)	Processes Controlled by East Surge Bin FFDC (AOS1) (cont'd)	FFDC315 (AOS1) (cont'd)	NF (cont'd)	1,576,800,000	dscf (cont'd)	Mercury	7439976	4.57E-14	lb/dscf	0%	3.60E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	7.39E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	8.88E-07
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	FFDC316 (AOS1)	NF	4,888,080,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	5.24E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	1.70E-06
						Beryllium	7440417	1.29E-13	lb/dscf	0%	3.14E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	2.18E-06
						Chromium	7440473	2.82E-12	lb/dscf	0%	6.89E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	5.06E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.06E-04
						Manganese	7439965	2.35E-11	lb/dscf	0%	5.74E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	1.12E-07
						Nickel	7440020	9.37E-13	lb/dscf	0%	2.29E-06
						Selenium	7782492	1.13E-12	lb/dscf	0%	2.75E-06
Total of Non-Fugitive Emissions for AOS1:											*1.32E-03*
Total of Fugitive Emissions for AOS1:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for AOS1:											*1.32E-03*
AOS2: Concentrate Leach Plant Upgrades											
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	8,760	hours	Antimony	7440360	9.84E-06	lb/hr	0%	4.31E-05
						Arsenic	7440382	1.35E-05	lb/hr	0%	5.93E-05
						Beryllium	7440417	2.63E-06	lb/hr	0%	1.15E-05
						Cadmium	7440439	6.34E-05	lb/hr	0%	2.78E-04
						Chromium	7440473	6.20E-06	lb/hr	0%	2.72E-05
						Cobalt	7440484	8.58E-05	lb/hr	0%	3.76E-04
						Lead	7439921	1.03E-04	lb/hr	0%	4.53E-04
						Manganese	7439965	1.79E-05	lb/hr	0%	7.86E-05
						Mercury	7439976	4.35E-07	lb/hr	0%	1.91E-06
						Nickel	7440020	2.45E-05	lb/hr	0%	1.07E-04
						Selenium	7782492	4.55E-05	lb/hr	0%	1.99E-04
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	8,760	hours	Antimony	7440360	9.84E-06	lb/hr	0%	4.31E-05
						Arsenic	7440382	1.35E-05	lb/hr	0%	5.93E-05
						Beryllium	7440417	2.63E-06	lb/hr	0%	1.15E-05
						Cadmium	7440439	6.34E-05	lb/hr	0%	2.78E-04
						Chromium	7440473	6.20E-06	lb/hr	0%	2.72E-05
						Cobalt	7440484	8.58E-05	lb/hr	0%	3.76E-04
						Lead	7439921	1.03E-04	lb/hr	0%	4.53E-04
						Manganese	7439965	1.79E-05	lb/hr	0%	7.86E-05
						Mercury	7439976	4.35E-07	lb/hr	0%	1.91E-06
						Nickel	7440020	2.45E-05	lb/hr	0%	1.07E-04
						Selenium	7782492	4.55E-05	lb/hr	0%	1.99E-04
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	OCT2 (AOS2)	F	1,892,160	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	3.63E-12	lb/1000 gal	0%	3.44E-09
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	9.08E-12	lb/1000 gal	0%	8.59E-09
						Manganese	7439965	4.50E-10	lb/1000 gal	0%	4.25E-07
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
Total of Non-Fugitive Emissions for AOS2:											*3.27E-03*
Total of Fugitive Emissions for AOS2:											*4.37E-07*
Total of Non-Fugitive and Fugitive Emissions for AOS2:											*3.27E-03*
AOS3: Primary Crushing and Overland Conveying Operations											
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.									
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.									
Total of Non-Fugitive Emissions for AOS3:											*0.00E+00*
Total of Fugitive Emissions for AOS3:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for AOS3:											*0.00E+00*
Greatest Single HAP Emissions:						**Xylenes**	**1330207**				**5.77E+00**
Total of Non-Fugitive Emissions:											**4.14E+00**
Total of Fugitive Emissions:											**1.13E+01**
Total of Non-Fugitive and Fugitive Emissions:											**1.54E+01**

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
Operation 001: Mining Operations											
001-004	Drilling	Drilling	F	350	holes	Antimony	7440360	6.29E-06	lb/hole	0%	2.20E-03
						Arsenic	7440382	9.02E-06	lb/hole	0%	3.16E-03
						Beryllium	7440417	9.98E-07	lb/hole	0%	3.49E-04
						Cadmium	7440439	1.10E-06	lb/hole	0%	3.84E-04
						Chromium	7440473	1.67E-05	lb/hole	0%	5.84E-03
						Cobalt	7440484	6.42E-06	lb/hole	0%	2.25E-03
						Lead	7439921	5.13E-05	lb/hole	0%	1.80E-02
						Manganese	7439965	1.83E-04	lb/hole	0%	6.39E-02
						Mercury	7439976	1.97E-07	lb/hole	0%	6.91E-05
						Nickel	7440020	1.54E-05	lb/hole	0%	5.39E-03
						Selenium	7782492	5.70E-06	lb/hole	0%	2.00E-03
001-003	Blasting	HBlasting	F	1	blasts	POM	250	1.32E-02	lb/blast	0%	1.32E-02
						Formaldehyde	50000	2.43E-01	lb/blast	0%	2.43E-01
						Antimony	7440360	6.05E-03	lb/blast	0%	6.05E-03
						Arsenic	7440382	1.09E-02	lb/blast	0%	1.09E-02
						Beryllium	7440417	2.59E-03	lb/blast	0%	2.59E-03
						Cadmium	7440439	2.68E-03	lb/blast	0%	2.68E-03
						Chromium	7440473	1.77E-02	lb/blast	0%	1.77E-02
						Cobalt	7440484	6.18E-03	lb/blast	0%	6.18E-03
						Lead	7439921	5.43E-02	lb/blast	0%	5.43E-02
						Manganese	7439965	1.79E-01	lb/blast	0%	1.79E-01
						Mercury	7439976	1.82E-03	lb/blast	0%	1.82E-03
						Nickel	7440020	1.64E-02	lb/blast	0%	1.64E-02
						Selenium	7782492	1.36E-02	lb/blast	0%	1.36E-02
001-001a	Vehicle Travel on Unpaved Roads	HTravel	F	2,616.39	VMT	Antimony	7440360	3.56E-05	lb/VMT	90%	9.31E-03
						Arsenic	7440382	5.11E-05	lb/VMT	90%	1.34E-02
						Beryllium	7440417	5.65E-06	lb/VMT	90%	1.48E-03
						Cadmium	7440439	6.21E-06	lb/VMT	90%	1.62E-03
						Chromium	7440473	9.44E-05	lb/VMT	90%	2.47E-02
						Cobalt	7440484	3.64E-05	lb/VMT	90%	9.51E-03
						Lead	7439921	2.90E-04	lb/VMT	90%	7.60E-02
						Manganese	7439965	1.03E-03	lb/VMT	90%	2.70E-01
						Mercury	7439976	1.12E-06	lb/VMT	90%	2.92E-04
						Nickel	7440020	8.71E-05	lb/VMT	90%	2.28E-02
						Selenium	7782492	3.23E-05	lb/VMT	90%	8.45E-03
001-001b	Dozer Operation	Dozer	F	51	hours	Antimony	7440360	9.49E-06	lb/hr	0%	4.84E-04
						Arsenic	7440382	1.36E-05	lb/hr	0%	6.95E-04
						Beryllium	7440417	1.51E-06	lb/hr	0%	7.69E-05
						Cadmium	7440439	1.65E-06	lb/hr	0%	8.44E-05
						Chromium	7440473	2.52E-05	lb/hr	0%	1.28E-03
						Cobalt	7440484	9.69E-06	lb/hr	0%	4.94E-04
						Lead	7439921	7.74E-05	lb/hr	0%	3.95E-03
						Manganese	7439965	2.76E-04	lb/hr	0%	1.41E-02
						Mercury	7439976	2.98E-07	lb/hr	0%	1.52E-05
						Nickel	7440020	2.32E-05	lb/hr	0%	1.18E-03
						Selenium	7782492	8.61E-06	lb/hr	0%	4.39E-04
001-001c	Road Grader Operation	Grader	F	48	VMT	Antimony	7440360	3.95E-06	lb/VMT	0%	1.89E-04
						Arsenic	7440382	5.66E-06	lb/VMT	0%	2.72E-04
						Beryllium	7440417	6.27E-07	lb/VMT	0%	3.01E-05
						Cadmium	7440439	6.88E-07	lb/VMT	0%	3.30E-05
						Chromium	7440473	1.05E-05	lb/VMT	0%	5.03E-04
						Cobalt	7440484	4.03E-06	lb/VMT	0%	1.93E-04
						Lead	7439921	3.22E-05	lb/VMT	0%	1.55E-03
						Manganese	7439965	1.15E-04	lb/VMT	0%	5.50E-03
						Mercury	7439976	1.24E-07	lb/VMT	0%	5.95E-06
						Nickel	7440020	9.66E-06	lb/VMT	0%	4.64E-04
						Selenium	7782492	3.58E-06	lb/VMT	0%	1.72E-04
001-002a	Loading Ore into Haul Trucks	Ore1TrUnpr t	F	55,000	tons	Antimony	7440360	7.08E-09	lb/ton	0%	3.90E-04
						Arsenic	7440382	1.02E-08	lb/ton	0%	5.59E-04
						Beryllium	7440417	1.13E-09	lb/ton	0%	6.19E-05
						Cadmium	7440439	1.24E-09	lb/ton	0%	6.80E-05
						Chromium	7440473	1.88E-08	lb/ton	0%	1.03E-03
						Cobalt	7440484	7.24E-09	lb/ton	0%	3.98E-04
						Lead	7439921	5.78E-08	lb/ton	0%	3.18E-03
						Manganese	7439965	2.06E-07	lb/ton	0%	1.13E-02
						Mercury	7439976	2.22E-10	lb/ton	0%	1.22E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
001-002a (cont'd)	Loading Ore into Haul Trucks (cont'd)	Ore1TrUnprt (cont'd)	F (cont'd)	55,000	tons (cont'd)	Nickel	7440020	1.73E-08	lb/ton	0%	9.54E-04
						Selenium	7782492	6.43E-09	lb/ton	0%	3.54E-04
001-002b	Haul Truck Unloading to Dump Pocket Feed Hoppers 2/3	Ore5TrUnprt	F	14,250	tons	Antimony	7440360	8.41E-09	lb/ton	90%	1.20E-05
						Arsenic	7440382	1.19E-08	lb/ton	90%	1.69E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	1.24E-06
						Cadmium	7440439	1.45E-09	lb/ton	90%	2.07E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	5.28E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	5.87E-06
						Lead	7439921	6.68E-08	lb/ton	90%	9.52E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	2.76E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	3.61E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	8.70E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	1.09E-05
001-002c	Haul Truck Unloading to Leaching/Storage Areas	Ore6TrUnprt	F	40,750	tons	Antimony	7440360	6.49E-09	lb/ton	0%	2.64E-04
						Arsenic	7440382	9.40E-09	lb/ton	0%	3.83E-04
						Beryllium	7440417	1.24E-09	lb/ton	0%	5.06E-05
						Cadmium	7440439	1.14E-09	lb/ton	0%	4.63E-05
						Chromium	7440473	2.56E-08	lb/ton	0%	1.04E-03
						Cobalt	7440484	8.64E-09	lb/ton	0%	3.52E-04
						Lead	7439921	5.37E-08	lb/ton	0%	2.19E-03
						Manganese	7439965	2.90E-07	lb/ton	0%	1.18E-02
						Mercury	7439976	2.08E-10	lb/ton	0%	8.49E-06
						Nickel	7440020	2.24E-08	lb/ton	0%	9.13E-04
						Selenium	7782492	5.86E-09	lb/ton	0%	2.39E-04
001-187	Apron Feeder AF2 to In-Pit Crusher 2	Ore5TrUnprt	F	7,500	tons	Antimony	7440360	8.41E-09	lb/ton	90%	6.31E-06
						Arsenic	7440382	1.19E-08	lb/ton	90%	8.91E-06
						Beryllium	7440417	8.68E-10	lb/ton	90%	6.51E-07
						Cadmium	7440439	1.45E-09	lb/ton	90%	1.09E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	2.78E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	3.09E-06
						Lead	7439921	6.68E-08	lb/ton	90%	5.01E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	1.45E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	1.90E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	4.58E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	5.76E-06
001-249	Apron Feeder AF3 to In-Pit Crusher 3	Ore5TrUnprt	F	6,750	tons	Antimony	7440360	8.41E-09	lb/ton	90%	5.67E-06
						Arsenic	7440382	1.19E-08	lb/ton	90%	8.02E-06
						Beryllium	7440417	8.68E-10	lb/ton	90%	5.86E-07
						Cadmium	7440439	1.45E-09	lb/ton	90%	9.82E-07
						Chromium	7440473	3.71E-09	lb/ton	90%	2.50E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	2.78E-06
						Lead	7439921	6.68E-08	lb/ton	90%	4.51E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	1.31E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	1.71E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	4.12E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	5.18E-06
001-006	Processes Controlled by In-Pit Crusher 2 FFDC	FFDC006	NF	1,074,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	1.47E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	2.07E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	1.52E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	2.54E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	6.47E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	7.19E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.17E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	3.38E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	4.43E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	1.07E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	1.34E-06
001-250	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	FFDC250	NF	720,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	50%	1.97E-06
						Arsenic	7440382	7.72E-12	lb/dscf	50%	2.78E-06
						Beryllium	7440417	5.64E-13	lb/dscf	50%	2.03E-07
						Cadmium	7440439	9.46E-13	lb/dscf	50%	3.40E-07
						Chromium	7440473	2.41E-12	lb/dscf	50%	8.67E-07
						Cobalt	7440484	2.68E-12	lb/dscf	50%	9.64E-07
						Lead	7439921	4.34E-11	lb/dscf	50%	1.56E-05
						Manganese	7439965	1.26E-11	lb/dscf	50%	4.54E-06
						Mercury	7439976	1.65E-13	lb/dscf	50%	5.93E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
001-250 (cont'd)	Processes Controlled by In-Pit Crusher 3 and FB3/P11 FFDC (vented inside) (cont'd)	FFDC250 (cont'd)	NF (cont'd)	720,000	dscf (cont'd)	Nickel	7440020	3.97E-12	lb/dscf	50%	1.43E-06
						Selenium	7782492	4.99E-12	lb/dscf	50%	1.80E-06
001-251	Processes Controlled by P11/P5 and P11/P12 FFDC	FFDC251	NF	918,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	5.02E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	7.09E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	5.18E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	8.68E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	2.21E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.46E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.99E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	1.16E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.51E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.64E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	4.58E-06
001-344	Conveyor Belt P12 to Conveyor Belt P10	Ore3TrPrt	NF	7,000	tons	Antimony	7440360	9.63E-10	lb/ton	90%	6.74E-07
						Arsenic	7440382	1.36E-09	lb/ton	90%	9.52E-07
						Beryllium	7440417	9.94E-11	lb/ton	90%	6.96E-08
						Cadmium	7440439	1.67E-10	lb/ton	90%	1.17E-07
						Chromium	7440473	4.24E-10	lb/ton	90%	2.97E-07
						Cobalt	7440484	4.72E-10	lb/ton	90%	3.30E-07
						Lead	7439921	7.65E-09	lb/ton	90%	5.36E-06
						Manganese	7439965	2.22E-09	lb/ton	90%	1.55E-06
						Mercury	7439976	2.90E-11	lb/ton	90%	2.03E-08
						Nickel	7440020	6.99E-10	lb/ton	90%	4.89E-07
						Selenium	7782492	8.79E-10	lb/ton	90%	6.16E-07
001-015	Processes Controlled by P5/P6 FFDC	FFDC015	NF	768,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	4.20E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	5.93E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	4.33E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	7.26E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.85E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.06E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.34E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	9.68E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.27E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	3.05E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	3.83E-06
001-016	Conveyor Belt P6 (transfer to Mill IOS)	Ore4TrUnprt	F	9,100	tons	Antimony	7440360	8.41E-09	lb/ton	90%	7.65E-06
						Arsenic	7440382	1.19E-08	lb/ton	90%	1.08E-05
						Beryllium	7440417	8.68E-10	lb/ton	90%	7.90E-07
						Cadmium	7440439	1.45E-09	lb/ton	90%	1.32E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	3.37E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	3.75E-06
						Lead	7439921	6.68E-08	lb/ton	90%	6.08E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	1.76E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	2.31E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	5.56E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	6.99E-06
001-017	Wind Erosion of Mill IOS	HWindIOS1	F	4.00	acre-yr	Antimony	7440360	1.75E-06	lb/acre-hr	0%	6.99E-06
						Arsenic	7440382	2.47E-06	lb/acre-hr	0%	9.87E-06
						Beryllium	7440417	1.80E-07	lb/acre-hr	0%	7.22E-07
						Cadmium	7440439	3.02E-07	lb/acre-hr	0%	1.21E-06
						Chromium	7440473	7.70E-07	lb/acre-hr	0%	3.08E-06
						Cobalt	7440484	8.56E-07	lb/acre-hr	0%	3.42E-06
						Lead	7439921	1.39E-05	lb/acre-hr	0%	5.55E-05
						Manganese	7439965	4.03E-06	lb/acre-hr	0%	1.61E-05
						Mercury	7439976	5.27E-08	lb/acre-hr	0%	2.11E-07
						Nickel	7440020	1.27E-06	lb/acre-hr	0%	5.08E-06
						Selenium	7782492	1.60E-06	lb/acre-hr	0%	6.38E-06
001-225	Processes Controlled by DC2/P9 and P9/P10 FFDC	FFDC225	NF	1,104,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	1.51E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	2.13E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	1.56E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	2.61E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	6.65E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	7.39E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.20E-05
						Manganese	7439965	3.15E-12	lb/dscf	0%	3.48E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	4.55E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
001-225 (cont'd)	Processes Controlled by DC2/P9 and P9/P10 FFDC (cont'd)	FFDC225 (cont'd)	NF (cont'd)	1,104,000	dscf (cont'd)	Nickel	7440020	9.92E-13	lb/dscf	0%	1.10E-06
						Selenium	7782492	1.25E-12	lb/dscf	0%	1.38E-06
001-226	Conveyor Belt P10 (transfer to MFL IOS)	Ore3TrUnprt	F	7,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	5.88E-06
						Arsenic	7440382	1.19E-08	lb/ton	90%	8.31E-06
						Beryllium	7440417	8.68E-10	lb/ton	90%	6.08E-07
						Cadmium	7440439	1.45E-09	lb/ton	90%	1.02E-06
						Chromium	7440473	3.71E-09	lb/ton	90%	2.59E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	2.88E-06
						Lead	7439921	6.68E-08	lb/ton	90%	4.68E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	1.36E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	1.78E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	4.27E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	5.38E-06
001-227	Wind Erosion of MFL IOS	HWindIOS2	F	4.50	acre-yr	Antimony	7440360	1.75E-06	lb/acre-hr	0%	7.86E-06
						Arsenic	7440382	2.47E-06	lb/acre-hr	0%	1.11E-05
						Beryllium	7440417	1.80E-07	lb/acre-hr	0%	8.12E-07
						Cadmium	7440439	3.02E-07	lb/acre-hr	0%	1.36E-06
						Chromium	7440473	7.70E-07	lb/acre-hr	0%	3.47E-06
						Cobalt	7440484	8.56E-07	lb/acre-hr	0%	3.85E-06
						Lead	7439921	1.39E-05	lb/acre-hr	0%	6.25E-05
						Manganese	7439965	4.03E-06	lb/acre-hr	0%	1.81E-05
						Mercury	7439976	5.27E-08	lb/acre-hr	0%	2.37E-07
						Nickel	7440020	1.27E-06	lb/acre-hr	0%	5.71E-06
						Selenium	7782492	1.60E-06	lb/acre-hr	0%	7.18E-06
001-325	Processes Controlled by DC2/P5 FFDC	FFDC325	NF	438,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	5.98E-07
						Arsenic	7440382	1.93E-12	lb/dscf	0%	8.45E-07
						Beryllium	7440417	1.41E-13	lb/dscf	0%	6.18E-08
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.04E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	2.64E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	2.93E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	4.76E-06
						Manganese	7439965	3.15E-12	lb/dscf	0%	1.38E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	1.81E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	4.35E-07
						Selenium	7782492	1.25E-12	lb/dscf	0%	5.47E-07
001-299	Processes Controlled by Mill IOS/R1A FFDC	FFDC299	NF	750,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	4.10E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	5.79E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	4.23E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	7.09E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.81E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	2.01E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	3.26E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	9.45E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	1.24E-07
						Nickel	7440020	3.97E-12	lb/dscf	0%	2.98E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	3.74E-06
001-300	Processes Controlled by Mill IOS/R1B FFDC	FFDC300	NF	600,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	3.28E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	4.63E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	3.39E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	5.67E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	1.45E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	1.61E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.61E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	7.56E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	9.89E-08
						Nickel	7440020	3.97E-12	lb/dscf	0%	2.38E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	2.99E-06
001-272	Processes Controlled by R1A and R1B/R7 FFDC	FFDC272	NF	180,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	3.86E-08
						Arsenic	7440382	6.97E-13	lb/dscf	0%	1.25E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	2.31E-08
						Cadmium	7440439	8.91E-13	lb/dscf	0%	1.60E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	5.07E-07
						Cobalt	7440484	2.07E-12	lb/dscf	0%	3.72E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	7.82E-06
						Manganese	7439965	2.35E-11	lb/dscf	0%	4.23E-06
						Mercury	7439976	4.57E-14	lb/dscf	0%	8.23E-09

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
001-272 (cont'd)	Processes Controlled by R1A and R1B/R7 FFDC (cont'd)	FFDC272 (cont'd)	NF (cont'd)	180,000	dscf (cont'd)	Nickel	7440020	9.37E-13	lb/dscf	0%	1.69E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	2.03E-07
001-277	Processes Controlled by R1A and R1B/R2 Bag Collector 1	BC277	NF	186,000	dscf	Antimony	7440360	1.88E-11	lb/dscf	0%	3.49E-06
						Arsenic	7440382	2.58E-11	lb/dscf	0%	4.80E-06
						Beryllium	7440417	1.75E-12	lb/dscf	0%	3.26E-07
						Cadmium	7440439	1.75E-12	lb/dscf	0%	3.26E-07
						Chromium	7440473	3.50E-12	lb/dscf	0%	6.51E-07
						Cobalt	7440484	5.75E-12	lb/dscf	0%	1.07E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	1.41E-05
						Manganese	7439965	3.00E-12	lb/dscf	0%	5.58E-07
						Mercury	7439976	4.97E-13	lb/dscf	0%	9.24E-08
						Nickel	7440020	1.23E-11	lb/dscf	0%	2.28E-06
						Selenium	7782492	1.55E-11	lb/dscf	0%	2.88E-06
001-278	Processes Controlled by R2/R11 FFDC	FFDC278	NF	276,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.96E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	4.07E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.76E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.76E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	5.52E-07
						Cobalt	7440484	3.29E-12	lb/dscf	0%	9.07E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	1.20E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	4.73E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	7.84E-08
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.93E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.44E-06
001-228	Processes Controlled by MFL IOS/R8 FFDC	FFDC228	NF	768,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	1.05E-06
						Arsenic	7440382	1.93E-12	lb/dscf	0%	1.48E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	1.08E-07
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.82E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	4.62E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	5.14E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	8.34E-06
						Manganese	7439965	3.15E-12	lb/dscf	0%	2.42E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	3.17E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	7.62E-07
						Selenium	7782492	1.25E-12	lb/dscf	0%	9.58E-07
001-229	Processes Controlled by R8/R9 FFDC	FFDC229	NF	636,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	8.69E-07
						Arsenic	7440382	1.93E-12	lb/dscf	0%	1.23E-06
						Beryllium	7440417	1.41E-13	lb/dscf	0%	8.97E-08
						Cadmium	7440439	2.36E-13	lb/dscf	0%	1.50E-07
						Chromium	7440473	6.02E-13	lb/dscf	0%	3.83E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	4.26E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	6.91E-06
						Manganese	7439965	3.15E-12	lb/dscf	0%	2.00E-06
						Mercury	7439976	4.12E-14	lb/dscf	0%	2.62E-08
						Nickel	7440020	9.92E-13	lb/dscf	0%	6.31E-07
						Selenium	7782492	1.25E-12	lb/dscf	0%	7.94E-07
001-323a	Loading to the Portable Cleanup Conveyor	Ore5TrUnprt	F	50	tons	Antimony	7440360	8.41E-09	lb/ton	0%	4.20E-07
						Arsenic	7440382	1.19E-08	lb/ton	0%	5.94E-07
						Beryllium	7440417	8.68E-10	lb/ton	0%	4.34E-08
						Cadmium	7440439	1.45E-09	lb/ton	0%	7.27E-08
						Chromium	7440473	3.71E-09	lb/ton	0%	1.85E-07
						Cobalt	7440484	4.12E-09	lb/ton	0%	2.06E-07
						Lead	7439921	6.68E-08	lb/ton	0%	3.34E-06
						Manganese	7439965	1.94E-08	lb/ton	0%	9.69E-07
						Mercury	7439976	2.54E-10	lb/ton	0%	1.27E-08
						Nickel	7440020	6.11E-09	lb/ton	0%	3.05E-07
						Selenium	7782492	7.68E-09	lb/ton	0%	3.84E-07
001-323b	Unloading from the Portable Cleanup Conveyor	Ore5TrUnprt	NF	50	tons	Antimony	7440360	8.41E-09	lb/ton	0%	4.20E-07
						Arsenic	7440382	1.19E-08	lb/ton	0%	5.94E-07
						Beryllium	7440417	8.68E-10	lb/ton	0%	4.34E-08
						Cadmium	7440439	1.45E-09	lb/ton	0%	7.27E-08
						Chromium	7440473	3.71E-09	lb/ton	0%	1.85E-07
						Cobalt	7440484	4.12E-09	lb/ton	0%	2.06E-07
						Lead	7439921	6.68E-08	lb/ton	0%	3.34E-06
						Manganese	7439965	1.94E-08	lb/ton	0%	9.69E-07
						Mercury	7439976	2.54E-10	lb/ton	0%	1.27E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information: Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
001-323b (cont'd)	Unloading from the Portable Cleanup Conveyor (cont'd)	Ore5TrUnprt (cont'd)	NF (cont'd)	50	tons (cont'd)	Nickel	7440020	6.11E-09	lb/ton	0%	3.05E-07
						Selenium	7782492	7.68E-09	lb/ton	0%	3.84E-07
Total of Non-Fugitive Emissions for Operation 001:											*4.61E-04*
Total of Fugitive Emissions for Operation 001:											*1.18E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 001:											*1.18E+00*
Operation 002: Morenci Concentrator											
002-030	Processes Controlled by Fine Crushing Line B FFDC 1	FFDC030	NF	1,422,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	7.62E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	2.48E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	4.57E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	3.17E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	1.00E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	7.35E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.54E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	8.35E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	1.63E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	3.33E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	4.00E-07
002-031	Processes Controlled by Fine Crushing Line C FFDC 1	FFDC031	NF	1,506,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	8.07E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	2.62E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	4.84E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	3.36E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	1.06E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	7.79E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.64E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	8.84E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	1.72E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	3.53E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	4.24E-07
002-035	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC	FFDC035	NF	834,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	4.47E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.45E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	2.68E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	1.86E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	5.87E-07
						Cobalt	7440484	5.17E-13	lb/dscf	0%	4.31E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	9.05E-06
						Manganese	7439965	5.87E-12	lb/dscf	0%	4.90E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	9.53E-09
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.95E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	2.35E-07
002-036	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC	FFDC036	NF	990,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	5.30E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.73E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	3.18E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	2.21E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	6.97E-07
						Cobalt	7440484	5.17E-13	lb/dscf	0%	5.12E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.07E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	5.81E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	1.13E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	2.32E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	2.79E-07
002-032	Processes Controlled by Fine Crushing Line D FFDC 1	FFDC032	NF	1,422,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	7.62E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	2.48E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	4.57E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	3.17E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	1.00E-06
						Cobalt	7440484	5.17E-13	lb/dscf	0%	7.35E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.54E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	8.35E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	1.63E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	3.33E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	4.00E-07
002-352	Morenci Concentrator Bulk Flotation	BFO	F	0.062	tons	Benzene	71432	4.47E-03	lb/ton	0%	2.76E-04
						Ethylbenzene	100414	7.52E-03	lb/ton	0%	4.65E-04
						n-Hexane	110543	9.40E-04	lb/ton	0%	5.82E-05
						Toluene	108883	5.38E-02	lb/ton	0%	3.33E-03
						m-Xylene	1330207	1.40E-01	lb/ton	0%	8.68E-03
Total of Non-Fugitive Emissions for Operation 002:											*1.17E-04*

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
Total of Fugitive Emissions for Operation 002:											*1.28E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 002:											*1.29E-02*
Operation 003: MFL Fine Crushing Plant											
003-273	Processes Controlled by R9/R10 FFDC	FFDC273	NF	180,000	dscf	Antimony	7440360	1.37E-12	lb/dscf	0%	2.46E-07
						Arsenic	7440382	1.93E-12	lb/dscf	0%	3.47E-07
						Beryllium	7440417	1.41E-13	lb/dscf	0%	2.54E-08
						Cadmium	7440439	2.36E-13	lb/dscf	0%	4.26E-08
						Chromium	7440473	6.02E-13	lb/dscf	0%	1.08E-07
						Cobalt	7440484	6.69E-13	lb/dscf	0%	1.20E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.95E-06
						Manganese	7439965	3.15E-12	lb/dscf	0%	5.67E-07
						Mercury	7439976	4.12E-14	lb/dscf	0%	7.42E-09
						Nickel	7440020	9.92E-13	lb/dscf	0%	1.79E-07
						Selenium	7782492	1.25E-12	lb/dscf	0%	2.25E-07
003-330	Processes Controlled by R10/R3 FFDC	FFDC330	NF	180,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	9.84E-07
						Arsenic	7440382	7.72E-12	lb/dscf	0%	1.39E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.02E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	1.70E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	4.34E-07
						Cobalt	7440484	2.68E-12	lb/dscf	0%	4.82E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	7.82E-06
						Manganese	7439965	1.26E-11	lb/dscf	0%	2.27E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	2.97E-08
						Nickel	7440020	3.97E-12	lb/dscf	0%	7.14E-07
						Selenium	7782492	4.99E-12	lb/dscf	0%	8.98E-07
003-079	Processes Controlled by R3/R4 Bag Collector 3	BC079	NF	192,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	1.84E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	2.59E-06
						Beryllium	7440417	9.88E-13	lb/dscf	0%	1.90E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	3.18E-07
						Chromium	7440473	4.22E-12	lb/dscf	0%	8.09E-07
						Cobalt	7440484	4.69E-12	lb/dscf	0%	9.00E-07
						Lead	7439921	7.60E-11	lb/dscf	0%	1.46E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	4.23E-06
						Mercury	7439976	2.89E-13	lb/dscf	0%	5.54E-08
						Nickel	7440020	6.95E-12	lb/dscf	0%	1.33E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	1.68E-06
003-080	Processes Controlled by R4/R5/R6 Bag Collector 4	BC080	NF	498,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	4.76E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	6.73E-06
						Beryllium	7440417	9.88E-13	lb/dscf	0%	4.92E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	8.24E-07
						Chromium	7440473	4.22E-12	lb/dscf	0%	2.10E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	2.33E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	3.78E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	1.10E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	1.44E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	3.46E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	4.35E-06
003-082	Processes Controlled by Scrubber 3C	SC082	NF	2,124,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	2.90E-05
						Arsenic	7440382	1.93E-11	lb/dscf	0%	4.10E-05
						Beryllium	7440417	1.41E-12	lb/dscf	0%	3.00E-06
						Cadmium	7440439	2.36E-12	lb/dscf	0%	5.02E-06
						Chromium	7440473	6.02E-12	lb/dscf	0%	1.28E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	1.42E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	2.31E-04
						Manganese	7439965	3.15E-11	lb/dscf	0%	6.69E-05
						Mercury	7439976	4.12E-13	lb/dscf	0%	8.75E-07
						Nickel	7440020	9.92E-12	lb/dscf	0%	2.11E-05
						Selenium	7782492	1.25E-11	lb/dscf	0%	2.65E-05
003-317	Processes Controlled by FFDC 3A	FFDC317	NF	2,280,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.25E-05
						Arsenic	7440382	7.72E-12	lb/dscf	0%	1.76E-05
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.29E-06
						Cadmium	7440439	9.46E-13	lb/dscf	0%	2.16E-06
						Chromium	7440473	2.41E-12	lb/dscf	0%	5.49E-06
						Cobalt	7440484	2.68E-12	lb/dscf	0%	6.10E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	9.90E-05
						Manganese	7439965	1.26E-11	lb/dscf	0%	2.87E-05
						Mercury	7439976	1.65E-13	lb/dscf	0%	3.76E-07

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
003-317 (cont'd)	Processes Controlled by FFDC 3A (cont'd)	FFDC317 (cont'd)	NF (cont'd)	2,280,000	dscf (cont'd)	Nickel	7440020	3.97E-12	lb/dscf	0%	9.05E-06
						Selenium	7782492	4.99E-12	lb/dscf	0%	1.14E-05
003-301	Processes Controlled by FFDC 6A	FFDC301	NF	1,866,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	1.27E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	1.80E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	1.32E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	2.21E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	5.62E-06
						Cobalt	7440484	3.35E-12	lb/dscf	0%	6.24E-06
						Lead	7439921	5.43E-11	lb/dscf	0%	1.01E-04
						Manganese	7439965	1.58E-11	lb/dscf	0%	2.94E-05
						Mercury	7439976	2.06E-13	lb/dscf	0%	3.85E-07
						Nickel	7440020	4.96E-12	lb/dscf	0%	9.26E-06
						Selenium	7782492	6.24E-12	lb/dscf	0%	1.16E-05
003-302	Processes Controlled by FFDC 6B	FFDC302	NF	1,650,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	1.13E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	1.59E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	1.16E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	1.95E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	4.97E-06
						Cobalt	7440484	3.35E-12	lb/dscf	0%	5.52E-06
						Lead	7439921	5.43E-11	lb/dscf	0%	8.96E-05
						Manganese	7439965	1.58E-11	lb/dscf	0%	2.60E-05
						Mercury	7439976	2.06E-13	lb/dscf	0%	3.40E-07
						Nickel	7440020	4.96E-12	lb/dscf	0%	8.19E-06
						Selenium	7782492	6.24E-12	lb/dscf	0%	1.03E-05
003-304	Processes Controlled by FFDC 1	FFDC304	NF	1,662,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	1.14E-05
						Arsenic	7440382	9.65E-12	lb/dscf	0%	1.60E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	1.17E-06
						Cadmium	7440439	1.18E-12	lb/dscf	0%	1.96E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	5.00E-06
						Cobalt	7440484	3.35E-12	lb/dscf	0%	5.56E-06
						Lead	7439921	5.43E-11	lb/dscf	0%	9.02E-05
						Manganese	7439965	1.58E-11	lb/dscf	0%	2.62E-05
						Mercury	7439976	2.06E-13	lb/dscf	0%	3.42E-07
						Nickel	7440020	4.96E-12	lb/dscf	0%	8.24E-06
						Selenium	7782492	6.24E-12	lb/dscf	0%	1.04E-05
003-089	Processes Controlled by Scrubber 5	SC089	NF	2,484,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	3.39E-05
						Arsenic	7440382	1.93E-11	lb/dscf	0%	4.79E-05
						Beryllium	7440417	1.41E-12	lb/dscf	0%	3.50E-06
						Cadmium	7440439	2.36E-12	lb/dscf	0%	5.87E-06
						Chromium	7440473	6.02E-12	lb/dscf	0%	1.50E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	1.66E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	2.70E-04
						Manganese	7439965	3.15E-11	lb/dscf	0%	7.82E-05
						Mercury	7439976	4.12E-13	lb/dscf	0%	1.02E-06
						Nickel	7440020	9.92E-12	lb/dscf	0%	2.46E-05
						Selenium	7782492	1.25E-11	lb/dscf	0%	3.10E-05
003-303	Processes Controlled by FFDC 8	FFDC303	NF	1,224,000	dscf	Antimony	7440360	6.83E-12	lb/dscf	0%	8.36E-06
						Arsenic	7440382	9.65E-12	lb/dscf	0%	1.18E-05
						Beryllium	7440417	7.05E-13	lb/dscf	0%	8.63E-07
						Cadmium	7440439	1.18E-12	lb/dscf	0%	1.45E-06
						Chromium	7440473	3.01E-12	lb/dscf	0%	3.69E-06
						Cobalt	7440484	3.35E-12	lb/dscf	0%	4.10E-06
						Lead	7439921	5.43E-11	lb/dscf	0%	6.64E-05
						Manganese	7439965	1.58E-11	lb/dscf	0%	1.93E-05
						Mercury	7439976	2.06E-13	lb/dscf	0%	2.52E-07
						Nickel	7440020	4.96E-12	lb/dscf	0%	6.07E-06
						Selenium	7782492	6.24E-12	lb/dscf	0%	7.64E-06
003-088	Processes Controlled by Scrubber 4	SC088	NF	2,754,000	dscf	Antimony	7440360	1.37E-11	lb/dscf	0%	3.76E-05
						Arsenic	7440382	1.93E-11	lb/dscf	0%	5.32E-05
						Beryllium	7440417	1.41E-12	lb/dscf	0%	3.89E-06
						Cadmium	7440439	2.36E-12	lb/dscf	0%	6.51E-06
						Chromium	7440473	6.02E-12	lb/dscf	0%	1.66E-05
						Cobalt	7440484	6.69E-12	lb/dscf	0%	1.84E-05
						Lead	7439921	1.09E-10	lb/dscf	0%	2.99E-04
						Manganese	7439965	3.15E-11	lb/dscf	0%	8.68E-05
						Mercury	7439976	4.12E-13	lb/dscf	0%	1.14E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
003-088 (cont'd)	Processes Controlled by Scrubber 4 (cont'd)	SC088 (cont'd)	NF (cont'd)	2,754,000	dscf (cont'd)	Nickel	7440020	9.92E-12	lb/dscf	0%	2.73E-05
						Selenium	7782492	1.25E-11	lb/dscf	0%	3.44E-05
003-320	Processes Controlled by 14/15 FFDC	FFDC320	NF	210,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.15E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	1.62E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.19E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	1.99E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	5.06E-07
						Cobalt	7440484	2.68E-12	lb/dscf	0%	5.62E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	9.12E-06
						Manganese	7439965	1.26E-11	lb/dscf	0%	2.65E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	3.46E-08
						Nickel	7440020	3.97E-12	lb/dscf	0%	8.33E-07
						Selenium	7782492	4.99E-12	lb/dscf	0%	1.05E-06
003-331	Processes Controlled by 15/16 FFDC	FFDC331	NF	186,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	1.02E-06
						Arsenic	7440382	7.72E-12	lb/dscf	0%	1.44E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.05E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	1.76E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	4.48E-07
						Cobalt	7440484	2.68E-12	lb/dscf	0%	4.98E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	8.08E-06
						Manganese	7439965	1.26E-11	lb/dscf	0%	2.34E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	3.07E-08
						Nickel	7440020	3.97E-12	lb/dscf	0%	7.38E-07
						Selenium	7782492	4.99E-12	lb/dscf	0%	9.28E-07
003-309	Processes Controlled by 16/S11 FFDC	FFDC309	NF	180,000	dscf	Antimony	7440360	5.46E-12	lb/dscf	0%	9.84E-07
						Arsenic	7440382	7.72E-12	lb/dscf	0%	1.39E-06
						Beryllium	7440417	5.64E-13	lb/dscf	0%	1.02E-07
						Cadmium	7440439	9.46E-13	lb/dscf	0%	1.70E-07
						Chromium	7440473	2.41E-12	lb/dscf	0%	4.34E-07
						Cobalt	7440484	2.68E-12	lb/dscf	0%	4.82E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	7.82E-06
						Manganese	7439965	1.26E-11	lb/dscf	0%	2.27E-06
						Mercury	7439976	1.65E-13	lb/dscf	0%	2.97E-08
						Nickel	7440020	3.97E-12	lb/dscf	0%	7.14E-07
						Selenium	7782492	4.99E-12	lb/dscf	0%	8.98E-07
003-199	Conveyor Belt S11 (transfer to FOIS)	Ore3TrUnpr t	F	6,000	tons	Antimony	7440360	8.41E-09	lb/ton	90%	5.04E-06
						Arsenic	7440382	1.19E-08	lb/ton	90%	7.13E-06
						Beryllium	7440417	8.68E-10	lb/ton	90%	5.21E-07
						Cadmium	7440439	1.45E-09	lb/ton	90%	8.73E-07
						Chromium	7440473	3.71E-09	lb/ton	90%	2.22E-06
						Cobalt	7440484	4.12E-09	lb/ton	90%	2.47E-06
						Lead	7439921	6.68E-08	lb/ton	90%	4.01E-05
						Manganese	7439965	1.94E-08	lb/ton	90%	1.16E-05
						Mercury	7439976	2.54E-10	lb/ton	90%	1.52E-07
						Nickel	7440020	6.11E-09	lb/ton	90%	3.66E-06
						Selenium	7782492	7.68E-09	lb/ton	90%	4.61E-06
003-200	Wind Erosion of the FOIS	HWindFO	F	1.00	acre-yr	Antimony	7440360	3.54E-06	lb/acre-hr	0%	3.54E-06
						Arsenic	7440382	5.00E-06	lb/acre-hr	0%	5.00E-06
						Beryllium	7440417	3.66E-07	lb/acre-hr	0%	3.66E-07
						Cadmium	7440439	6.13E-07	lb/acre-hr	0%	6.13E-07
						Chromium	7440473	1.56E-06	lb/acre-hr	0%	1.56E-06
						Cobalt	7440484	1.74E-06	lb/acre-hr	0%	1.74E-06
						Lead	7439921	2.81E-05	lb/acre-hr	0%	2.81E-05
						Manganese	7439965	8.17E-06	lb/acre-hr	0%	8.17E-06
						Mercury	7439976	1.07E-07	lb/acre-hr	0%	1.07E-07
						Nickel	7440020	2.57E-06	lb/acre-hr	0%	2.57E-06
						Selenium	7782492	3.23E-06	lb/acre-hr	0%	3.23E-06
003-441	Dust Suppression Fan	DSF	F	24	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	1.83E-12	lb/1000 gal	0%	4.40E-11
						Cadmium	7440439	1.83E-13	lb/1000 gal	0%	4.40E-12
						Chromium	7440473	5.50E-11	lb/1000 gal	0%	1.32E-09
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	0.00E+00	lb/1000 gal	0%	0.00E+00
						Manganese	7439965	0.00E+00	lb/1000 gal	0%	0.00E+00
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
003-441 (cont'd)	Dust Suppression Fan (cont'd)	DSF (cont'd)	F (cont'd)	24	1000 gal (cont'd)	Nickel	7440020	2.75E-11	lb/1000 gal	0%	6.61E-10
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
003-201	Processes Controlled by FOIS/A1A Bag Collector 7	BC201	NF	672,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	6.43E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	9.08E-06
						Beryllium	7440417	9.88E-13	lb/dscf	0%	6.64E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	1.11E-06
						Chromium	7440473	4.22E-12	lb/dscf	0%	2.83E-06
						Cobalt	7440484	4.69E-12	lb/dscf	0%	3.15E-06
						Lead	7439921	7.60E-11	lb/dscf	0%	5.11E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	1.48E-05
						Mercury	7439976	2.89E-13	lb/dscf	0%	1.94E-07
						Nickel	7440020	6.95E-12	lb/dscf	0%	4.67E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	5.87E-06
003-202	Processes Controlled by A1A/A2A Bag Collector 8	BC202	NF	192,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	1.84E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	2.59E-06
						Beryllium	7440417	9.88E-13	lb/dscf	0%	1.90E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	3.18E-07
						Chromium	7440473	4.22E-12	lb/dscf	0%	8.09E-07
						Cobalt	7440484	4.69E-12	lb/dscf	0%	9.00E-07
						Lead	7439921	7.60E-11	lb/dscf	0%	1.46E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	4.23E-06
						Mercury	7439976	2.89E-13	lb/dscf	0%	5.54E-08
						Nickel	7440020	6.95E-12	lb/dscf	0%	1.33E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	1.68E-06
003-203	Processes Controlled by A1A/A2C Bag Collector 9	BC203	NF	192,000	dscf	Antimony	7440360	9.56E-12	lb/dscf	0%	1.84E-06
						Arsenic	7440382	1.35E-11	lb/dscf	0%	2.59E-06
						Beryllium	7440417	9.88E-13	lb/dscf	0%	1.90E-07
						Cadmium	7440439	1.66E-12	lb/dscf	0%	3.18E-07
						Chromium	7440473	4.22E-12	lb/dscf	0%	8.09E-07
						Cobalt	7440484	4.69E-12	lb/dscf	0%	9.00E-07
						Lead	7439921	7.60E-11	lb/dscf	0%	1.46E-05
						Manganese	7439965	2.21E-11	lb/dscf	0%	4.23E-06
						Mercury	7439976	2.89E-13	lb/dscf	0%	5.54E-08
						Nickel	7440020	6.95E-12	lb/dscf	0%	1.33E-06
						Selenium	7782492	8.74E-12	lb/dscf	0%	1.68E-06
Total of Non-Fugitive Emissions for Operation 003:											*2.76E-03*
Total of Fugitive Emissions for Operation 003:											*1.33E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 003:											*2.90E-03*
Operation 004: Lime Slaking Plants and Lime Transloading											
004-446	Lime Transloading Engine (47.6 hp engine)	Tier4-19/37	NF	47.60	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	3.11E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.36E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	9.50E-05
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	1.30E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	3.93E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	2.56E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	3.08E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	2.83E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.69E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	4.73E-07
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	9.73E-06
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	9.80E-06
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	6.23E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	2.54E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.59E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	5.60E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.18E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	3.30E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	5.16E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	6.26E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.25E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	1.94E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.63E-07
Total of Non-Fugitive Emissions for Operation 004:											*1.29E-03*
Total of Fugitive Emissions for Operation 004:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 004:											*1.29E-03*

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
Operation 005: Metcalf Power Plant											
005-108	Natural Gas Turbine 1 (204.89 MMBtu/hr)	MGT1	NF	204.89	MMBtu	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	0%	8.81E-05
						Acetaldehyde	75070	4.00E-05	lb/MMBtu	0%	8.20E-03
						Acrolein	107028	6.40E-06	lb/MMBtu	0%	1.31E-03
						Benzene	71432	1.20E-05	lb/MMBtu	0%	2.46E-03
						Ethylbenzene	100414	3.20E-05	lb/MMBtu	0%	6.56E-03
						Formaldehyde	50000	7.10E-04	lb/MMBtu	0%	1.45E-01
						Naphthalene	91203	1.30E-06	lb/MMBtu	0%	2.66E-04
						Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu	0%	4.51E-04
						Propylene Oxide	75569	2.90E-05	lb/MMBtu	0%	5.94E-03
						Toluene	108883	1.30E-04	lb/MMBtu	0%	2.66E-02
						Xylenes	1330207	6.40E-05	lb/MMBtu	0%	1.31E-02
005-110	Natural Gas Turbine 2 (204.89 MMBtu/hr)	MGT2	NF	204.89	MMBtu	1,3-Butadiene	106990	4.30E-07	lb/MMBtu	0%	8.81E-05
						Acetaldehyde	75070	4.00E-05	lb/MMBtu	0%	8.20E-03
						Acrolein	107028	6.40E-06	lb/MMBtu	0%	1.31E-03
						Benzene	71432	1.20E-05	lb/MMBtu	0%	2.46E-03
						Ethylbenzene	100414	3.20E-05	lb/MMBtu	0%	6.56E-03
						Formaldehyde	50000	7.10E-04	lb/MMBtu	0%	1.45E-01
						Naphthalene	91203	1.30E-06	lb/MMBtu	0%	2.66E-04
						Polycyclic Aromatic Hydrocarbons	250	2.20E-06	lb/MMBtu	0%	4.51E-04
						Propylene Oxide	75569	2.90E-05	lb/MMBtu	0%	5.94E-03
						Toluene	108883	1.30E-04	lb/MMBtu	0%	2.66E-02
						Xylenes	1330207	6.40E-05	lb/MMBtu	0%	1.31E-02
005-432	Diesel Black Start Turbine Engine 1 (300 hp engine)	DES	NF	300	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.96E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	8.59E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	5.99E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	8.21E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	2.48E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.61E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.94E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.78E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.06E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	2.98E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	6.13E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	6.17E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	3.93E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.60E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.00E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	3.53E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	7.41E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	2.08E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	3.26E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	3.95E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	7.88E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	1.22E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.03E-06
005-433	Diesel Black Start Turbine Engine 2 (300 hp engine)	DES	NF	300	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.96E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	8.59E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	5.99E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	8.21E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	2.48E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.61E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.94E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.78E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.06E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	2.98E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	6.13E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	6.17E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	3.93E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.60E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.00E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	3.53E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	7.41E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	2.08E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	3.26E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	3.95E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	7.88E-07

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
005-433 (cont'd)	Diesel Black Start Turbine Engine 2 (300 hp engine) (cont'd)	DES (cont'd)	NF (cont'd)	300	hp-hr (cont'd)	Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	1.22E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.03E-06
Total of Non-Fugitive Emissions for Operation 005:											*4.37E-01*
Total of Fugitive Emissions for Operation 005:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 005:											*4.37E-01*
Operation 006: Copper Concentrate Processing Operations											
006-392a	Copper Filters 1/2 to Copper Filter Discharge Hoppers 1/2	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-392b	Copper Filter Discharge Hoppers 1/2 to Copper Cake Discharge Feeders 1/2	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-392c	Copper Cake Discharge Feeders 1/2 to Final Concentrate Conveyor	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-392d	Final Concentrate Conveyor to Conveyor Belt 10A South	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044a	Conveyor Belt 10A South to Conveyor Belts 11, 11A, 11B, 12, and 13	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044b	Conveyor Belt 10A South to Conveyor Belt BA	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
006-044b (cont'd)	Conveyor Belt 10A South to Conveyor Belt BA (cont'd)	CCTrPrt (cont'd)	NF (cont'd)	500	tons (cont'd)	Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044c	Conveyor Belts 11, 11A, 11B, 12, and 13 to Copper Concentrate Storage Piles	CCTrPrt	F	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044d	Conveyor Belt BA to Conveyor Belt BB	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044e	Conveyor Belt BB to Conveyor Belt BC	CCTrPrt	NF	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-044f	Conveyor Belt BC to Copper Concentrate Storage Piles	CCTrPrt	F	500	tons	Antimony	7440360	4.11E-10	lb/ton	0%	2.06E-07
						Arsenic	7440382	5.66E-10	lb/ton	0%	2.83E-07
						Beryllium	7440417	1.10E-10	lb/ton	0%	5.49E-08
						Cadmium	7440439	2.65E-09	lb/ton	0%	1.33E-06
						Chromium	7440473	2.59E-10	lb/ton	0%	1.30E-07
						Cobalt	7440484	3.58E-09	lb/ton	0%	1.79E-06
						Lead	7439921	4.32E-09	lb/ton	0%	2.16E-06
						Manganese	7439965	7.50E-10	lb/ton	0%	3.75E-07
						Mercury	7439976	1.82E-11	lb/ton	0%	9.10E-09
						Nickel	7440020	1.02E-09	lb/ton	0%	5.12E-07
						Selenium	7782492	1.90E-09	lb/ton	0%	9.51E-07
006-335a	Wind Erosion of the Copper Concentrate Storage Piles	HWindCC	F	0.25	acre-yr	Antimony	7440360	4.44E-05	lb/acre-hr	75%	2.78E-06
						Arsenic	7440382	6.11E-05	lb/acre-hr	75%	3.82E-06
						Beryllium	7440417	1.19E-05	lb/acre-hr	75%	7.41E-07
						Cadmium	7440439	2.86E-04	lb/acre-hr	75%	1.79E-05
						Chromium	7440473	2.80E-05	lb/acre-hr	75%	1.75E-06
						Cobalt	7440484	3.87E-04	lb/acre-hr	75%	2.42E-05
						Lead	7439921	4.67E-04	lb/acre-hr	75%	2.92E-05
						Manganese	7439965	8.10E-05	lb/acre-hr	75%	5.06E-06
						Mercury	7439976	1.97E-06	lb/acre-hr	75%	1.23E-07
						Nickel	7440020	1.11E-04	lb/acre-hr	75%	6.91E-06
						Selenium	7782492	2.05E-04	lb/acre-hr	75%	1.28E-05
006-335b	Copper Concentrate Storage Piles to Railcars/Trucks	CCTrUnprt	F	500	tons	Antimony	7440360	3.59E-09	lb/ton	0%	1.80E-06
						Arsenic	7440382	4.94E-09	lb/ton	0%	2.47E-06
						Beryllium	7440417	9.58E-10	lb/ton	0%	4.79E-07
						Cadmium	7440439	2.32E-08	lb/ton	0%	1.16E-05
						Chromium	7440473	2.26E-09	lb/ton	0%	1.13E-06
						Cobalt	7440484	3.13E-08	lb/ton	0%	1.56E-05
						Lead	7439921	3.78E-08	lb/ton	0%	1.89E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
006-335b (cont'd)	Copper Concentrate Storage Piles to Railcars/Trucks (cont'd)	CCTrUnprt (cont'd)	F (cont'd)	500	tons (cont'd)	Manganese	7439965	6.55E-09	lb/ton	0%	3.27E-06
						Mercury	7439976	1.59E-10	lb/ton	0%	7.95E-08
						Nickel	7440020	8.94E-09	lb/ton	0%	4.47E-06
						Selenium	7782492	1.66E-08	lb/ton	0%	8.30E-06
Total of Non-Fugitive Emissions for Operation 006:											*6.24E-05*
Total of Fugitive Emissions for Operation 006:											*1.89E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 006:											*2.51E-04*
Operation 009: Solution Extraction/Electrowinning Operations											
009-117	Central SX (21,175 ft2)	SXC	F	1	hours	Benzene	71432	1.11E-03	lb/hr	0%	1.11E-03
						Toluene	108883	1.88E-02	lb/hr	0%	1.88E-02
						Ethylbenzene	100414	9.16E-02	lb/hr	0%	9.16E-02
						Xylenes	1330207	1.20E-01	lb/hr	0%	1.20E-01
009-462	Central Backwash Bleed Tank (33,000 gallons)	Tank462	NF	1	hours	Benzene	71432	2.88E-05	lb/hr	0%	2.88E-05
						Toluene	108883	4.88E-04	lb/hr	0%	4.88E-04
						Ethylbenzene	100414	2.37E-03	lb/hr	0%	2.37E-03
						Xylenes	1330207	3.10E-03	lb/hr	0%	3.10E-03
009-463	Central Barren Organic Tank (60,900 gallons)	Tank463	NF	1	hours	Benzene	71432	2.16E-05	lb/hr	0%	2.16E-05
						Toluene	108883	3.66E-04	lb/hr	0%	3.66E-04
						Ethylbenzene	100414	1.78E-03	lb/hr	0%	1.78E-03
						Xylenes	1330207	2.32E-03	lb/hr	0%	2.32E-03
009-464	Central Bead Separator Tank (5,000 gallons)	Tank464	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.91E-04	lb/hr	0%	1.91E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	9.27E-04
						Xylenes	1330207	1.21E-03	lb/hr	0%	1.21E-03
009-465	Central High Decant Tank (4,700 gallons)	Tank465	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.91E-04	lb/hr	0%	1.91E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	9.27E-04
						Xylenes	1330207	1.21E-03	lb/hr	0%	1.21E-03
009-466	Central Low Decant Tank (4,700 gallons)	Tank466	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.91E-04	lb/hr	0%	1.91E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	9.27E-04
						Xylenes	1330207	1.21E-03	lb/hr	0%	1.21E-03
009-467	Central Gunk Tank 1 (7,600 gallons)	Tank467	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.91E-04	lb/hr	0%	1.91E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	9.27E-04
						Xylenes	1330207	1.21E-03	lb/hr	0%	1.21E-03
009-468	Central Gunk Tank 2 (7,600 gallons)	Tank468	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.91E-04	lb/hr	0%	1.91E-04
						Ethylbenzene	100414	9.27E-04	lb/hr	0%	9.27E-04
						Xylenes	1330207	1.21E-03	lb/hr	0%	1.21E-03
009-469	Central Gunk Tank 3 (23,800 gallons)	Tank469	NF	1	hours	Benzene	71432	1.90E-05	lb/hr	0%	1.90E-05
						Toluene	108883	3.22E-04	lb/hr	0%	3.22E-04
						Ethylbenzene	100414	1.57E-03	lb/hr	0%	1.57E-03
						Xylenes	1330207	2.04E-03	lb/hr	0%	2.04E-03
009-470	Central Organic Recovery Tank (306,700 gallons)	Tank470	NF	1	hours	Benzene	71432	4.05E-04	lb/hr	0%	4.05E-04
						Toluene	108883	6.86E-03	lb/hr	0%	6.86E-03
						Ethylbenzene	100414	3.34E-02	lb/hr	0%	3.34E-02
						Xylenes	1330207	4.35E-02	lb/hr	0%	4.35E-02
009-471	Central Raffinate Pond (9,905 ft2)	Pond471	F	1	hours	Benzene	71432	1.42E-03	lb/hr	0%	1.42E-03
						Toluene	108883	2.40E-02	lb/hr	0%	2.40E-02
						Ethylbenzene	100414	1.17E-01	lb/hr	0%	1.17E-01
						Xylenes	1330207	1.53E-01	lb/hr	0%	1.53E-01
009-118	Metcalf SX (40,585.41 ft2)	SXMe	F	1	hours	Benzene	71432	2.14E-03	lb/hr	0%	2.14E-03
						Toluene	108883	3.70E-02	lb/hr	0%	3.70E-02
						Ethylbenzene	100414	1.81E-01	lb/hr	0%	1.81E-01
						Xylenes	1330207	2.36E-01	lb/hr	0%	2.36E-01
009-472	Metcalf Barren Organic Tank (82,900 gallons)	Tank472	NF	1	hours	Benzene	71432	2.95E-05	lb/hr	0%	2.95E-05
						Toluene	108883	5.10E-04	lb/hr	0%	5.10E-04
						Ethylbenzene	100414	2.49E-03	lb/hr	0%	2.49E-03
						Xylenes	1330207	3.25E-03	lb/hr	0%	3.25E-03
009-473	Metcalf High A Decant Tank (4,700 gallons)	Tank473	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	9.54E-04
						Xylenes	1330207	1.25E-03	lb/hr	0%	1.25E-03
009-474	Metcalf High B Decant Tank (4,700 gallons)	Tank474	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
009-474 (cont'd)	Metcalf High B Decant Tank (4,700 gallons) (cont'd)	Tank474 (cont'd)	NF (cont'd)	1	hours (cont'd)	Ethylbenzene	100414	9.54E-04	lb/hr	0%	9.54E-04
						Xylenes	1330207	1.25E-03	lb/hr	0%	1.25E-03
009-475	Metcalf Low A Decant Tank (4,700 gallons)	Tank475	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	9.54E-04
						Xylenes	1330207	1.25E-03	lb/hr	0%	1.25E-03
009-476	Metcalf Low B Decant Tank (4,700 gallons)	Tank476	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	9.54E-04
						Xylenes	1330207	1.25E-03	lb/hr	0%	1.25E-03
009-477	Metcalf SX-7 Diluent Tank (51,200 gallons)	Tank477	NF	1	hours	Benzene	71432	1.82E-05	lb/hr	0%	1.82E-05
						Toluene	108883	3.15E-04	lb/hr	0%	3.15E-04
						Ethylbenzene	100414	1.54E-03	lb/hr	0%	1.54E-03
						Xylenes	1330207	2.01E-03	lb/hr	0%	2.01E-03
009-478	Metcalf Gunk Tank 1 (15,200 gallons)	Tank478	NF	1	hours	Benzene	71432	1.62E-05	lb/hr	0%	1.62E-05
						Toluene	108883	2.81E-04	lb/hr	0%	2.81E-04
						Ethylbenzene	100414	1.37E-03	lb/hr	0%	1.37E-03
						Xylenes	1330207	1.79E-03	lb/hr	0%	1.79E-03
009-479	Metcalf Gunk Tank 2 (7,600 gallons)	Tank479	NF	1	hours	Benzene	71432	1.13E-05	lb/hr	0%	1.13E-05
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04
						Ethylbenzene	100414	9.54E-04	lb/hr	0%	9.54E-04
						Xylenes	1330207	1.25E-03	lb/hr	0%	1.25E-03
009-480	Metcalf Gunk Tank 3 (23,100 gallons)	Tank480	NF	1	hours	Benzene	71432	1.90E-05	lb/hr	0%	1.90E-05
						Toluene	108883	3.30E-04	lb/hr	0%	3.30E-04
						Ethylbenzene	100414	1.61E-03	lb/hr	0%	1.61E-03
						Xylenes	1330207	2.10E-03	lb/hr	0%	2.10E-03
009-481	Metcalf Holding Tank (122,200 gallons)	Tank481	NF	1	hours	Benzene	71432	4.34E-05	lb/hr	0%	4.34E-05
						Toluene	108883	7.53E-04	lb/hr	0%	7.53E-04
						Ethylbenzene	100414	3.68E-03	lb/hr	0%	3.68E-03
						Xylenes	1330207	4.80E-03	lb/hr	0%	4.80E-03
009-482	Metcalf Organic Recovery A Tank (302,500 gallons)	Tank482	NF	1	hours	Benzene	71432	4.06E-04	lb/hr	0%	4.06E-04
						Toluene	108883	7.03E-03	lb/hr	0%	7.03E-03
						Ethylbenzene	100414	3.44E-02	lb/hr	0%	3.44E-02
						Xylenes	1330207	4.48E-02	lb/hr	0%	4.48E-02
009-483	Metcalf Organic Recovery B Tank (302,500 gallons)	Tank483	NF	1	hours	Benzene	71432	4.06E-04	lb/hr	0%	4.06E-04
						Toluene	108883	7.03E-03	lb/hr	0%	7.03E-03
						Ethylbenzene	100414	3.44E-02	lb/hr	0%	3.44E-02
						Xylenes	1330207	4.48E-02	lb/hr	0%	4.48E-02
009-484	Metcalf Partially Loaded Organic Tank (122,200 gallons)	Tank484	NF	1	hours	Benzene	71432	4.34E-05	lb/hr	0%	4.34E-05
						Toluene	108883	7.53E-04	lb/hr	0%	7.53E-04
						Ethylbenzene	100414	3.68E-03	lb/hr	0%	3.68E-03
						Xylenes	1330207	4.80E-03	lb/hr	0%	4.80E-03
009-485	Metcalf Raffinate Pond (10,236 ft2)	Pond485	F	1	hours	Benzene	71432	1.47E-03	lb/hr	0%	1.47E-03
						Toluene	108883	2.55E-02	lb/hr	0%	2.55E-02
						Ethylbenzene	100414	1.24E-01	lb/hr	0%	1.24E-01
						Xylenes	1330207	1.62E-01	lb/hr	0%	1.62E-01
009-119	Modoc SX (88,229.16 ft2)	SXMo	F	1	hours	Benzene	71432	3.32E-02	lb/hr	0%	3.32E-02
						Toluene	108883	3.84E-02	lb/hr	0%	3.84E-02
						Ethylbenzene	100414	4.19E-02	lb/hr	0%	4.19E-02
						Xylenes	1330207	4.50E-02	lb/hr	0%	4.50E-02
009-486	Modoc Loaded Organic F Tank (81,400 gallons)	Tank486	NF	1	hours	Benzene	71432	2.42E-04	lb/hr	0%	2.42E-04
						Toluene	108883	2.80E-04	lb/hr	0%	2.80E-04
						Ethylbenzene	100414	3.06E-04	lb/hr	0%	3.06E-04
						Xylenes	1330207	3.28E-04	lb/hr	0%	3.28E-04
009-487	Modoc Loaded Organic G Tank (81,400 gallons)	Tank487	NF	1	hours	Benzene	71432	2.42E-04	lb/hr	0%	2.42E-04
						Toluene	108883	2.80E-04	lb/hr	0%	2.80E-04
						Ethylbenzene	100414	3.06E-04	lb/hr	0%	3.06E-04
						Xylenes	1330207	3.28E-04	lb/hr	0%	3.28E-04
009-488	Modoc High A Decant Tank (4,700 gallons)	Tank488	NF	1	hours	Benzene	71432	8.06E-05	lb/hr	0%	8.06E-05
						Toluene	108883	9.33E-05	lb/hr	0%	9.33E-05
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	1.02E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	1.09E-04
009-489	Modoc High B Decant Tank (4,700 gallons)	Tank489	NF	1	hours	Benzene	71432	8.06E-05	lb/hr	0%	8.06E-05
						Toluene	108883	9.33E-05	lb/hr	0%	9.33E-05
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	1.02E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	1.09E-04
009-490	Modoc Low A Decant Tank (4,700 gallons)	Tank490	NF	1	hours	Benzene	71432	8.06E-05	lb/hr	0%	8.06E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
009-490 (cont'd)	Modoc Low A Decant Tank (4,700 gallons) (cont'd)	Tank490 (cont'd)	NF (cont'd)	1	hours (cont'd)	Toluene	108883	9.33E-05	lb/hr	0%	9.33E-05
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	1.02E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	1.09E-04
009-491	Modoc Low B Decant Tank (4,700 gallons)	Tank491	NF	1	hours	Benzene	71432	8.06E-05	lb/hr	0%	8.06E-05
						Toluene	108883	9.33E-05	lb/hr	0%	9.33E-05
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	1.02E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	1.09E-04
009-492	Modoc SX-7 Diluent Tank (49,700 gallons)	Tank492	NF	1	hours	Benzene	71432	1.30E-04	lb/hr	0%	1.30E-04
						Toluene	108883	1.51E-04	lb/hr	0%	1.51E-04
						Ethylbenzene	100414	1.64E-04	lb/hr	0%	1.64E-04
						Xylenes	1330207	1.76E-04	lb/hr	0%	1.76E-04
009-493	Modoc Gunk Tank 1 (15,400 gallons)	Tank493	NF	1	hours	Benzene	71432	1.36E-04	lb/hr	0%	1.36E-04
						Toluene	108883	1.58E-04	lb/hr	0%	1.58E-04
						Ethylbenzene	100414	1.72E-04	lb/hr	0%	1.72E-04
						Xylenes	1330207	1.85E-04	lb/hr	0%	1.85E-04
009-494	Modoc Gunk Tank 2 (7,600 gallons)	Tank494	NF	1	hours	Benzene	71432	8.06E-05	lb/hr	0%	8.06E-05
						Toluene	108883	9.33E-05	lb/hr	0%	9.33E-05
						Ethylbenzene	100414	1.02E-04	lb/hr	0%	1.02E-04
						Xylenes	1330207	1.09E-04	lb/hr	0%	1.09E-04
009-495	Modoc Gunk Tank 3 (21,700 gallons)	Tank495	NF	1	hours	Benzene	71432	1.36E-04	lb/hr	0%	1.36E-04
						Toluene	108883	1.58E-04	lb/hr	0%	1.58E-04
						Ethylbenzene	100414	1.72E-04	lb/hr	0%	1.72E-04
						Xylenes	1330207	1.85E-04	lb/hr	0%	1.85E-04
009-496	Modoc Holding Tank (118,000 gallons)	Tank496	NF	1	hours	Benzene	71432	3.48E-04	lb/hr	0%	3.48E-04
						Toluene	108883	4.03E-04	lb/hr	0%	4.03E-04
						Ethylbenzene	100414	4.40E-04	lb/hr	0%	4.40E-04
						Xylenes	1330207	4.72E-04	lb/hr	0%	4.72E-04
009-497	Modoc Organic Recovery A Tank (302,400 gallons)	Tank497	NF	1	hours	Benzene	71432	2.90E-03	lb/hr	0%	2.90E-03
						Toluene	108883	3.36E-03	lb/hr	0%	3.36E-03
						Ethylbenzene	100414	3.67E-03	lb/hr	0%	3.67E-03
						Xylenes	1330207	3.93E-03	lb/hr	0%	3.93E-03
009-498	Modoc Organic Recovery B Tank (302,400 gallons)	Tank498	NF	1	hours	Benzene	71432	2.90E-03	lb/hr	0%	2.90E-03
						Toluene	108883	3.36E-03	lb/hr	0%	3.36E-03
						Ethylbenzene	100414	3.67E-03	lb/hr	0%	3.67E-03
						Xylenes	1330207	3.93E-03	lb/hr	0%	3.93E-03
009-499	Modoc Raffinate Pond (15,678 ft2)	Pond499	F	1	hours	Benzene	71432	1.61E-02	lb/hr	0%	1.61E-02
						Toluene	108883	1.86E-02	lb/hr	0%	1.86E-02
						Ethylbenzene	100414	2.03E-02	lb/hr	0%	2.03E-02
						Xylenes	1330207	2.18E-02	lb/hr	0%	2.18E-02
009-349	Stargo SX (48,846.87 ft2)	SXSt	F	1	hours	Benzene	71432	2.57E-03	lb/hr	0%	2.57E-03
						Toluene	108883	4.39E-02	lb/hr	0%	4.39E-02
						Ethylbenzene	100414	2.14E-01	lb/hr	0%	2.14E-01
						Xylenes	1330207	2.79E-01	lb/hr	0%	2.79E-01
009-500	Stargo Recovered Solution Tank (5,920 gallons)	Tank500	NF	1	hours	Benzene	71432	1.62E-05	lb/hr	0%	1.62E-05
						Toluene	108883	2.77E-04	lb/hr	0%	2.77E-04
						Ethylbenzene	100414	1.35E-03	lb/hr	0%	1.35E-03
						Xylenes	1330207	1.76E-03	lb/hr	0%	1.76E-03
009-501	Stargo Gunk Tank 1 (16,955 gallons)	Tank501	NF	1	hours	Benzene	71432	2.53E-05	lb/hr	0%	2.53E-05
						Toluene	108883	4.33E-04	lb/hr	0%	4.33E-04
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	2.11E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	2.76E-03
009-502	Stargo Gunk Tank 2 (16,955 gallons)	Tank502	NF	1	hours	Benzene	71432	2.53E-05	lb/hr	0%	2.53E-05
						Toluene	108883	4.33E-04	lb/hr	0%	4.33E-04
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	2.11E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	2.76E-03
009-503	Stargo Gunk Tank 3 (16,955 gallons)	Tank503	NF	1	hours	Benzene	71432	2.53E-05	lb/hr	0%	2.53E-05
						Toluene	108883	4.33E-04	lb/hr	0%	4.33E-04
						Ethylbenzene	100414	2.11E-03	lb/hr	0%	2.11E-03
						Xylenes	1330207	2.76E-03	lb/hr	0%	2.76E-03
009-504	Stargo Loaded Organic Tank (98,515 gallons)	Tank504	NF	1	hours	Benzene	71432	2.74E-05	lb/hr	0%	2.74E-05
						Toluene	108883	4.68E-04	lb/hr	0%	4.68E-04
						Ethylbenzene	100414	2.28E-03	lb/hr	0%	2.28E-03
						Xylenes	1330207	2.98E-03	lb/hr	0%	2.98E-03
009-505	Stargo Holding Tank (108,900 gallons)	Tank505	NF	1	hours	Benzene	71432	3.16E-05	lb/hr	0%	3.16E-05
						Toluene	108883	5.40E-04	lb/hr	0%	5.40E-04
						Ethylbenzene	100414	2.63E-03	lb/hr	0%	2.63E-03
						Xylenes	1330207	3.43E-03	lb/hr	0%	3.43E-03

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
009-506	Stargo Stormwater Tank (772,190 gallons)	Tank506	NF	1	hours	Benzene	71432	6.17E-04	lb/hr	0%	6.17E-04
						Toluene	108883	1.05E-02	lb/hr	0%	1.05E-02
						Ethylbenzene	100414	5.14E-02	lb/hr	0%	5.14E-02
						Xylenes	1330207	6.71E-02	lb/hr	0%	6.71E-02
009-507	Stargo Tricanter Feed Tank (250 gallons)	Tank507	NF	1	hours	Benzene	71432	2.29E-06	lb/hr	0%	2.29E-06
						Toluene	108883	3.92E-05	lb/hr	0%	3.92E-05
						Ethylbenzene	100414	1.91E-04	lb/hr	0%	1.91E-04
						Xylenes	1330207	2.50E-04	lb/hr	0%	2.50E-04
009-508	Stargo Slurry Tank (500 gallons)	Tank508	NF	1	hours	Benzene	71432	1.51E-06	lb/hr	0%	1.51E-06
						Toluene	108883	2.59E-05	lb/hr	0%	2.59E-05
						Ethylbenzene	100414	1.26E-04	lb/hr	0%	1.26E-04
						Xylenes	1330207	1.64E-04	lb/hr	0%	1.64E-04
009-121	Central EW (548 cells)	EWC	F	1	hours	Cobalt Compounds	7440484	7.13E-04	lb/hr	0%	7.13E-04
009-122	Southside EW (220 cells)	EWSS	F	1	hours	Cobalt Compounds	7440484	2.50E-04	lb/hr	0%	2.50E-04
009-221	Stargo EW (324 cells)	EWSt	F	1	hours	Cobalt Compounds	7440484	4.44E-04	lb/hr	0%	4.44E-04
009-123	Small Industrial Natural Gas Boiler 1 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.61E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.10E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.75E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.10E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.10E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.62E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.10E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.10E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.07E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.07E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.16E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.82E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.29E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.10E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.10E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.93E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.61E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.85E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.44E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.07E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.89E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.41E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.48E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.62E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.13E-07
009-184	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.61E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.10E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.75E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.10E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.10E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.62E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.10E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.10E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.07E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.07E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.16E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.82E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
009-184 (cont'd)	Small Industrial Natural Gas Boiler 2 (17.56 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	17.56	MMBtu (cont'd)	Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.29E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.10E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.10E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.93E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.61E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.85E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.44E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.07E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.89E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.41E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.48E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.62E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.13E-07
009-185	Small Industrial Natural Gas Boiler 3 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.61E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.10E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.75E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.10E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.10E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.62E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.10E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.10E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.07E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.07E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.16E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.82E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.29E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.10E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.10E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.93E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.61E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.85E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.44E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.07E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.89E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.41E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.48E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.62E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.13E-07
009-222	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.61E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.10E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.75E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.10E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.10E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.62E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.10E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.10E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.07E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.07E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.16E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
009-222 (cont'd)	Small Industrial Natural Gas Boiler 4 (17.56 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	17.56	MMBtu (cont'd)	Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.82E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.29E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.10E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.10E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.93E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.61E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.85E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.44E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.07E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.89E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.41E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.48E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.62E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.13E-07
009-223	Small Industrial Natural Gas Boiler 5 (17.56 MMBtu/hr)	NGC	NF	17.56	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.61E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.13E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.10E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.75E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.10E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.10E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.13E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.62E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.10E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.07E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.10E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.10E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.07E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.07E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.16E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.82E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.29E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.10E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.10E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.93E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.61E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.85E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.44E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.07E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.89E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.41E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.48E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.62E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.13E-07
009-274	Diesel Hot Water Pressure Cleaner 1 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	Lead	7439921	9.00E-06	lb/MMBtu	0%	4.95E-06
						POM	250	2.41E-05	lb/MMBtu	0%	1.32E-05
						Formaldehyde	50000	4.45E-04	lb/MMBtu	0%	2.45E-04
						Arsenic	7440382	4.00E-06	lb/MMBtu	0%	2.20E-06
						Beryllium	7440417	3.00E-06	lb/MMBtu	0%	1.65E-06
						Cadmium	7440439	3.00E-06	lb/MMBtu	0%	1.65E-06
						Chromium	7440473	3.00E-06	lb/MMBtu	0%	1.65E-06
						Mercury	7439976	3.00E-06	lb/MMBtu	0%	1.65E-06
						Manganese	7439965	6.00E-06	lb/MMBtu	0%	3.30E-06
						Nickel	7440020	3.00E-06	lb/MMBtu	0%	1.65E-06
						Selenium	7782492	1.50E-05	lb/MMBtu	0%	8.25E-06
009-347	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr)	DCI	NF	0.55	MMBtu	Lead	7439921	9.00E-06	lb/MMBtu	0%	4.95E-06
						POM	250	2.41E-05	lb/MMBtu	0%	1.32E-05
						Formaldehyde	50000	4.45E-04	lb/MMBtu	0%	2.45E-04
						Arsenic	7440382	4.00E-06	lb/MMBtu	0%	2.20E-06
						Beryllium	7440417	3.00E-06	lb/MMBtu	0%	1.65E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
009-347 (cont'd)	Diesel Hot Water Pressure Cleaner 2 (0.55 MMBtu/hr) (cont'd)	DCI (cont'd)	NF (cont'd)	0.55	MMBtu (cont'd)	Cadmium	7440439	3.00E-06	lb/MMBtu	0%	1.65E-06
						Chromium	7440473	3.00E-06	lb/MMBtu	0%	1.65E-06
						Mercury	7439976	3.00E-06	lb/MMBtu	0%	1.65E-06
						Manganese	7439965	6.00E-06	lb/MMBtu	0%	3.30E-06
						Nickel	7440020	3.00E-06	lb/MMBtu	0%	1.65E-06
						Selenium	7782492	1.50E-05	lb/MMBtu	0%	8.25E-06
009-422	Modoc Test Facility SX (1,418.72 ft2)	SXM-MTF	F	1	hours	Benzene	71432	1.16E-03	lb/hr	0%	1.16E-03
						Toluene	108883	1.34E-03	lb/hr	0%	1.34E-03
						Ethylbenzene	100414	1.47E-03	lb/hr	0%	1.47E-03
						Xylenes	1330207	1.57E-03	lb/hr	0%	1.57E-03
009-424	A Organic Tank (Modoc Test Facility) (3,333.38 gallons)	Tank424	NF	1	hours	Benzene	71432	5.39E-05	lb/hr	0%	5.39E-05
						Toluene	108883	6.24E-05	lb/hr	0%	6.24E-05
						Ethylbenzene	100414	6.81E-05	lb/hr	0%	6.81E-05
						Xylenes	1330207	7.31E-05	lb/hr	0%	7.31E-05
009-425	B Organic Tank (Modoc Test Facility) (3,006.58 gallons)	Tank425	NF	1	hours	Benzene	71432	5.39E-05	lb/hr	0%	5.39E-05
						Toluene	108883	6.24E-05	lb/hr	0%	6.24E-05
						Ethylbenzene	100414	6.81E-05	lb/hr	0%	6.81E-05
						Xylenes	1330207	7.31E-05	lb/hr	0%	7.31E-05
009-426	Diluent Tank (Modoc Test Facility) (1,266 gallons)	Tank426	NF	1	hours	Benzene	71432	2.90E-05	lb/hr	0%	2.90E-05
						Toluene	108883	3.36E-05	lb/hr	0%	3.36E-05
						Ethylbenzene	100414	3.67E-05	lb/hr	0%	3.67E-05
						Xylenes	1330207	3.93E-05	lb/hr	0%	3.93E-05
Total of Non-Fugitive Emissions for Operation 009:											*6.93E-01*
Total of Fugitive Emissions for Operation 009:											*2.08E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 009:											*2.77E+00*
Operation 010: Concrete Batch Plant											
010-144a	Unloading Aggregate to the Aggregate Stockpiles	AggTrUnprt	F	143.53	tons	Antimony	7440360	8.50E-10	lb/ton	0%	1.22E-07
						Arsenic	7440382	3.46E-09	lb/ton	0%	4.96E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	7.99E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	3.99E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	3.14E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	7.59E-06
						Lead	7439921	2.77E-08	lb/ton	0%	3.97E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	3.79E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	2.11E-08
						Nickel	7440020	1.70E-07	lb/ton	0%	2.45E-05
						Selenium	7782492	1.61E-10	lb/ton	0%	2.31E-08
010-144b	Wind Erosion of the Aggregate Stockpiles	HWindAgg	F	1.00	acre-yr	Antimony	7440360	2.71E-08	lb/acre-hr	0%	2.71E-08
						Arsenic	7440382	1.10E-07	lb/acre-hr	0%	1.10E-07
						Beryllium	7440417	1.77E-07	lb/acre-hr	0%	1.77E-07
						Cadmium	7440439	8.86E-09	lb/acre-hr	0%	8.86E-09
						Chromium	7440473	6.97E-06	lb/acre-hr	0%	6.97E-06
						Cobalt	7440484	1.68E-06	lb/acre-hr	0%	1.68E-06
						Lead	7439921	8.81E-07	lb/acre-hr	0%	8.81E-07
						Manganese	7439965	8.41E-05	lb/acre-hr	0%	8.41E-05
						Mercury	7439976	4.69E-09	lb/acre-hr	0%	4.69E-09
						Nickel	7440020	5.43E-06	lb/acre-hr	0%	5.43E-06
						Selenium	7782492	5.14E-09	lb/acre-hr	0%	5.14E-09
010-144c	Loading Aggregate to the Feed Hopper	AggTrUnprt	F	143.53	tons	Antimony	7440360	8.50E-10	lb/ton	0%	1.22E-07
						Arsenic	7440382	3.46E-09	lb/ton	0%	4.96E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	7.99E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	3.99E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	3.14E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	7.59E-06
						Lead	7439921	2.77E-08	lb/ton	0%	3.97E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	3.79E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	2.11E-08
						Nickel	7440020	1.70E-07	lb/ton	0%	2.45E-05
						Selenium	7782492	1.61E-10	lb/ton	0%	2.31E-08
010-145	Feed Hopper to Aggregate Conveyor Belt	AggTrUnprt	NF	143.53	tons	Antimony	7440360	8.50E-10	lb/ton	0%	1.22E-07
						Arsenic	7440382	3.46E-09	lb/ton	0%	4.96E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	7.99E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	3.99E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	3.14E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	7.59E-06
						Lead	7439921	2.77E-08	lb/ton	0%	3.97E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	3.79E-04

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
010-145 (cont'd)	Feed Hopper to Aggregate Conveyor Belt (cont'd)	AggTrUnprt (cont'd)	NF (cont'd)	143.53	tons (cont'd)	Mercury	7439976	1.47E-10	lb/ton	0%	2.11E-08
						Nickel	7440020	1.70E-07	lb/ton	0%	2.45E-05
						Selenium	7782492	1.61E-10	lb/ton	0%	2.31E-08
010-146	Pneumatic Transfer of Fly Ash to the Fly Ash Silo	FATr	NF	5.29	tons	Arsenic	7440382	5.00E-05	lb/ton	90%	2.64E-05
						Beryllium	7440417	4.52E-06	lb/ton	90%	2.39E-06
						Cadmium	7440439	9.90E-09	lb/ton	90%	5.23E-09
						Chromium	7440473	6.10E-05	lb/ton	90%	3.23E-05
						Lead	7439921	2.60E-05	lb/ton	90%	1.37E-05
						Manganese	7439965	1.28E-05	lb/ton	90%	6.77E-06
						Nickel	7440020	1.14E-04	lb/ton	90%	6.03E-05
						Selenium	7782492	3.62E-06	lb/ton	90%	1.91E-06
010-147	Pneumatic Transfer of Cement to the Cement Silo	CemTr	NF	26.48	tons	Arsenic	7440382	1.68E-06	lb/ton	90%	4.45E-06
						Beryllium	7440417	1.79E-08	lb/ton	90%	4.74E-08
						Cadmium	7440439	2.34E-07	lb/ton	90%	6.20E-07
						Chromium	7440473	2.52E-07	lb/ton	90%	6.67E-07
						Lead	7439921	7.36E-07	lb/ton	90%	1.95E-06
						Manganese	7439965	2.02E-04	lb/ton	90%	5.35E-04
						Nickel	7440020	1.76E-05	lb/ton	90%	4.66E-05
010-148a	Fly Ash Screw Conveyor to Weigh Hopper	FATr	NF	5.29	tons	Arsenic	7440382	5.00E-05	lb/ton	0%	2.64E-04
						Beryllium	7440417	4.52E-06	lb/ton	0%	2.39E-05
						Cadmium	7440439	9.90E-09	lb/ton	0%	5.23E-08
						Chromium	7440473	6.10E-05	lb/ton	0%	3.23E-04
						Lead	7439921	2.60E-05	lb/ton	0%	1.37E-04
						Manganese	7439965	1.28E-05	lb/ton	0%	6.77E-05
						Nickel	7440020	1.14E-04	lb/ton	0%	6.03E-04
						Selenium	7782492	3.62E-06	lb/ton	0%	1.91E-05
010-148b	Cement Screw Conveyor to Weigh Hopper	CemTr	NF	26.48	tons	Arsenic	7440382	1.68E-06	lb/ton	0%	4.45E-05
						Beryllium	7440417	1.79E-08	lb/ton	0%	4.74E-07
						Cadmium	7440439	2.34E-07	lb/ton	0%	6.20E-06
						Chromium	7440473	2.52E-07	lb/ton	0%	6.67E-06
						Lead	7439921	7.36E-07	lb/ton	0%	1.95E-05
						Manganese	7439965	2.02E-04	lb/ton	0%	5.35E-03
						Nickel	7440020	1.76E-05	lb/ton	0%	4.66E-04
010-148c	Aggregate Conveyor Belt to Weigh Hopper	AggTrUnprt	NF	143.53	tons	Antimony	7440360	8.50E-10	lb/ton	0%	1.22E-07
						Arsenic	7440382	3.46E-09	lb/ton	0%	4.96E-07
						Beryllium	7440417	5.57E-09	lb/ton	0%	7.99E-07
						Cadmium	7440439	2.78E-10	lb/ton	0%	3.99E-08
						Chromium	7440473	2.19E-07	lb/ton	0%	3.14E-05
						Cobalt	7440484	5.29E-08	lb/ton	0%	7.59E-06
						Lead	7439921	2.77E-08	lb/ton	0%	3.97E-06
						Manganese	7439965	2.64E-06	lb/ton	0%	3.79E-04
						Mercury	7439976	1.47E-10	lb/ton	0%	2.11E-08
						Nickel	7440020	1.70E-07	lb/ton	0%	2.45E-05
						Selenium	7782492	1.61E-10	lb/ton	0%	2.31E-08
010-148d	Weigh Hopper to Concrete Mixing Truck	LoadCMT	NF	31.77	tons	Arsenic	7440382	1.22E-05	lb/ton	0%	3.88E-04
						Beryllium	7440417	2.44E-07	lb/ton	0%	7.75E-06
						Cadmium	7440439	3.42E-08	lb/ton	0%	1.09E-06
						Chromium	7440473	1.14E-05	lb/ton	0%	3.62E-04
						Lead	7439921	3.62E-06	lb/ton	0%	1.15E-04
						Manganese	7439965	6.12E-05	lb/ton	0%	1.94E-03
						Nickel	7440020	1.19E-05	lb/ton	0%	3.78E-04
						Selenium	7782492	2.62E-06	lb/ton	0%	8.32E-05
010-270	Propane Hot Water Heater 1 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	4.95E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	2.38E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.78E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	1.58E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.78E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.78E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	2.38E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	2.08E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.78E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.78E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	1.19E-09

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
010-270 (cont'd)	Propane Hot Water Heater 1 (1.01 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	1.01	MMBtu (cont'd)	Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	1.19E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	2.97E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	2.77E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	7.43E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.78E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.78E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	6.04E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.68E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	4.95E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	3.37E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.98E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	1.19E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.09E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	1.39E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	8.32E-08
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	3.76E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	2.57E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	2.08E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	2.38E-08
010-271	Propane Hot Water Heater 2 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	4.95E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	2.38E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.78E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	1.58E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.78E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.78E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	2.38E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	2.08E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.78E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.78E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	1.19E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	1.19E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	2.97E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	2.77E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	7.43E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.78E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.78E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	6.04E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.68E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	4.95E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	3.37E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.98E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	1.19E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.09E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	1.39E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	8.32E-08
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	3.76E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	2.57E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	2.08E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	2.38E-08
010-310	Propane Hot Water Heater 3 (1.01 MMBtu/hr)	PCI	NF	1.01	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	4.95E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	2.38E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.78E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	1.58E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.78E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.78E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	2.38E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	2.08E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.78E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	1.19E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.78E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.78E-09

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
010-310 (cont'd)	Propane Hot Water Heater 3 (1.01 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	1.01	MMBtu (cont'd)	Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	1.19E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	1.19E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	2.97E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	2.77E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	7.43E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.78E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.78E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	6.04E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	1.68E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	4.95E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	3.37E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.98E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	1.19E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.09E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	1.39E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	8.32E-08
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	3.76E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	2.57E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	2.08E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	2.38E-08
Total of Non-Fugitive Emissions for Operation 010:											*1.78E-02*
Total of Fugitive Emissions for Operation 010:											*9.95E-04*
Total of Non-Fugitive and Fugitive Emissions for Operation 010:											*1.88E-02*
Operation 011: Storage Tanks											
011-150	Diesel Tank D1 (177,850 gallons)	Tank150	NF	1	hours	Benzene	71432	3.84E-05	lb/hr	0%	3.84E-05
						Ethylbenzene	100414	6.35E-05	lb/hr	0%	6.35E-05
						n-Hexane	110543	7.70E-06	lb/hr	0%	7.70E-06
						Toluene	108883	4.54E-04	lb/hr	0%	4.54E-04
						m-Xylene	1330207	1.19E-03	lb/hr	0%	1.19E-03
011-151	Diesel Tank D2 (200,434 gallons)	Tank151	NF	1	hours	Benzene	71432	5.05E-05	lb/hr	0%	5.05E-05
						Ethylbenzene	100414	8.35E-05	lb/hr	0%	8.35E-05
						n-Hexane	110543	1.01E-05	lb/hr	0%	1.01E-05
						Toluene	108883	5.97E-04	lb/hr	0%	5.97E-04
						m-Xylene	1330207	1.56E-03	lb/hr	0%	1.56E-03
011-154	Diesel Tank D5 (47,255 gallons)	Tank154	NF	1	hours	Benzene	71432	1.65E-05	lb/hr	0%	1.65E-05
						Ethylbenzene	100414	2.72E-05	lb/hr	0%	2.72E-05
						n-Hexane	110543	3.30E-06	lb/hr	0%	3.30E-06
						Toluene	108883	1.95E-04	lb/hr	0%	1.95E-04
						m-Xylene	1330207	5.08E-04	lb/hr	0%	5.08E-04
011-161	Diesel Tank Pit 95 (101,690 gallons)	Tank161	NF	1	hours	Benzene	71432	7.21E-05	lb/hr	0%	7.21E-05
						Ethylbenzene	100414	1.19E-04	lb/hr	0%	1.19E-04
						n-Hexane	110543	1.45E-05	lb/hr	0%	1.45E-05
						Toluene	108883	8.52E-04	lb/hr	0%	8.52E-04
						m-Xylene	1330207	2.22E-03	lb/hr	0%	2.22E-03
011-155	Gasoline Tank G1 (12,000 gallons)	Tank155	NF	1	hours	Benzene	71432	9.49E-03	lb/hr	0%	9.49E-03
						Ethylbenzene	100414	4.87E-04	lb/hr	0%	4.87E-04
						n-Hexane	110543	1.40E-02	lb/hr	0%	1.40E-02
						Naphthalene	91203	3.06E-06	lb/hr	0%	3.06E-06
						Cumene	98828	3.58E-04	lb/hr	0%	3.58E-04
						Toluene	108883	1.18E-02	lb/hr	0%	1.18E-02
						m-Xylene	1330207	1.95E-03	lb/hr	0%	1.95E-03
011-156	Gasoline Tank G2 (12,000 gallons)	Tank156	NF	1	hours	Benzene	71432	9.49E-03	lb/hr	0%	9.49E-03
						Ethylbenzene	100414	4.87E-04	lb/hr	0%	4.87E-04
						n-Hexane	110543	1.40E-02	lb/hr	0%	1.40E-02
						Naphthalene	91203	3.06E-06	lb/hr	0%	3.06E-06
						Cumene	98828	3.58E-04	lb/hr	0%	3.58E-04
						Toluene	108883	1.18E-02	lb/hr	0%	1.18E-02
						m-Xylene	1330207	1.95E-03	lb/hr	0%	1.95E-03
011-157	Gasoline Tank G3 (12,000 gallons)	Tank157	NF	1	hours	Benzene	71432	5.65E-03	lb/hr	0%	5.65E-03
						Ethylbenzene	100414	2.90E-04	lb/hr	0%	2.90E-04
						n-Hexane	110543	8.32E-03	lb/hr	0%	8.32E-03
						Naphthalene	91203	1.82E-06	lb/hr	0%	1.82E-06
						Cumene	98828	2.13E-04	lb/hr	0%	2.13E-04
						Toluene	108883	7.04E-03	lb/hr	0%	7.04E-03
						m-Xylene	1330207	1.16E-03	lb/hr	0%	1.16E-03
Total of Non-Fugitive Emissions for Operation 011:											*1.07E-01*
Total of Fugitive Emissions for Operation 011:											*0.00E+00*

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
Total of Non-Fugitive and Fugitive Emissions for Operation 011:											*1.07E-01*
Operation 013: Grizzly Operations											
013-195a	Material Transfer to Concentrate Grizzly and Concentrate Grizzly Screening	G1ScreenC	F	60	tons	Antimony	7440360	1.54E-08	lb/ton	0%	9.22E-07
						Arsenic	7440382	1.93E-08	lb/ton	0%	1.16E-06
						Beryllium	7440417	3.72E-09	lb/ton	0%	2.23E-07
						Cadmium	7440439	8.83E-08	lb/ton	0%	5.30E-06
						Chromium	7440473	8.77E-09	lb/ton	0%	5.26E-07
						Cobalt	7440484	1.19E-07	lb/ton	0%	7.17E-06
						Lead	7439921	1.44E-07	lb/ton	0%	8.64E-06
						Manganese	7439965	2.51E-08	lb/ton	0%	1.50E-06
						Mercury	7439976	7.28E-10	lb/ton	0%	4.37E-08
						Nickel	7440020	3.46E-08	lb/ton	0%	2.07E-06
						Selenium	7782492	6.84E-08	lb/ton	0%	4.10E-06
013-195b	Material Transfer from Concentrate Grizzly to Oversize and Undersize Stockpiles	ConGTrUnprt	F	60	tons	Antimony	7440360	1.83E-08	lb/ton	0%	1.10E-06
						Arsenic	7440382	2.29E-08	lb/ton	0%	1.38E-06
						Beryllium	7440417	4.42E-09	lb/ton	0%	2.65E-07
						Cadmium	7440439	1.05E-07	lb/ton	0%	6.29E-06
						Chromium	7440473	1.04E-08	lb/ton	0%	6.25E-07
						Cobalt	7440484	1.42E-07	lb/ton	0%	8.51E-06
						Lead	7439921	1.71E-07	lb/ton	0%	1.03E-05
						Manganese	7439965	2.98E-08	lb/ton	0%	1.79E-06
						Mercury	7439976	8.65E-10	lb/ton	0%	5.19E-08
						Nickel	7440020	4.11E-08	lb/ton	0%	2.46E-06
						Selenium	7782492	8.13E-08	lb/ton	0%	4.88E-06
013-195c	Wind Erosion of Concentrate Grizzly Oversize and Undersize Stockpiles	HWindConG	F	0.50	acre-yr	Antimony	7440360	3.80E-06	lb/acre-hr	0%	1.90E-06
						Arsenic	7440382	4.76E-06	lb/acre-hr	0%	2.38E-06
						Beryllium	7440417	9.18E-07	lb/acre-hr	0%	4.59E-07
						Cadmium	7440439	2.18E-05	lb/acre-hr	0%	1.09E-05
						Chromium	7440473	2.16E-06	lb/acre-hr	0%	1.08E-06
						Cobalt	7440484	2.95E-05	lb/acre-hr	0%	1.47E-05
						Lead	7439921	3.55E-05	lb/acre-hr	0%	1.78E-05
						Manganese	7439965	6.19E-06	lb/acre-hr	0%	3.09E-06
						Mercury	7439976	1.80E-07	lb/acre-hr	0%	8.98E-08
						Nickel	7440020	8.53E-06	lb/acre-hr	0%	4.27E-06
						Selenium	7782492	1.69E-05	lb/acre-hr	0%	8.44E-06
013-337a	Material Transfer to Construction Grizzly 1 and Construction Grizzly 1 Screening	G2ScreenC	F	500	tons	Antimony	7440360	3.12E-10	lb/ton	0%	1.56E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	6.35E-07
						Beryllium	7440417	2.05E-09	lb/ton	0%	1.02E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	5.11E-08
						Chromium	7440473	8.04E-08	lb/ton	0%	4.02E-05
						Cobalt	7440484	1.94E-08	lb/ton	0%	9.71E-06
						Lead	7439921	1.02E-08	lb/ton	0%	5.08E-06
						Manganese	7439965	9.70E-07	lb/ton	0%	4.85E-04
						Mercury	7439976	5.40E-11	lb/ton	0%	2.70E-08
						Nickel	7440020	6.26E-08	lb/ton	0%	3.13E-05
						Selenium	7782492	5.92E-11	lb/ton	0%	2.96E-08
013-337b	Material Transfer from Construction Grizzly 1 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	Antimony	7440360	3.71E-10	lb/ton	0%	1.85E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	7.54E-07
						Beryllium	7440417	2.43E-09	lb/ton	0%	1.22E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	6.07E-08
						Chromium	7440473	9.55E-08	lb/ton	0%	4.77E-05
						Cobalt	7440484	2.31E-08	lb/ton	0%	1.15E-05
						Lead	7439921	1.21E-08	lb/ton	0%	6.03E-06
						Manganese	7439965	1.15E-06	lb/ton	0%	5.76E-04
						Mercury	7439976	6.42E-11	lb/ton	0%	3.21E-08
						Nickel	7440020	7.44E-08	lb/ton	0%	3.72E-05
						Selenium	7782492	7.03E-11	lb/ton	0%	3.52E-08
013-337c	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles	HWindCG1	F	0.50	acre-yr	Antimony	7440360	7.71E-08	lb/acre-hr	0%	3.85E-08
						Arsenic	7440382	3.14E-07	lb/acre-hr	0%	1.57E-07
						Beryllium	7440417	5.05E-07	lb/acre-hr	0%	2.53E-07
						Cadmium	7440439	2.52E-08	lb/acre-hr	0%	1.26E-08
						Chromium	7440473	1.98E-05	lb/acre-hr	0%	9.92E-06
						Cobalt	7440484	4.79E-06	lb/acre-hr	0%	2.40E-06
						Lead	7439921	2.51E-06	lb/acre-hr	0%	1.25E-06
						Manganese	7439965	2.39E-04	lb/acre-hr	0%	1.20E-04
						Mercury	7439976	1.33E-08	lb/acre-hr	0%	6.67E-09

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
013-337c (cont'd)	Wind Erosion of Construction Grizzly 1 Oversize and Undersize Stockpiles (cont'd)	HWindCG1 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.55E-05	lb/acre-hr	0%	7.73E-06
						Selenium	7782492	1.46E-08	lb/acre-hr	0%	7.31E-09
013-338a	Material Transfer to Construction Grizzly 2 and Construction Grizzly 2 Screening	G2ScreenC	F	500	tons	Antimony	7440360	3.12E-10	lb/ton	0%	1.56E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	6.35E-07
						Beryllium	7440417	2.05E-09	lb/ton	0%	1.02E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	5.11E-08
						Chromium	7440473	8.04E-08	lb/ton	0%	4.02E-05
						Cobalt	7440484	1.94E-08	lb/ton	0%	9.71E-06
						Lead	7439921	1.02E-08	lb/ton	0%	5.08E-06
						Manganese	7439965	9.70E-07	lb/ton	0%	4.85E-04
						Mercury	7439976	5.40E-11	lb/ton	0%	2.70E-08
						Nickel	7440020	6.26E-08	lb/ton	0%	3.13E-05
						Selenium	7782492	5.92E-11	lb/ton	0%	2.96E-08
013-338b	Material Transfer from Construction Grizzly 2 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	Antimony	7440360	3.71E-10	lb/ton	0%	1.85E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	7.54E-07
						Beryllium	7440417	2.43E-09	lb/ton	0%	1.22E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	6.07E-08
						Chromium	7440473	9.55E-08	lb/ton	0%	4.77E-05
						Cobalt	7440484	2.31E-08	lb/ton	0%	1.15E-05
						Lead	7439921	1.21E-08	lb/ton	0%	6.03E-06
						Manganese	7439965	1.15E-06	lb/ton	0%	5.76E-04
						Mercury	7439976	6.42E-11	lb/ton	0%	3.21E-08
						Nickel	7440020	7.44E-08	lb/ton	0%	3.72E-05
						Selenium	7782492	7.03E-11	lb/ton	0%	3.52E-08
013-338c	Wind Erosion of Construction Grizzly 2 Oversize and Undersize Stockpiles	HWindCG2	F	0.50	acre-yr	Antimony	7440360	7.71E-08	lb/acre-hr	0%	3.85E-08
						Arsenic	7440382	3.14E-07	lb/acre-hr	0%	1.57E-07
						Beryllium	7440417	5.05E-07	lb/acre-hr	0%	2.53E-07
						Cadmium	7440439	2.52E-08	lb/acre-hr	0%	1.26E-08
						Chromium	7440473	1.98E-05	lb/acre-hr	0%	9.92E-06
						Cobalt	7440484	4.79E-06	lb/acre-hr	0%	2.40E-06
						Lead	7439921	2.51E-06	lb/acre-hr	0%	1.25E-06
						Manganese	7439965	2.39E-04	lb/acre-hr	0%	1.20E-04
						Mercury	7439976	1.33E-08	lb/acre-hr	0%	6.67E-09
						Nickel	7440020	1.55E-05	lb/acre-hr	0%	7.73E-06
						Selenium	7782492	1.46E-08	lb/acre-hr	0%	7.31E-09
013-339a	Material Transfer to Construction Grizzly 3 and Construction Grizzly 3 Screening	G2ScreenC	F	500	tons	Antimony	7440360	3.12E-10	lb/ton	0%	1.56E-07
						Arsenic	7440382	1.27E-09	lb/ton	0%	6.35E-07
						Beryllium	7440417	2.05E-09	lb/ton	0%	1.02E-06
						Cadmium	7440439	1.02E-10	lb/ton	0%	5.11E-08
						Chromium	7440473	8.04E-08	lb/ton	0%	4.02E-05
						Cobalt	7440484	1.94E-08	lb/ton	0%	9.71E-06
						Lead	7439921	1.02E-08	lb/ton	0%	5.08E-06
						Manganese	7439965	9.70E-07	lb/ton	0%	4.85E-04
						Mercury	7439976	5.40E-11	lb/ton	0%	2.70E-08
						Nickel	7440020	6.26E-08	lb/ton	0%	3.13E-05
						Selenium	7782492	5.92E-11	lb/ton	0%	2.96E-08
013-339b	Material Transfer from Construction Grizzly 3 to Oversize and Undersize Stockpiles	CGTrUnprt	F	500	tons	Antimony	7440360	3.71E-10	lb/ton	0%	1.85E-07
						Arsenic	7440382	1.51E-09	lb/ton	0%	7.54E-07
						Beryllium	7440417	2.43E-09	lb/ton	0%	1.22E-06
						Cadmium	7440439	1.21E-10	lb/ton	0%	6.07E-08
						Chromium	7440473	9.55E-08	lb/ton	0%	4.77E-05
						Cobalt	7440484	2.31E-08	lb/ton	0%	1.15E-05
						Lead	7439921	1.21E-08	lb/ton	0%	6.03E-06
						Manganese	7439965	1.15E-06	lb/ton	0%	5.76E-04
						Mercury	7439976	6.42E-11	lb/ton	0%	3.21E-08
						Nickel	7440020	7.44E-08	lb/ton	0%	3.72E-05
						Selenium	7782492	7.03E-11	lb/ton	0%	3.52E-08
013-339c	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles	HWindCG3	F	0.50	acre-yr	Antimony	7440360	7.71E-08	lb/acre-hr	0%	3.85E-08
						Arsenic	7440382	3.14E-07	lb/acre-hr	0%	1.57E-07
						Beryllium	7440417	5.05E-07	lb/acre-hr	0%	2.53E-07
						Cadmium	7440439	2.52E-08	lb/acre-hr	0%	1.26E-08
						Chromium	7440473	1.98E-05	lb/acre-hr	0%	9.92E-06
						Cobalt	7440484	4.79E-06	lb/acre-hr	0%	2.40E-06
						Lead	7439921	2.51E-06	lb/acre-hr	0%	1.25E-06
						Manganese	7439965	2.39E-04	lb/acre-hr	0%	1.20E-04
						Mercury	7439976	1.33E-08	lb/acre-hr	0%	6.67E-09

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
013-339c (cont'd)	Wind Erosion of Construction Grizzly 3 Oversize and Undersize Stockpiles (cont'd)	HWindCG3 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.55E-05	lb/acre-hr	0%	7.73E-06
						Selenium	7782492	1.46E-08	lb/acre-hr	0%	7.31E-09
013-380a	Material Transfer to Stockpile Grizzly 1 and Stockpile Grizzly 1 Screening	G3ScreenC	F	500	tons	Antimony	7440360	7.08E-09	lb/ton	0%	3.54E-06
						Arsenic	7440382	1.00E-08	lb/ton	0%	5.00E-06
						Beryllium	7440417	7.31E-10	lb/ton	0%	3.65E-07
						Cadmium	7440439	1.22E-09	lb/ton	0%	6.12E-07
						Chromium	7440473	3.12E-09	lb/ton	0%	1.56E-06
						Cobalt	7440484	3.47E-09	lb/ton	0%	1.73E-06
						Lead	7439921	5.62E-08	lb/ton	0%	2.81E-05
						Manganese	7439965	1.63E-08	lb/ton	0%	8.16E-06
						Mercury	7439976	2.13E-10	lb/ton	0%	1.07E-07
						Nickel	7440020	5.14E-09	lb/ton	0%	2.57E-06
						Selenium	7782492	6.46E-09	lb/ton	0%	3.23E-06
013-380b	Material Transfer from Stockpile Grizzly 1 to Oversize and Undersize Stockpiles	SGTrUnprt	F	500	tons	Antimony	7440360	8.41E-09	lb/ton	0%	4.20E-06
						Arsenic	7440382	1.19E-08	lb/ton	0%	5.94E-06
						Beryllium	7440417	8.68E-10	lb/ton	0%	4.34E-07
						Cadmium	7440439	1.45E-09	lb/ton	0%	7.27E-07
						Chromium	7440473	3.71E-09	lb/ton	0%	1.85E-06
						Cobalt	7440484	4.12E-09	lb/ton	0%	2.06E-06
						Lead	7439921	6.68E-08	lb/ton	0%	3.34E-05
						Manganese	7439965	1.94E-08	lb/ton	0%	9.69E-06
						Mercury	7439976	2.54E-10	lb/ton	0%	1.27E-07
						Nickel	7440020	6.11E-09	lb/ton	0%	3.05E-06
						Selenium	7782492	7.68E-09	lb/ton	0%	3.84E-06
013-380c	Wind Erosion of Stockpile Grizzly 1 Oversize and Undersize Stockpiles	HWindSG1	F	0.50	acre-yr	Antimony	7440360	1.75E-06	lb/acre-hr	0%	8.74E-07
						Arsenic	7440382	2.47E-06	lb/acre-hr	0%	1.23E-06
						Beryllium	7440417	1.80E-07	lb/acre-hr	0%	9.02E-08
						Cadmium	7440439	3.02E-07	lb/acre-hr	0%	1.51E-07
						Chromium	7440473	7.70E-07	lb/acre-hr	0%	3.85E-07
						Cobalt	7440484	8.56E-07	lb/acre-hr	0%	4.28E-07
						Lead	7439921	1.39E-05	lb/acre-hr	0%	6.94E-06
						Manganese	7439965	4.03E-06	lb/acre-hr	0%	2.01E-06
						Mercury	7439976	5.27E-08	lb/acre-hr	0%	2.64E-08
						Nickel	7440020	1.27E-06	lb/acre-hr	0%	6.34E-07
						Selenium	7782492	1.60E-06	lb/acre-hr	0%	7.98E-07
013-381a	Material Transfer to Stockpile Grizzly 2 and Stockpile Grizzly 2 Screening	G3ScreenC	F	500	tons	Antimony	7440360	7.08E-09	lb/ton	0%	3.54E-06
						Arsenic	7440382	1.00E-08	lb/ton	0%	5.00E-06
						Beryllium	7440417	7.31E-10	lb/ton	0%	3.65E-07
						Cadmium	7440439	1.22E-09	lb/ton	0%	6.12E-07
						Chromium	7440473	3.12E-09	lb/ton	0%	1.56E-06
						Cobalt	7440484	3.47E-09	lb/ton	0%	1.73E-06
						Lead	7439921	5.62E-08	lb/ton	0%	2.81E-05
						Manganese	7439965	1.63E-08	lb/ton	0%	8.16E-06
						Mercury	7439976	2.13E-10	lb/ton	0%	1.07E-07
						Nickel	7440020	5.14E-09	lb/ton	0%	2.57E-06
						Selenium	7782492	6.46E-09	lb/ton	0%	3.23E-06
013-381b	Material Transfer from Stockpile Grizzly 2 to Oversize and Undersize Stockpiles	SGTrUnprt	F	500	tons	Antimony	7440360	8.41E-09	lb/ton	0%	4.20E-06
						Arsenic	7440382	1.19E-08	lb/ton	0%	5.94E-06
						Beryllium	7440417	8.68E-10	lb/ton	0%	4.34E-07
						Cadmium	7440439	1.45E-09	lb/ton	0%	7.27E-07
						Chromium	7440473	3.71E-09	lb/ton	0%	1.85E-06
						Cobalt	7440484	4.12E-09	lb/ton	0%	2.06E-06
						Lead	7439921	6.68E-08	lb/ton	0%	3.34E-05
						Manganese	7439965	1.94E-08	lb/ton	0%	9.69E-06
						Mercury	7439976	2.54E-10	lb/ton	0%	1.27E-07
						Nickel	7440020	6.11E-09	lb/ton	0%	3.05E-06
						Selenium	7782492	7.68E-09	lb/ton	0%	3.84E-06
013-381c	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles	HWindSG2	F	0.50	acre-yr	Antimony	7440360	1.75E-06	lb/acre-hr	0%	8.74E-07
						Arsenic	7440382	2.47E-06	lb/acre-hr	0%	1.23E-06
						Beryllium	7440417	1.80E-07	lb/acre-hr	0%	9.02E-08
						Cadmium	7440439	3.02E-07	lb/acre-hr	0%	1.51E-07
						Chromium	7440473	7.70E-07	lb/acre-hr	0%	3.85E-07
						Cobalt	7440484	8.56E-07	lb/acre-hr	0%	4.28E-07
						Lead	7439921	1.39E-05	lb/acre-hr	0%	6.94E-06
						Manganese	7439965	4.03E-06	lb/acre-hr	0%	2.01E-06
						Mercury	7439976	5.27E-08	lb/acre-hr	0%	2.64E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
013-381c (cont'd)	Wind Erosion of Stockpile Grizzly 2 Oversize and Undersize Stockpiles (cont'd)	HWindSG2 (cont'd)	F (cont'd)	0.50	acre-yr (cont'd)	Nickel	7440020	1.27E-06	lb/acre-hr	0%	6.34E-07
						Selenium	7782492	1.60E-06	lb/acre-hr	0%	7.98E-07
Total of Non-Fugitive Emissions for Operation 013:											*0.00E+00*
Total of Fugitive Emissions for Operation 013:											*4.59E-03*
Total of Non-Fugitive and Fugitive Emissions for Operation 013:											*4.59E-03*
Operation 014: Concentrate Leach Plant											
014-242	Natural Gas Startup Boiler (17.64 MMBtu/hr)	SGB	NF	17.64	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	8.65E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.15E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.11E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	2.77E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.11E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.11E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.15E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.11E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	3.63E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.08E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.11E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.08E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.11E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.11E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.08E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.08E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.19E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	4.84E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.30E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.11E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.11E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.05E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	2.94E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	8.65E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	5.88E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.46E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.08E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	1.90E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.42E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.45E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	6.57E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	4.50E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	3.63E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.15E-07
014-239	Pressure Leach Vessel 1 and Pressure Leach Vessel 2 Controlled by PLV 2-Stage Scrubber	PLV2S	NF	1	hours	Antimony	7440360	1.41E-05	lb/hr	0%	1.41E-05
						Arsenic	7440382	1.94E-05	lb/hr	0%	1.94E-05
						Beryllium	7440417	3.75E-06	lb/hr	0%	3.75E-06
						Cadmium	7440439	9.06E-05	lb/hr	0%	9.06E-05
						Chromium	7440473	8.86E-06	lb/hr	0%	8.86E-06
						Cobalt	7440484	1.23E-04	lb/hr	0%	1.23E-04
						Lead	7439921	1.48E-04	lb/hr	0%	1.48E-04
						Manganese	7439965	2.56E-05	lb/hr	0%	2.56E-05
						Mercury	7439976	6.22E-07	lb/hr	0%	6.22E-07
						Nickel	7440020	3.50E-05	lb/hr	0%	3.50E-05
						Selenium	7782492	6.50E-05	lb/hr	0%	6.50E-05
014-240	PLV Cooling Tower	PCT	F	600	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	1.45E-12	lb/1000 gal	0%	8.72E-10
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	3.63E-12	lb/1000 gal	0%	2.18E-09
						Manganese	7439965	1.80E-10	lb/1000 gal	0%	1.08E-07
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
014-241	Oxygen Plant Cooling Tower 1	OCT1	F	309	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	7.26E-13	lb/1000 gal	0%	2.24E-10

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
014-241 (cont'd)	Oxygen Plant Cooling Tower 1 (cont'd)	OCT1 (cont'd)	F (cont'd)	309	1000 gal (cont'd)	Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	1.82E-12	lb/1000 gal	0%	5.61E-10
						Manganese	7439965	8.99E-11	lb/1000 gal	0%	2.78E-08
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
Total of Non-Fugitive Emissions for Operation 014:											*3.32E-02*
Total of Fugitive Emissions for Operation 014:											*1.40E-07*
Total of Non-Fugitive and Fugitive Emissions for Operation 014:											*3.32E-02*
Operation 015: Diesel Emergency Engines											
015-262	GO Diesel Emergency Generator GNO37A (809 hp engine)	GNO37A	NF	809	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	4.39E-03
						Toluene	108883	1.97E-06	lb/hp-hr	0%	1.59E-03
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	1.09E-03
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	4.47E-04
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	1.43E-04
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	4.46E-05
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	7.36E-04
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	5.23E-05
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	2.65E-05
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	7.25E-05
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	2.31E-04
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	6.97E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	2.28E-05
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	2.10E-05
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	3.52E-06
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	8.66E-06
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	6.29E-06
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	1.23E-06
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	1.46E-06
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	2.34E-06
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	1.96E-06
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	3.15E-06
015-414	Metcalf Concentrator Diesel Emergency Generator GNO38A (810 hp engine)	GNO38A	NF	810	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	4.40E-03
						Toluene	108883	1.97E-06	lb/hp-hr	0%	1.59E-03
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	1.09E-03
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	4.47E-04
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	1.43E-04
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	4.47E-05
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	7.37E-04
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	5.23E-05
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	2.65E-05
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	7.26E-05
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	2.31E-04
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	6.97E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	2.29E-05
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	2.10E-05
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	3.53E-06
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	8.68E-06
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	6.29E-06
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	1.24E-06
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	1.46E-06
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	2.35E-06
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	1.96E-06
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	3.15E-06
015-415	ETPS Diesel Emergency Generator GNO36A (324 hp engine)	GNO36A	NF	324	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	2.12E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	9.28E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	6.46E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	8.87E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	2.68E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.74E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	2.10E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.92E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.15E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	3.22E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	6.62E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	6.67E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	4.24E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
015-415 (cont'd)	ETPS Diesel Emergency Generator GNO36A (324 hp engine) (cont'd)	GNO36A (cont'd)	NF (cont'd)	324	hp-hr (cont'd)	Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.73E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.08E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	3.81E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	8.01E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	2.25E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	3.52E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	4.26E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	8.51E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	1.32E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.11E-06
015-419	NTPS Diesel Emergency Generator GNO46A (220 hp engine)	GNO46A	NF	220	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.44E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	6.30E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	4.39E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	6.02E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.82E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.18E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.42E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.31E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	7.79E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	2.19E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	4.50E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	4.53E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	2.88E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.17E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	7.36E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	2.59E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	5.44E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	1.53E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	2.39E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	2.90E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	5.78E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	8.98E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	7.53E-07
015-421	Central SX Diesel Emergency Generator GNO95A (66 hp engine)	GNO95A	NF	66	hp-hr	Benzene	71432	3.96E-06	lb/hp-hr	0%	2.61E-04
						Toluene	108883	1.74E-06	lb/hp-hr	0%	1.15E-04
						Xylenes	1330207	1.21E-06	lb/hp-hr	0%	7.98E-05
						1,3-Butadiene	106990	1.66E-07	lb/hp-hr	0%	1.10E-05
						Formaldehyde	50000	5.01E-06	lb/hp-hr	0%	3.31E-04
						Acetaldehyde	75070	3.26E-06	lb/hp-hr	0%	2.15E-04
						Acrolein	107028	3.93E-07	lb/hp-hr	0%	2.59E-05
						Naphthalene	91203	3.60E-07	lb/hp-hr	0%	2.38E-05
						Acenaphthylene	208968	2.15E-08	lb/hp-hr	0%	1.42E-06
						Acenaphthene	83329	6.03E-09	lb/hp-hr	0%	3.98E-07
						Fluorene	86737	1.24E-07	lb/hp-hr	0%	8.18E-06
						Phenanthrene	85018	1.25E-07	lb/hp-hr	0%	8.24E-06
						Anthracene	120127	7.94E-09	lb/hp-hr	0%	5.24E-07
						Fluoranthene	206440	3.23E-08	lb/hp-hr	0%	2.13E-06
						Pyrene	129000	2.03E-08	lb/hp-hr	0%	1.34E-06
						Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr	0%	4.71E-07
						Chrysene	218019	1.50E-09	lb/hp-hr	0%	9.89E-08
						Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr	0%	2.78E-08
						Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr	0%	4.34E-08
						Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr	0%	5.27E-08
						Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr	0%	1.05E-07
						Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr	0%	1.63E-07
						Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr	0%	1.37E-07
015-429	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine)	Tier3-130/225	NF	225	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.47E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	6.44E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	4.49E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	6.16E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.86E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.21E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.46E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.34E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	7.97E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	2.24E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	4.60E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
015-429 (cont'd)	Stargo MFL Emergency Diesel Pump Engine LS-234 (225 hp engine) (cont'd)	Tier3-130/225 (cont'd)	NF (cont'd)	225	hp-hr (cont'd)	Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	4.63E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	2.95E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.20E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	7.53E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	2.65E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	5.56E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	1.56E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	2.44E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	2.96E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	5.91E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	9.18E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	7.70E-07
015-434	Metcalf Diesel Fire Pump Engine (350 hp engine)	MFPE	NF	350	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	2.29E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.00E-03
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	6.98E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	9.58E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	2.89E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	1.88E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	2.27E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	2.08E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.24E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	3.48E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	7.15E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	7.20E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	4.58E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	1.86E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.17E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	4.12E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	8.65E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	2.43E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	3.80E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	4.61E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	9.19E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	1.43E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.20E-06
015-439	Emergency Diesel Generator WWTP GNO61A (1141 hp engine)	GNO61A	NF	1,141	hp-hr	Benzene	71432	5.43E-06	lb/hp-hr	0%	6.20E-03
						Toluene	108883	1.97E-06	lb/hp-hr	0%	2.24E-03
						Xylenes	1330207	1.35E-06	lb/hp-hr	0%	1.54E-03
						Formaldehyde	50000	5.52E-07	lb/hp-hr	0%	6.30E-04
						Acetaldehyde	75070	1.76E-07	lb/hp-hr	0%	2.01E-04
						Acrolein	107028	5.52E-08	lb/hp-hr	0%	6.29E-05
						Naphthalene	91203	9.10E-07	lb/hp-hr	0%	1.04E-03
						Acenaphthylene	208968	6.46E-08	lb/hp-hr	0%	7.37E-05
						Acenaphthene	83329	3.28E-08	lb/hp-hr	0%	3.74E-05
						Fluorene	86737	8.96E-08	lb/hp-hr	0%	1.02E-04
						Phenanthrene	85018	2.86E-07	lb/hp-hr	0%	3.26E-04
						Anthracene	120127	8.61E-09	lb/hp-hr	0%	9.82E-06
						Fluoranthene	206440	2.82E-08	lb/hp-hr	0%	3.22E-05
						Pyrene	129000	2.60E-08	lb/hp-hr	0%	2.96E-05
						Benz(a)anthracene	56553	4.35E-09	lb/hp-hr	0%	4.97E-06
						Chrysene	218019	1.07E-08	lb/hp-hr	0%	1.22E-05
						Benzo(b)fluoranthene	205992	7.77E-09	lb/hp-hr	0%	8.87E-06
						Benzo(k)fluoranthene	207089	1.53E-09	lb/hp-hr	0%	1.74E-06
						Benzo(a)pyrene	50328	1.80E-09	lb/hp-hr	0%	2.05E-06
						Indeno(1,2,3-cd)pyrene	193395	2.90E-09	lb/hp-hr	0%	3.31E-06
						Dibenz(a,h)anthracene	53703	2.42E-09	lb/hp-hr	0%	2.76E-06
						Benzo(g,h,i)perylene	191242	3.89E-09	lb/hp-hr	0%	4.44E-06
015-442	Metcalf Clean Room Diesel Emergency Generator (69 hp engine)	MCR	NF	69	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	4.51E-04
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.98E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.38E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	1.89E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	5.70E-04
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	3.70E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	4.47E-05
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	4.10E-05
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	2.44E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	6.86E-07

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
015-442 (cont'd)	Metcalf Clean Room Diesel Emergency Generator (69 hp engine) (cont'd)	MCR (cont'd)	NF (cont'd)	69	hp-hr (cont'd)	Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.41E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.42E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	9.03E-07
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	3.68E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	2.31E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	8.11E-07
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.70E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	4.79E-08
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	7.49E-08
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	9.08E-08
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.81E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	2.82E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	2.36E-07
015-461	Metcalf Mill Diesel Emergency Generator (539 hp engine)	Tier3-225/450	NF	539	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	3.52E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	1.54E-03
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	1.08E-03
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	1.48E-04
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	4.45E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	2.89E-03
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	3.49E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	3.20E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	1.91E-05
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	5.36E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	1.10E-04
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	1.11E-04
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	7.06E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	2.87E-05
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	1.80E-05
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	6.34E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	1.33E-06
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	3.74E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	5.85E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	7.09E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	1.41E-06
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	2.20E-06
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	1.84E-06
Total of Non-Fugitive Emissions for Operation 015:											*7.83E-02*
Total of Fugitive Emissions for Operation 015:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 015:											*7.83E-02*
Operation 017: Metcalf Concentrator											
017-318	Processes Controlled by Secondary Screen Feed Bin FFDC	FFDC318	NF	408,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	4.37E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	6.02E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	4.08E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	4.08E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	8.16E-07
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.34E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	1.77E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	6.99E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.16E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	2.86E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	3.61E-06
017-280	Processes Controlled by Secondary Screening FFDC 1	FFDC280	NF	1,572,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.68E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	2.32E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.57E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.57E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	3.14E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	5.17E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	6.83E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.69E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	4.46E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.10E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.39E-05
017-281	Processes Controlled by Secondary Screening FFDC 2	FFDC281	NF	1,554,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.67E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	2.29E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.55E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.55E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	3.11E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
017-281 (cont'd)	Processes Controlled by Secondary Screening FFDC 2 (cont'd)	FFDC281 (cont'd)	NF (cont'd)	1,554,000	dscf (cont'd)	Cobalt	7440484	3.29E-12	lb/dscf	0%	5.11E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	6.75E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.66E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	4.41E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.09E-05
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.38E-05
017-319	Processes Controlled by Secondary Crusher Feed Bin FFDC	FFDC319	NF	222,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.38E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.27E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.22E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.22E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	4.44E-07
						Cobalt	7440484	3.29E-12	lb/dscf	0%	7.29E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	9.64E-06
						Manganese	7439965	1.71E-12	lb/dscf	0%	3.81E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	6.30E-08
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.55E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.97E-06
017-283	Processes Controlled by Secondary Crushing FFDC 1	FFDC283	NF	528,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	5.66E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	7.78E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	5.28E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	5.28E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.06E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.73E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.29E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	9.05E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.50E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	3.70E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	4.68E-06
017-284	Processes Controlled by Secondary Crushing FFDC 2	FFDC284	NF	672,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	7.20E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	9.91E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.72E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.72E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.34E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	2.21E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.92E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.15E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.91E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.70E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	5.95E-06
017-285	Processes Controlled by Crushed Ore A/B Conveyor Transfer Point FFDC	FFDC285	NF	246,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.64E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.63E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.46E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.46E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	4.92E-07
						Cobalt	7440484	3.29E-12	lb/dscf	0%	8.08E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	1.07E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	4.22E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	6.99E-08
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.72E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	2.18E-06
017-286	Processes Controlled by Crushed Ore B/Tripper Conveyor Transfer Point FFDC	FFDC286	NF	1,224,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.31E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.80E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.22E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.22E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.45E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	4.02E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	5.32E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.10E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.48E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	8.57E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.08E-05
017-287	Processes Controlled by Crushed Ore Bin FFDC 1	FFDC287	NF	1,374,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.47E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	2.03E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.37E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.37E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.75E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	4.51E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
017-287 (cont'd)	Processes Controlled by Crushed Ore Bin FFDC 1 (cont'd)	FFDC287 (cont'd)	NF (cont'd)	1,374,000	dscf (cont'd)	Lead	7439921	4.34E-11	lb/dscf	0%	5.97E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.36E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.90E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	9.62E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.22E-05
017-288	Processes Controlled by Crushed Ore Bin FFDC 2	FFDC288	NF	1,200,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.29E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.77E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.20E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.20E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.40E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	5.21E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.06E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.41E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	8.40E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.06E-05
017-289	Processes Controlled by Crushed Ore Bin FFDC 3	FFDC289	NF	1,200,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.29E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.77E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.20E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.20E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.40E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	5.21E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.06E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.41E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	8.40E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.06E-05
017-290	Processes Controlled by Crushed Ore Bin FFDC 4	FFDC290	NF	1,200,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	1.29E-05
						Arsenic	7440382	1.47E-11	lb/dscf	0%	1.77E-05
						Beryllium	7440417	1.00E-12	lb/dscf	0%	1.20E-06
						Cadmium	7440439	1.00E-12	lb/dscf	0%	1.20E-06
						Chromium	7440473	2.00E-12	lb/dscf	0%	2.40E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	3.94E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	5.21E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	2.06E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	3.41E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	8.40E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.06E-05
017-291	Processes Controlled by Crushed Ore Transfers FFDC	FFDC291	NF	612,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	6.56E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	9.02E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.12E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.12E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.22E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	2.01E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.66E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.05E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.74E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.28E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	5.42E-06
017-292	Processes Controlled by HRC/HPGR Crusher FFDC	FFDC292	NF	600,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	6.43E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	8.85E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	6.00E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	6.00E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	1.20E-06
						Cobalt	7440484	3.29E-12	lb/dscf	0%	1.97E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.61E-05
						Manganese	7439965	1.71E-12	lb/dscf	0%	1.03E-06
						Mercury	7439976	2.84E-13	lb/dscf	0%	1.70E-07
						Nickel	7440020	7.00E-12	lb/dscf	0%	4.20E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	5.31E-06
017-294	Processes Controlled by Wet Screen Feed FFDC	FFDC294	NF	210,000	dscf	Antimony	7440360	1.07E-11	lb/dscf	0%	2.25E-06
						Arsenic	7440382	1.47E-11	lb/dscf	0%	3.10E-06
						Beryllium	7440417	1.00E-12	lb/dscf	0%	2.10E-07
						Cadmium	7440439	1.00E-12	lb/dscf	0%	2.10E-07
						Chromium	7440473	2.00E-12	lb/dscf	0%	4.20E-07
						Cobalt	7440484	3.29E-12	lb/dscf	0%	6.90E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	9.12E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
017-294 (cont'd)	Processes Controlled by Wet Screen Feed FFDC (cont'd)	FFDC294 (cont'd)	NF (cont'd)	210,000	dscf (cont'd)	Manganese	7439965	1.71E-12	lb/dscf	0%	3.60E-07
						Mercury	7439976	2.84E-13	lb/dscf	0%	5.96E-08
						Nickel	7440020	7.00E-12	lb/dscf	0%	1.47E-06
						Selenium	7782492	8.86E-12	lb/dscf	0%	1.86E-06
017-327	Metcalf Concentrator Bulk Flotation	BFO	F	0.062	tons	Benzene	71432	4.47E-03	lb/ton	0%	2.76E-04
						Ethylbenzene	100414	7.52E-03	lb/ton	0%	4.65E-04
						n-Hexane	110543	9.40E-04	lb/ton	0%	5.82E-05
						Toluene	108883	5.38E-02	lb/ton	0%	3.33E-03
						m-Xylene	1330207	1.40E-01	lb/ton	0%	8.68E-03
Total of Non-Fugitive Emissions for Operation 017:											*1.21E-03*
Total of Fugitive Emissions for Operation 017:											*1.28E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 017:											*1.40E-02*
Operation 018: Combined Molybdenum Flotation and Molybdenum Concentrate Processing Operations											
018-334a	Molybdenum Filter to Molybdenum Filter Discharge Hopper	MCTrPrt	NF	6.93	tons	Antimony	7440360	4.28E-09	lb/ton	0%	2.97E-08
						Arsenic	7440382	1.18E-09	lb/ton	0%	8.17E-09
						Beryllium	7440417	1.79E-10	lb/ton	0%	1.24E-09
						Cadmium	7440439	1.79E-10	lb/ton	0%	1.24E-09
						Chromium	7440473	3.59E-10	lb/ton	0%	2.49E-09
						Cobalt	7440484	5.90E-10	lb/ton	0%	4.09E-09
						Lead	7439921	4.87E-10	lb/ton	0%	3.38E-09
						Manganese	7439965	3.08E-10	lb/ton	0%	2.13E-09
						Mercury	7439976	3.10E-10	lb/ton	0%	2.15E-09
						Nickel	7440020	1.26E-09	lb/ton	0%	8.71E-09
						Selenium	7782492	1.31E-08	lb/ton	0%	9.04E-08
018-334b	Molybdenum Filter Screw Conveyor to Shipping Container (Molybdenum Packaging)	MCTrPrt	F	6.93	tons	Antimony	7440360	4.28E-09	lb/ton	0%	2.97E-08
						Arsenic	7440382	1.18E-09	lb/ton	0%	8.17E-09
						Beryllium	7440417	1.79E-10	lb/ton	0%	1.24E-09
						Cadmium	7440439	1.79E-10	lb/ton	0%	1.24E-09
						Chromium	7440473	3.59E-10	lb/ton	0%	2.49E-09
						Cobalt	7440484	5.90E-10	lb/ton	0%	4.09E-09
						Lead	7439921	4.87E-10	lb/ton	0%	3.38E-09
						Manganese	7439965	3.08E-10	lb/ton	0%	2.13E-09
						Mercury	7439976	3.10E-10	lb/ton	0%	2.15E-09
						Nickel	7440020	1.26E-09	lb/ton	0%	8.71E-09
						Selenium	7782492	1.31E-08	lb/ton	0%	9.04E-08
018-336	Processes Controlled by H2S Scrubber System	H2S	NF	1	hours	Antimony	7440360	7.26E-05	lb/hr	0%	7.26E-05
						Arsenic	7440382	2.00E-05	lb/hr	0%	2.00E-05
						Beryllium	7440417	3.04E-06	lb/hr	0%	3.04E-06
						Cadmium	7440439	3.04E-06	lb/hr	0%	3.04E-06
						Chromium	7440473	6.09E-06	lb/hr	0%	6.09E-06
						Cobalt	7440484	1.00E-05	lb/hr	0%	1.00E-05
						Lead	7439921	8.26E-06	lb/hr	0%	8.26E-06
						Manganese	7439965	5.22E-06	lb/hr	0%	5.22E-06
						Mercury	7439976	5.26E-06	lb/hr	0%	5.26E-06
						Nickel	7440020	2.13E-05	lb/hr	0%	2.13E-05
						Selenium	7782492	2.21E-04	lb/hr	0%	2.21E-04
Total of Non-Fugitive Emissions for Operation 018:											*3.76E-04*
Total of Fugitive Emissions for Operation 018:											*1.54E-07*
Total of Non-Fugitive and Fugitive Emissions for Operation 018:											*3.76E-04*
Operation 021: Propane and Natural Gas Emergency Engines											
021-367	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.36E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.03E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.73E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	8.81E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.69E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	3.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	3.49E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.35E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.71E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.82E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.29E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.83E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.72E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.06E-04

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
021-367 (cont'd)	Western King Site 1 Propane Emergency Generator GNO21A (12.65 hp engine) (cont'd)	Generac2 (cont'd)	NF (cont'd)	12.65	hp-hr (cont'd)	Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	5.47E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.29E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.87E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.58E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	7.41E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	9.54E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.59E-05
021-368	Western King Site 2 Propane Emergency Generator GNO20A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.60E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.57E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.33E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.80E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.30E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.86E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.70E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.62E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.82E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.32E-05
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.41E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.54E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.19E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.10E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	3.14E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.23E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.96E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.45E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.22E-05
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.72E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	7.37E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.00E-04
021-369	Engineering Yard Propane Emergency Generator GNO19A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.60E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.57E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.33E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.80E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.30E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.86E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.70E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.62E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.82E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.32E-05
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.41E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.54E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.19E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.10E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	3.14E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.23E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.96E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.45E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.22E-05
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.72E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	7.37E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.00E-04
021-371	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine)	Cummins1	NF	97.70	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.60E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.57E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.33E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.80E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.30E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.86E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.70E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.62E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.82E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.32E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
021-371 (cont'd)	Hoopes Hill Site 2 Propane Emergency Generator GNO18A (97.7 hp engine) (cont'd)	Cummins1 (cont'd)	NF (cont'd)	97.70	hp-hr (cont'd)	Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.41E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.54E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.19E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.10E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	3.14E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.23E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.96E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.45E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.22E-05
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.72E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	7.37E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.00E-04
021-372	Silver Basin Site 2 Propane Emergency Generator GNO17A (97.7 hp engine)	Cummins2	NF	97.70	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	2.60E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	1.57E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.16E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.33E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	6.80E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.30E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	2.86E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	2.70E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	1.62E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	1.82E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.32E-05
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.41E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	2.54E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.19E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.10E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	3.14E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	4.23E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	9.96E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.45E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.22E-05
						Toluene	108883	5.86E-06	lb/hp-hr	0%	5.72E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	7.37E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.00E-04
021-373	Flagpole Propane Emergency Generator GNO22A (36.14 hp engine)	P1CII	NF	36.14	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	9.60E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.81E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	4.29E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	4.29E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	4.93E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.52E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.82E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	1.06E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	9.98E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	6.00E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	6.72E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	4.90E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	5.20E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	9.41E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	8.08E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	7.78E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.16E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.56E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.68E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	5.35E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	4.52E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	2.12E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.72E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	7.40E-05
021-374	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine)	Generac2	NF	12.65	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.36E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.03E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.73E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	8.81E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.69E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
021-374 (cont'd)	Hoopes Hill Site 1 Propane Emergency Generator GNO47A (12.65 hp engine) (cont'd)	Generac2 (cont'd)	NF (cont'd)	12.65	hp-hr (cont'd)	Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	3.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	3.49E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.35E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.71E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.82E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.29E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.83E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.72E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.06E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	5.47E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.29E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.87E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.58E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	7.41E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	9.54E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.59E-05
021-377	Garfield Connex Propane Emergency Generator GNO48A (12.65 hp engine)	Generac1	NF	12.65	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.36E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.03E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.73E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	8.81E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.69E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	3.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	3.49E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.35E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.71E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.82E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.29E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.83E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.72E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.06E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	5.47E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.29E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.87E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.58E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	7.41E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	9.54E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.59E-05
021-417	Mine Gate Guard Shack Propane Emergency Generator GNO26A (12.65 hp engine)	Generac3	NF	12.65	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.36E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.03E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.50E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	1.73E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	8.81E-05
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.69E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	3.71E-04
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	3.49E-04
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.10E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.35E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.71E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	1.82E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.29E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	2.83E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	2.72E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.06E-04
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	5.47E-06
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.29E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	1.87E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.58E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	7.41E-05
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	9.54E-07
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	2.59E-05
021-435	GSC Propane Emergency Generator GNO23A (37 hp engine)	P1CII	NF	37	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	9.83E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.94E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
021-435 (cont'd)	GSC Propane Emergency Generator GNO23A (37 hp engine) (cont'd)	P1CII (cont'd)	NF (cont'd)	37	hp-hr (cont'd)	1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	4.39E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	4.39E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	5.05E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.58E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.93E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	1.08E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	1.02E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	6.14E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	6.88E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	5.01E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	5.32E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	9.63E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	8.28E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	7.96E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.19E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.60E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.77E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	5.48E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	4.62E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	2.17E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.79E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	7.58E-05
021-436	Metcalf Mine Office Propane Emergency Generator GNO24A (37 hp engine)	P1CII	NF	37	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	9.83E-06
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	5.94E-06
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	4.39E-06
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	4.39E-06
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	5.05E-06
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	2.58E-04
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	4.93E-06
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	1.08E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	1.02E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	6.14E-04
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	6.88E-06
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	5.01E-06
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	5.32E-06
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	9.63E-06
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	8.28E-06
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	7.96E-03
						Methanol	67561	3.21E-05	lb/hp-hr	0%	1.19E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	1.60E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	3.77E-05
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	5.48E-05
						Styrene	100425	1.25E-07	lb/hp-hr	0%	4.62E-06
						Toluene	108883	5.86E-06	lb/hp-hr	0%	2.17E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	2.79E-06
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	7.58E-05
021-447	Sunridge Propane Emergency Generator GNO85A (147 hp engine)	GNO85A	NF	147	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.91E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.36E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.74E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.74E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	2.01E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.02E-03
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.96E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	4.31E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	4.06E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.44E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.73E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.99E-05
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	2.11E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.83E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	3.29E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	3.16E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.72E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	6.36E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.50E-04
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	2.18E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.84E-05

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
021-447 (cont'd)	Sunridge Propane Emergency Generator GNO85A (147 hp engine) (cont'd)	GNO85A (cont'd)	NF (cont'd)	147	hp-hr (cont'd)	Toluene	108883	5.86E-06	lb/hp-hr	0%	8.61E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.11E-05
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	3.01E-04
021-509	GSC Natural Gas Emergency Generator (460 hp engine)	GSC-NG	NF	460	hp-hr	1,1,2,2-Tetrachloroethane	79345	1.28E-08	lb/hp-hr	0%	5.90E-06
						1,1,2-Trichloroethane	79005	7.75E-09	lb/hp-hr	0%	3.57E-06
						1,1-Dichloroethane	75343	5.72E-09	lb/hp-hr	0%	2.63E-06
						1,2-Dichloroethane	107062	5.72E-09	lb/hp-hr	0%	2.63E-06
						1,2-Dichloropropane	78875	6.59E-09	lb/hp-hr	0%	3.03E-06
						1,3-Butadiene	106990	3.36E-07	lb/hp-hr	0%	1.54E-04
						1,3-Dichloropropene	542756	6.43E-09	lb/hp-hr	0%	2.96E-06
						Acetaldehyde	75070	1.41E-06	lb/hp-hr	0%	6.50E-04
						Acrolein	107028	1.33E-06	lb/hp-hr	0%	6.13E-04
						Benzene	71432	8.00E-07	lb/hp-hr	0%	3.68E-04
						Carbon Tetrachloride	56235	8.97E-09	lb/hp-hr	0%	4.12E-06
						Chlorobenzene	108907	6.53E-09	lb/hp-hr	0%	3.01E-06
						Chloroform	67663	6.94E-09	lb/hp-hr	0%	3.19E-06
						Ethylbenzene	100414	1.26E-08	lb/hp-hr	0%	5.78E-06
						Ethylene Dibromide	106934	1.08E-08	lb/hp-hr	0%	4.96E-06
						Formaldehyde	50000	1.04E-05	lb/hp-hr	0%	4.78E-03
						Methanol	67561	1.55E-06	lb/hp-hr	0%	7.13E-04
						Methylene Chloride	75092	2.09E-08	lb/hp-hr	0%	9.60E-06
						Naphthalene	91203	4.92E-08	lb/hp-hr	0%	2.26E-05
						Polycyclic Aromatic Hydrocarbons	250	7.14E-08	lb/hp-hr	0%	3.29E-05
						Styrene	100425	6.03E-09	lb/hp-hr	0%	2.77E-06
						Toluene	108883	2.83E-07	lb/hp-hr	0%	1.30E-04
						Vinyl Chloride	75014	3.64E-09	lb/hp-hr	0%	1.67E-06
						Xylene	1330207	9.88E-08	lb/hp-hr	0%	4.54E-05
021-510	Metcalf Mine Office Propane Emergency Generator GNO24B (147 hp engine)	GNO24B	NF	147	hp-hr	1,1,2,2-Tetrachloroethane	79345	2.66E-07	lb/hp-hr	0%	3.91E-05
						1,1,2-Trichloroethane	79005	1.61E-07	lb/hp-hr	0%	2.36E-05
						1,1-Dichloroethane	75343	1.19E-07	lb/hp-hr	0%	1.74E-05
						1,2-Dichloroethane	107062	1.19E-07	lb/hp-hr	0%	1.74E-05
						1,2-Dichloropropane	78875	1.37E-07	lb/hp-hr	0%	2.01E-05
						1,3-Butadiene	106990	6.96E-06	lb/hp-hr	0%	1.02E-03
						1,3-Dichloropropene	542756	1.33E-07	lb/hp-hr	0%	1.96E-05
						Acetaldehyde	75070	2.93E-05	lb/hp-hr	0%	4.31E-03
						Acrolein	107028	2.76E-05	lb/hp-hr	0%	4.06E-03
						Benzene	71432	1.66E-05	lb/hp-hr	0%	2.44E-03
						Carbon Tetrachloride	56235	1.86E-07	lb/hp-hr	0%	2.73E-05
						Chlorobenzene	108907	1.35E-07	lb/hp-hr	0%	1.99E-05
						Chloroform	67663	1.44E-07	lb/hp-hr	0%	2.11E-05
						Ethylbenzene	100414	2.60E-07	lb/hp-hr	0%	3.83E-05
						Ethylene Dibromide	106934	2.24E-07	lb/hp-hr	0%	3.29E-05
						Formaldehyde	50000	2.15E-04	lb/hp-hr	0%	3.16E-02
						Methanol	67561	3.21E-05	lb/hp-hr	0%	4.72E-03
						Methylene Chloride	75092	4.33E-07	lb/hp-hr	0%	6.36E-05
						Naphthalene	91203	1.02E-06	lb/hp-hr	0%	1.50E-04
						Polycyclic Aromatic Hydrocarbons	250	1.48E-06	lb/hp-hr	0%	2.18E-04
						Styrene	100425	1.25E-07	lb/hp-hr	0%	1.84E-05
						Toluene	108883	5.86E-06	lb/hp-hr	0%	8.61E-04
						Vinyl Chloride	75014	7.54E-08	lb/hp-hr	0%	1.11E-05
						Xylene	1330207	2.05E-06	lb/hp-hr	0%	3.01E-04
Total of Non-Fugitive Emissions for Operation 021:											*2.96E-01*
Total of Fugitive Emissions for Operation 021:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 021:											*2.96E-01*
Operation 023: Tailings Operations											
023-418	Wind Erosion of Tailings	HWindT	F	2,645	acre-yr	Antimony	7440360	8.85E-08	lb/acre-hr	0%	2.34E-04
						Arsenic	7440382	1.47E-07	lb/acre-hr	0%	3.90E-04
						Beryllium	7440417	1.97E-08	lb/acre-hr	0%	5.20E-05
						Cadmium	7440439	9.83E-09	lb/acre-hr	0%	2.60E-05
						Chromium	7440473	2.36E-07	lb/acre-hr	0%	6.24E-04
						Cobalt	7440484	7.12E-08	lb/acre-hr	0%	1.88E-04
						Lead	7439921	2.42E-07	lb/acre-hr	0%	6.39E-04
						Manganese	7439965	2.79E-06	lb/acre-hr	0%	7.38E-03
						Mercury	7439976	1.57E-09	lb/acre-hr	0%	4.16E-06
						Nickel	7440020	2.36E-07	lb/acre-hr	0%	6.24E-04
						Selenium	7782492	3.93E-07	lb/acre-hr	0%	1.04E-03
Total of Non-Fugitive Emissions for Operation 023:											*0.00E+00*

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
Total of Fugitive Emissions for Operation 023:											*1.12E-02*
Total of Non-Fugitive and Fugitive Emissions for Operation 023:											*1.12E-02*
Operation 024: Miscellaneous Fuel Burning Equipment											
024-420	Light Vehicle Propane Pressure Washer (0.318 MMBtu/hr)	PCI	NF	0.318	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	1.56E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	7.48E-09
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	5.61E-10
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	4.99E-09
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	5.61E-10
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	5.61E-10
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	7.48E-10
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	5.61E-10
						Benzene	71432	2.06E-06	lb/MMBtu	0%	6.55E-07
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	3.74E-10
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	5.61E-10
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	3.74E-10
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	5.61E-10
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	5.61E-10
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	3.74E-10
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	3.74E-07
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	9.35E-10
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	8.73E-10
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	2.34E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	5.61E-04
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	5.61E-10
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.90E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	5.30E-09
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	1.56E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.06E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	6.24E-08
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	3.74E-09
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	3.43E-07
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	4.36E-07
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	2.62E-08
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.18E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	8.11E-08
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	6.55E-07
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	7.48E-09
024-437	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr)	NGC	NF	0.504	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.47E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.19E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	8.89E-10
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	7.91E-09
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	8.89E-10
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	8.89E-10
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.19E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	8.89E-10
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.04E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	5.93E-10
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	8.89E-10
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	5.93E-10
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	8.89E-10
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	8.89E-10
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	5.93E-10
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	5.93E-07
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.48E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.38E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.71E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	8.89E-04
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	8.89E-10
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.01E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	8.40E-09
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.47E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.68E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	9.88E-08
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	5.93E-09
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	5.44E-07
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	6.92E-07
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	4.15E-08

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
024-437 (cont'd)	Locomotive Area Machine Shop Natural Gas Parts Washer (0.504 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	0.504	MMBtu (cont'd)	Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.88E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.28E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.04E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.19E-08
024-443a	Natural Gas Small Space Heaters (20.25 MMBtu/hr)	NGC	NF	20.25	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	9.92E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	4.76E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	3.57E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	3.18E-07
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	3.57E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	3.57E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	4.76E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	3.57E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	4.17E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	2.38E-08
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	3.57E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	2.38E-08
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	3.57E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	3.57E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	2.38E-08
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	2.38E-05
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	5.95E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	5.56E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	1.49E-03
						Hexane	110543	1.76E-03	lb/MMBtu	0%	3.57E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	3.57E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	1.21E-05
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	3.37E-07
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	9.92E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	6.75E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	3.97E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	2.38E-07
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	2.18E-05
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	2.78E-05
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	1.67E-06
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	7.54E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	5.16E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	4.17E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	4.76E-07
024-443b	Natural Gas Small Boilers (5.95 MMBtu/hr)	NGC	NF	5.95	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.91E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.40E-07
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	1.05E-08
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	9.33E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	1.05E-08
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	1.05E-08
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.40E-08
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	1.05E-08
						Benzene	71432	2.06E-06	lb/MMBtu	0%	1.22E-05
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	7.00E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	1.05E-08
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	7.00E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	1.05E-08
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	1.05E-08
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	7.00E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	7.00E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.75E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.63E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	4.37E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	1.05E-02
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	1.05E-08
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	3.56E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	9.91E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.91E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.98E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	1.17E-06
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	7.00E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	6.41E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	8.16E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
024-443b (cont'd)	Natural Gas Small Boilers (5.95 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	5.95	MMBtu (cont'd)	Cobalt	7440484	8.24E-08	lb/MMBtu	0%	4.90E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	2.22E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.52E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	1.22E-05
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.40E-07
024-444a	Propane Small Space Heaters (4.21 MMBtu/hr)	PCI	NF	4.21	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.06E-06
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	9.91E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	7.43E-09
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	6.61E-08
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	7.43E-09
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	7.43E-09
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	9.91E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	7.43E-09
						Benzene	71432	2.06E-06	lb/MMBtu	0%	8.67E-06
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	4.96E-09
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	7.43E-09
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	4.96E-09
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	7.43E-09
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	7.43E-09
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	4.96E-09
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	4.96E-06
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.24E-08
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.16E-08
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.10E-04
						Hexane	110543	1.76E-03	lb/MMBtu	0%	7.43E-03
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	7.43E-09
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	2.52E-06
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	7.02E-08
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.06E-08
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.40E-05
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	8.26E-07
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	4.96E-08
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	4.54E-06
						Chromium	7440473	1.37E-06	lb/MMBtu	0%	5.78E-06
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	3.47E-07
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.57E-06
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.07E-06
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	8.67E-06
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	9.91E-08
024-444b	Propane Small Boilers (0.469 MMBtu/hr)	PCI	NF	0.469	MMBtu	Lead	7439921	4.90E-07	lb/MMBtu	0%	2.30E-07
						2-Methylnaphthalene	91576	2.35E-08	lb/MMBtu	0%	1.10E-08
						3-Methylchloranthrene	56495	1.76E-09	lb/MMBtu	0%	8.28E-10
						7,12-Dimethylbenz(a)anthracene	57976	1.57E-08	lb/MMBtu	0%	7.36E-09
						Acenaphthene	83329	1.76E-09	lb/MMBtu	0%	8.28E-10
						Acenaphthylene	208968	1.76E-09	lb/MMBtu	0%	8.28E-10
						Anthracene	120127	2.35E-09	lb/MMBtu	0%	1.10E-09
						Benz(a)anthracene	56553	1.76E-09	lb/MMBtu	0%	8.28E-10
						Benzene	71432	2.06E-06	lb/MMBtu	0%	9.66E-07
						Benzo(a)pyrene	50328	1.18E-09	lb/MMBtu	0%	5.52E-10
						Benzo(b)fluoranthene	205992	1.76E-09	lb/MMBtu	0%	8.28E-10
						Benzo(g,h,i)perylene	191242	1.18E-09	lb/MMBtu	0%	5.52E-10
						Benzo(k)fluoranthene	207089	1.76E-09	lb/MMBtu	0%	8.28E-10
						Chrysene	218019	1.76E-09	lb/MMBtu	0%	8.28E-10
						Dibenz(a,h)anthracene	53703	1.18E-09	lb/MMBtu	0%	5.52E-10
						Dichlorobenzene	106467	1.18E-06	lb/MMBtu	0%	5.52E-07
						Fluoranthene	206440	2.94E-09	lb/MMBtu	0%	1.38E-09
						Fluorene	86737	2.75E-09	lb/MMBtu	0%	1.29E-09
						Formaldehyde	50000	7.35E-05	lb/MMBtu	0%	3.45E-05
						Hexane	110543	1.76E-03	lb/MMBtu	0%	8.28E-04
						Indeno(1,2,3-cd)pyrene	193395	1.76E-09	lb/MMBtu	0%	8.28E-10
						Naphthalene	91203	5.98E-07	lb/MMBtu	0%	2.80E-07
						Phenanthrene	85018	1.67E-08	lb/MMBtu	0%	7.82E-09
						Pyrene	129000	4.90E-09	lb/MMBtu	0%	2.30E-09
						Toluene	108883	3.33E-06	lb/MMBtu	0%	1.56E-06
						Arsenic	7440382	1.96E-07	lb/MMBtu	0%	9.20E-08
						Beryllium	7440417	1.18E-08	lb/MMBtu	0%	5.52E-09
						Cadmium	7440439	1.08E-06	lb/MMBtu	0%	5.06E-07

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
024-444b (cont'd)	Propane Small Boilers (0.469 MMBtu/hr) (cont'd)	PCI (cont'd)	NF (cont'd)	0.469	MMBtu (cont'd)	Chromium	7440473	1.37E-06	lb/MMBtu	0%	6.44E-07
						Cobalt	7440484	8.24E-08	lb/MMBtu	0%	3.86E-08
						Manganese	7439965	3.73E-07	lb/MMBtu	0%	1.75E-07
						Mercury	7439976	2.55E-07	lb/MMBtu	0%	1.20E-07
						Nickel	7440020	2.06E-06	lb/MMBtu	0%	9.66E-07
						Selenium	7782492	2.35E-08	lb/MMBtu	0%	1.10E-08
Total of Non-Fugitive Emissions for Operation 024:											*5.87E-02*
Total of Fugitive Emissions for Operation 024:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 024:											*5.87E-02*
Operation 025: Diesel Non-Emergency Engines											
025-431	West Rail Cut Non-Emergency Diesel Pump Engine LS-233 (173.8 hp engine)	Tier3-75/130-DN	NF	173.80	hp-hr	Benzene	71432	6.53E-06	lb/hp-hr	0%	1.14E-03
						Toluene	108883	2.86E-06	lb/hp-hr	0%	4.98E-04
						Xylenes	1330207	2.00E-06	lb/hp-hr	0%	3.47E-04
						1,3-Butadiene	106990	2.74E-07	lb/hp-hr	0%	4.76E-05
						Formaldehyde	50000	8.26E-06	lb/hp-hr	0%	1.44E-03
						Acetaldehyde	75070	5.37E-06	lb/hp-hr	0%	9.33E-04
						Acrolein	107028	6.48E-07	lb/hp-hr	0%	1.13E-04
						Naphthalene	91203	5.94E-07	lb/hp-hr	0%	1.03E-04
						Acenaphthylene	208968	3.54E-08	lb/hp-hr	0%	6.16E-06
						Acenaphthene	83329	9.94E-09	lb/hp-hr	0%	1.73E-06
						Fluorene	86737	2.04E-07	lb/hp-hr	0%	3.55E-05
						Phenanthrene	85018	2.06E-07	lb/hp-hr	0%	3.58E-05
						Anthracene	120127	1.31E-08	lb/hp-hr	0%	2.28E-06
						Fluoranthene	206440	5.33E-08	lb/hp-hr	0%	9.26E-06
						Pyrene	129000	3.35E-08	lb/hp-hr	0%	5.82E-06
						Benzo(a)anthracene	56553	1.18E-08	lb/hp-hr	0%	2.04E-06
						Chrysene	218019	2.47E-09	lb/hp-hr	0%	4.29E-07
						Benzo(b)fluoranthene	205992	6.94E-10	lb/hp-hr	0%	1.21E-07
						Benzo(k)fluoranthene	207089	1.09E-09	lb/hp-hr	0%	1.89E-07
						Benzo(a)pyrene	50328	1.32E-09	lb/hp-hr	0%	2.29E-07
						Indeno(1,2,3-cd)pyrene	193395	2.63E-09	lb/hp-hr	0%	4.56E-07
						Dibenz(a,h)anthracene	53703	4.08E-09	lb/hp-hr	0%	7.09E-07
						Benzo(g,h,i)perylene	191242	3.42E-09	lb/hp-hr	0%	5.95E-07
025-448	Non-Emergency Diesel S12/A1A Sump Pump Engine (74 hp engine)	S12-DN	NF	74	hp-hr	Benzene	71432	3.96E-06	lb/hp-hr	0%	2.93E-04
						Toluene	108883	1.74E-06	lb/hp-hr	0%	1.28E-04
						Xylenes	1330207	1.21E-06	lb/hp-hr	0%	8.95E-05
						1,3-Butadiene	106990	1.66E-07	lb/hp-hr	0%	1.23E-05
						Formaldehyde	50000	5.01E-06	lb/hp-hr	0%	3.71E-04
						Acetaldehyde	75070	3.26E-06	lb/hp-hr	0%	2.41E-04
						Acrolein	107028	3.93E-07	lb/hp-hr	0%	2.91E-05
						Naphthalene	91203	3.60E-07	lb/hp-hr	0%	2.66E-05
						Acenaphthylene	208968	2.15E-08	lb/hp-hr	0%	1.59E-06
						Acenaphthene	83329	6.03E-09	lb/hp-hr	0%	4.46E-07
						Fluorene	86737	1.24E-07	lb/hp-hr	0%	9.17E-06
						Phenanthrene	85018	1.25E-07	lb/hp-hr	0%	9.23E-06
						Anthracene	120127	7.94E-09	lb/hp-hr	0%	5.87E-07
						Fluoranthene	206440	3.23E-08	lb/hp-hr	0%	2.39E-06
						Pyrene	129000	2.03E-08	lb/hp-hr	0%	1.50E-06
						Benzo(a)anthracene	56553	7.13E-09	lb/hp-hr	0%	5.28E-07
						Chrysene	218019	1.50E-09	lb/hp-hr	0%	1.11E-07
						Benzo(b)fluoranthene	205992	4.21E-10	lb/hp-hr	0%	3.11E-08
						Benzo(k)fluoranthene	207089	6.58E-10	lb/hp-hr	0%	4.87E-08
						Benzo(a)pyrene	50328	7.98E-10	lb/hp-hr	0%	5.90E-08
						Indeno(1,2,3-cd)pyrene	193395	1.59E-09	lb/hp-hr	0%	1.18E-07
						Dibenz(a,h)anthracene	53703	2.47E-09	lb/hp-hr	0%	1.83E-07
						Benzo(g,h,i)perylene	191242	2.08E-09	lb/hp-hr	0%	1.54E-07
Total of Non-Fugitive Emissions for Operation 025:											*5.93E-03*
Total of Fugitive Emissions for Operation 025:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for Operation 025:											*5.93E-03*
AOS1: Morenci Concentrator Quaternary Crushing Operations											
002-035 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1)	FFDC035 (AOS1)	NF	834,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	4.47E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.45E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	2.68E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	1.86E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	5.87E-07
						Cobalt	7440484	5.17E-13	lb/dscf	0%	4.31E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	9.05E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information Name	Code	EF	EF Units	Control Efficiency (%)	Emissions (lb/hr)
002-035 (AOS1) (cont'd)	Processes Controlled by Fine Crushing Line C to 3B to 3 FFDC (AOS1) (cont'd)	FFDC035 (AOS1) (cont'd)	NF (cont'd)	834,000	dscf (cont'd)	Manganese	7439965	5.87E-12	lb/dscf	0%	4.90E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	9.53E-09
						Nickel	7440020	2.34E-13	lb/dscf	0%	1.95E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	2.35E-07
002-036 (AOS1)	Processes Controlled by Fine Crushing Line C to 3B to 3A FFDC (AOS1)	FFDC036 (AOS1)	NF	990,000	dscf	Antimony	7440360	5.36E-14	lb/dscf	0%	5.30E-08
						Arsenic	7440382	1.74E-13	lb/dscf	0%	1.73E-07
						Beryllium	7440417	3.21E-14	lb/dscf	0%	3.18E-08
						Cadmium	7440439	2.23E-13	lb/dscf	0%	2.21E-07
						Chromium	7440473	7.04E-13	lb/dscf	0%	6.97E-07
						Cobalt	7440484	5.17E-13	lb/dscf	0%	5.12E-07
						Lead	7439921	1.09E-11	lb/dscf	0%	1.07E-05
						Manganese	7439965	5.87E-12	lb/dscf	0%	5.81E-06
						Mercury	7439976	1.14E-14	lb/dscf	0%	1.13E-08
						Nickel	7440020	2.34E-13	lb/dscf	0%	2.32E-07
						Selenium	7782492	2.81E-13	lb/dscf	0%	2.79E-07
002-311 (AOS1)	Processes Controlled by West Transfer Points FFDC (AOS1)	FFDC311 (AOS1)	NF	1,014,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	2.17E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	7.07E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	1.30E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	9.04E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	2.86E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	2.10E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	4.40E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	2.38E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	4.64E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	9.50E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	1.14E-06
002-312 (AOS1)	Processes Controlled by West Surge Bin FFDC (AOS1)	FFDC312 (AOS1)	NF	180,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	3.86E-08
						Arsenic	7440382	6.97E-13	lb/dscf	0%	1.25E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	2.31E-08
						Cadmium	7440439	8.91E-13	lb/dscf	0%	1.60E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	5.07E-07
						Cobalt	7440484	2.07E-12	lb/dscf	0%	3.72E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	7.82E-06
						Manganese	7439965	2.35E-11	lb/dscf	0%	4.23E-06
						Mercury	7439976	4.57E-14	lb/dscf	0%	8.23E-09
						Nickel	7440020	9.37E-13	lb/dscf	0%	1.69E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	2.03E-07
002-313 (AOS1)	Processes Controlled by West RC FFDC (AOS1)	FFDC313 (AOS1)	NF	558,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	1.20E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	3.89E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	7.17E-08
						Cadmium	7440439	8.91E-13	lb/dscf	0%	4.97E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	1.57E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	1.15E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.42E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.31E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	2.55E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	5.23E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	6.28E-07
002-314 (AOS1)	Processes Controlled by East Transfer Points FFDC (AOS1)	FFDC314 (AOS1)	NF	1,014,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	2.17E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	7.07E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	1.30E-07
						Cadmium	7440439	8.91E-13	lb/dscf	0%	9.04E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	2.86E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	2.10E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	4.40E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	2.38E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	4.64E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	9.50E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	1.14E-06
002-315 (AOS1)	Processes Controlled by East Surge Bin FFDC (AOS1)	FFDC315 (AOS1)	NF	180,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	3.86E-08
						Arsenic	7440382	6.97E-13	lb/dscf	0%	1.25E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	2.31E-08
						Cadmium	7440439	8.91E-13	lb/dscf	0%	1.60E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	5.07E-07
						Cobalt	7440484	2.07E-12	lb/dscf	0%	3.72E-07
						Lead	7439921	4.34E-11	lb/dscf	0%	7.82E-06
						Manganese	7439965	2.35E-11	lb/dscf	0%	4.23E-06

Table F.11 Hourly HAP Emissions - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	HAP Information				Control Efficiency (%)	Emissions (lb/hr)
						Name	Code	EF	EF Units		
002-315 (AOS1) (cont'd)	Processes Controlled by East Surge Bin FFDC (AOS1) (cont'd)	FFDC315 (AOS1) (cont'd)	NF (cont'd)	180,000	dscf (cont'd)	Mercury	7439976	4.57E-14	lb/dscf	0%	8.23E-09
						Nickel	7440020	9.37E-13	lb/dscf	0%	1.69E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	2.03E-07
002-316 (AOS1)	Processes Controlled by East RC FFDC (AOS1)	FFDC316 (AOS1)	NF	558,000	dscf	Antimony	7440360	2.14E-13	lb/dscf	0%	1.20E-07
						Arsenic	7440382	6.97E-13	lb/dscf	0%	3.89E-07
						Beryllium	7440417	1.29E-13	lb/dscf	0%	7.17E-08
						Cadmium	7440439	8.91E-13	lb/dscf	0%	4.97E-07
						Chromium	7440473	2.82E-12	lb/dscf	0%	1.57E-06
						Cobalt	7440484	2.07E-12	lb/dscf	0%	1.15E-06
						Lead	7439921	4.34E-11	lb/dscf	0%	2.42E-05
						Manganese	7439965	2.35E-11	lb/dscf	0%	1.31E-05
						Mercury	7439976	4.57E-14	lb/dscf	0%	2.55E-08
						Nickel	7440020	9.37E-13	lb/dscf	0%	5.23E-07
						Selenium	7782492	1.13E-12	lb/dscf	0%	6.28E-07
Total of Non-Fugitive Emissions for AOS1:											*3.00E-04*
Total of Fugitive Emissions for AOS1:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for AOS1:											*3.00E-04*
AOS2: Concentrate Leach Plant Upgrades											
014-458 (AOS2)	Pressure Leach Vessel 1 (AOS2) Controlled by PLV Scrubber 1 (AOS2)	PLVS1 (AOS2)	NF	1	hours	Antimony	7440360	9.84E-06	lb/hr	0%	9.84E-06
						Arsenic	7440382	1.35E-05	lb/hr	0%	1.35E-05
						Beryllium	7440417	2.63E-06	lb/hr	0%	2.63E-06
						Cadmium	7440439	6.34E-05	lb/hr	0%	6.34E-05
						Chromium	7440473	6.20E-06	lb/hr	0%	6.20E-06
						Cobalt	7440484	8.58E-05	lb/hr	0%	8.58E-05
						Lead	7439921	1.03E-04	lb/hr	0%	1.03E-04
						Manganese	7439965	1.79E-05	lb/hr	0%	1.79E-05
						Mercury	7439976	4.35E-07	lb/hr	0%	4.35E-07
						Nickel	7440020	2.45E-05	lb/hr	0%	2.45E-05
						Selenium	7782492	4.55E-05	lb/hr	0%	4.55E-05
014-459 (AOS2)	Pressure Leach Vessel 2 (AOS2) Controlled by PLV Scrubber 2 (AOS2)	PLVS2 (AOS2)	NF	1	hours	Antimony	7440360	9.84E-06	lb/hr	0%	9.84E-06
						Arsenic	7440382	1.35E-05	lb/hr	0%	1.35E-05
						Beryllium	7440417	2.63E-06	lb/hr	0%	2.63E-06
						Cadmium	7440439	6.34E-05	lb/hr	0%	6.34E-05
						Chromium	7440473	6.20E-06	lb/hr	0%	6.20E-06
						Cobalt	7440484	8.58E-05	lb/hr	0%	8.58E-05
						Lead	7439921	1.03E-04	lb/hr	0%	1.03E-04
						Manganese	7439965	1.79E-05	lb/hr	0%	1.79E-05
						Mercury	7439976	4.35E-07	lb/hr	0%	4.35E-07
						Nickel	7440020	2.45E-05	lb/hr	0%	2.45E-05
						Selenium	7782492	4.55E-05	lb/hr	0%	4.55E-05
014-460 (AOS2)	Oxygen Plant Cooling Tower 2 (AOS2)	OCT2 (AOS2)	F	216	1000 gal	Antimony	7440360	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	7440382	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	7440417	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	7440439	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	7440473	3.63E-12	lb/1000 gal	0%	7.85E-10
						Cobalt	7440484	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	7439921	9.08E-12	lb/1000 gal	0%	1.96E-09
						Manganese	7439965	4.50E-10	lb/1000 gal	0%	9.71E-08
						Mercury	7439976	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	7440020	0.00E+00	lb/1000 gal	0%	0.00E+00
						Selenium	7782492	0.00E+00	lb/1000 gal	0%	0.00E+00
Total of Non-Fugitive Emissions for AOS2:											*7.46E-04*
Total of Fugitive Emissions for AOS2:											*9.98E-08*
Total of Non-Fugitive and Fugitive Emissions for AOS2:											*7.47E-04*
AOS3: Primary Crushing and Overland Conveying Operations											
001-256a (AOS3)	Processes Controlled by Pollution Control Device for Crushers (AOS3)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.									
001-256b (AOS3)	Processes Controlled by Pollution Control Device for Conveyor Belts (AOS3)	Emissions from the pollution control device cannot be determined until it is rented/purchased. However, emissions will be no more than emissions from the FFDC being replaced.									
Total of Non-Fugitive Emissions for AOS3:											*0.00E+00*
Total of Fugitive Emissions for AOS3:											*0.00E+00*
Total of Non-Fugitive and Fugitive Emissions for AOS3:											*0.00E+00*
Greatest Single HAP Emissions:						**Xylenes**	**1330207**				**1.35E+00**
Total of Non-Fugitive Emissions:											**1.73E+00**
Total of Fugitive Emissions:											**3.30E+00**
Total of Non-Fugitive and Fugitive Emissions:											**5.03E+00**

* Emissions from AOS1 and AOS2 are greater than emissions from non-AOS operations such that they are included in the maximum facility-wide totals. Emissions from AOS3 are less than or equal to emissions from non-AOS operations such that they are not considered in the maximum facility-wide totals.

APPENDIX G METHODOLOGY FOR THE CAM ANALYSIS CALCULATIONS

G.1 INTRODUCTION

The methodology used to calculate the emission rates presented in Section 18 and Appendix H of this application is explained in the following sections, including identification of process rates and emission factors. Emissions are calculated using the following general equation:

$$E_A = PR_A \times UEF \times \left(\frac{1\ \text{ton}}{2{,}000\ \text{lb}}\right)$$

where:

E_A	=	calculated pre-control device emissions on an annual basis (tons of pollutant/yr);
PR_A	=	annual process rate associated with the emission unit (activity/yr); and
UEF	=	pre-control device emission factor (lb of pollutant/activity).

G.2 MATERIAL TRANSFER POINTS

G.2.1 Process Rates

For CAM Analysis purposes, only annual emissions are analyzed. Identification and description of the annual process rate for each material transfer point is presented in Table G.1.

G.2.2 Emission Factors

G.2.2.1 Material Transfer of Ore

Potential pre-control device emissions of PM, PM_{10}, and $PM_{2.5}$ from the material transfer points associated with ore are calculated using the following emission factor expression from AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes:

$$EF = (k)(0.0032)\left(\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}\right)$$

where:

EF	=	emission factor (lb/ton)
k	=	particle size multiplier (0.74 for PM, 0.35 for PM_{10}, 0.053 for $PM_{2.5}$)
U	=	mean wind speed

The mean ambient wind speed at the FMMI facility is 6.88 mph based on 2017-2021 data from the Townsite Meteorological Monitor. This wind speed is used for unprotected material transfer points subject to ambient winds.

The lowest wind speed able to be used in the aggregate drop process equation and retain an A rating is 1.3 mph. This wind speed is used for protected material transfer points such as those located indoors or underground or shielded from the ambient wind by enclosures, chutes, or seals.

M = material moisture content

For each material transfer point associated with ore, the type of material transferred, the moisture content of the material transferred, and the classification of the transfer as being either protected or unprotected is identified in Table G.1.

HAP emissions from the material transfer points associated with ore are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the various process materials are presented in Table G.8.

The emission factors for the material transfer points associated with ore are presented in Table G.2.

G.2.2.2 Material Transfer of Lime

Potential pre-control device emissions of PM from the material transfer points associated with lime are calculated using the emission factor from AP-42 Table 11.17-4 (02/98) for lime product loading, enclosed truck. Potential pre-control device emissions of PM_{10} and $PM_{2.5}$ emissions are estimated to be 35% and 5.3%, respectively, of PM emissions based on the particle size fractions in AP-42 Section 13.2.4.3 (11/06) for aggregate drop processes.

The emission factors for the material transfer points associated with lime are presented in Table G.3.

G.2.3 Control Efficiencies

For CAM Analysis purposes, the potential pre-control device emissions from each PSEU are analyzed. Consequently, control efficiencies are not applied.

G.3 SCREENING OPERATIONS

G.3.1 Process Rates

For CAM Analysis purposes, only annual emissions are analyzed. Identification and description of the annual process rate for each screening operation is presented in Table G.1.

G.3.2 Emission Factors

Potential pre-control device emissions of PM, PM_{10}, and $PM_{2.5}$ from screening operations are calculated using the emission factors from AP-42 Table 11.19.2-2 (08/04) for screening (controlled). AP-42 Page 11.19.2-1 (08/04) states that the output from tertiary crushers typically ranges from $^{3}/_{16}$ inch to 1 inch while fines crushing product has a maximum size of $^{3}/_{16}$ inch. Since the output from crushers is typically processed by screens, it is assumed that these same size ranges apply to the screening and fines screening operations. Because all screening operations (as identified in Table G.1) process material greater than $^{3}/_{16}$ inch, the screening emission factors (as opposed to the fines screening emission factors) in AP-42 Table 11.19.2-2 (08/04) are most appropriate to use to estimate potential pre-control device emissions.

The Background Information for AP-42 Section 11.19.2 (05/03) explains that results from testing at various crushed stone processing plants were used to develop the emission factors in AP-42 Section 11.19.2. The procedures for testing screens included using track-mounted hood systems to capture emissions. The captured emissions were ducted away using a forced air stream and an emission rate was measured. The material throughput rate was also measured during the test to determine emission factors in units of lb/ton of material processed. When using the track-mounted hood test method, the total emissions measured must include both emissions from the material transfer to the screen and emissions from the screening process, due to testing being performed with a continuous material flow. Therefore, it is assumed that the screening emission factors from AP-42 Section 11.19.2 include emissions from the transfer of material to the screen. However, because the PSEUs typically include both the transfer to the screens and the screens themselves, using the combined emission factor does not overestimate emissions.

Furthermore, Table 11.19.2-2 states in footnote “b” that the wet suppression technology used during the testing at the various crushed stone processing plants caused the moisture content of the material processed to range from 0.55% to 2.88% (compared to a range of 0.21% to 1.3% for the same plants operated without wet suppression). Because all screening operations (as identified in Table G.1) process material that has a moisture content of at least 3.2%, the controlled emission factors are used to estimate potential pre-control device emission of PM, PM_{10}, and $PM_{2.5}$.

HAP emissions from the screening operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The type of material processed by the screening operations is presented in Table G.1. The HAP concentrations of the various process material are presented in Table G.8.

The emission factors for the screening operations are presented in Table G.4.

G.3.3 Control Efficiencies

For CAM Analysis purposes, the potential pre-control device emissions from each PSEU are analyzed. Consequently, control efficiencies are not applied.

G.4 CRUSHING OPERATIONS

G.4.1 Process Rates

For CAM Analysis purposes, only annual emissions are analyzed. Identification and description of the annual process rate for each crushing operation is presented in Table G.1.

G.4.2 Emission Factors

Potential pre-control device emissions of PM, PM_{10}, and $PM_{2.5}$ from crushing operations are calculated using the emission factors from AP-42 Table 11.19.2-2 (08/04) for tertiary crushing (controlled).

Although AP-42 Table 11.19.2-2 does not present emission factors for primary or secondary crushing, footnote “n” states that the tertiary crushing emission factors can be used as an upper limit for these operations. Additionally, AP-42 Page 11.19.2-1 (08/04) states that the output from tertiary crushers typically ranges from $^3/_{16}$ inch to 1 inch while fines crushing product has a maximum size of $^3/_{16}$ inch. Because all crushing operations (as identified in Table G.1) produce material greater than $^3/_{16}$ inch, the tertiary crushing emission factors (as opposed to the fines crushing emission factors) in AP-42 Table 11.19.2-2 (08/04) are most appropriate to use to estimate potential pre-control device emissions.

It is not appropriate to use the crushing emission factors in AP-42 Section 11.24 (08/82) for metallic mineral processing because they combine multiple emission units (crushers, screens, surge bins, apron feeders, and conveyor belt transfer points) into a single emission factor, which can drastically overestimate emissions from each individual PSEU.

The Background Information for AP-42 Section 11.19.2 (05/03) explains that results from testing at various crushed stone processing plants were used to develop the emission factors in AP-42 Section 11.19.2. The procedures for testing crushers included using quasi-stack systems to capture emissions. The captured emissions were ducted away using a forced air stream and an emission rate was measured. The material throughput rate was also measured during the test to determine emission factors in units of lb/ton of material processed. When using the quasi-stack test method, the total emissions measured must include both emissions from the material transfer to the crusher and emissions from the crushing process, due to testing being performed with a continuous material flow. Therefore, it is assumed that the tertiary crushing emission factors from AP-42 Section 11.19.2 include emissions from the transfer of material to the crusher. However, because the PSEUs typically include both the transfer to the crushers and the crushers themselves, using the combined emission factor does not overestimate emissions.

Furthermore, Table 11.19.2-2 states in footnote “b” that the wet suppression technology used during the testing at the various crushed stone processing plants caused the moisture content of the material processed to range from 0.55% to 2.88% (compared to a range of 0.21% to 1.3% for the same plants operated without wet suppression). Because all crushing operations (as identified in Table G.1) process material that has a moisture content of at least 3.2%, the controlled emission factors are used to estimate potential pre-control device emission of PM, PM_{10}, and $PM_{2.5}$.

HAP emissions from the crushing operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM_{10} emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM_{10} emitted. The type of material processed by the crushing operations is presented in Table G.1. The HAP concentrations of the various process material is presented in Table G.8.

The emission factors for the crushing operations are presented in Table G.5.

G.4.3 Control Efficiencies

For CAM Analysis purposes, the potential pre-control device emissions from each PSEU are analyzed. Consequently, control efficiencies are not applied.

G.5 PRESSURE LEACHING OPERATIONS UNDER EXISTING OPERATIONS

G.5.1 Process Rates

For CAM Analysis purposes, only annual emissions are analyzed. The annual process rates for Pressure Leach Vessel 1 and Pressure Leach Vessel 2 under existing operations (Process #014-239) assume continuous operation (8,760 hr/yr).

G.5.2 Emission Factors

Potential pre-control device emissions of PM from pressure leaching operations under existing operations are calculated using a statistical analysis of performance test results from the exhaust of the PLV 2-Stage Scrubber at a 95% confidence interval with the uncontrolled emission rate back-calculated using the maximum control efficiency of 99% from AP-42 Table B.2-3 for a venturi scrubber.

Potential pre-control device emissions of PM_{10} and $PM_{2.5}$ are assumed to equal PM emissions as a worst-case emission estimate.

HAP emissions from the pressure leaching operations under AOS2 are calculated by multiplying the concentration of HAPs in copper concentrate by the PM_{10} emission factor. It is assumed that the concentration of HAPs in copper concentrate is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the copper concentrate is presented in Table G.8.

The emission factors for the pressure leaching operations under existing operations are presented in Table G.6.

G.5.3 Control Efficiencies

For CAM Analysis purposes, the potential pre-control device emissions from each PSEU are analyzed. Consequently, control efficiencies are not applied.

G.6 PRESSURE LEACHING OPERATIONS UNDER AOS2

G.6.1 Process Rates

For CAM Analysis purposes, only annual emissions are analyzed. The annual process rates for Pressure Leach Vessel 1 and Pressure Leach Vessel 2 under AOS2 (Process #s 014-458 and 014-459) assume continuous operation (8,760 hr/yr).

G.6.2 Emission Factors

Potential pre-control device emissions of PM from pressure leaching operations under AOS2 are calculated using an engineering estimate of the particulate matter entrained in the vent gas from Spray Condensers 1 and 2. Potential pre-control device emissions of PM_{10} and $PM_{2.5}$ are assumed to equal PM emissions as a worst-case emission estimate.

HAP emissions from the pressure leaching operations under AOS2 are calculated by multiplying the concentration of HAPs in copper concentrate by the PM_{10} emission factor. It is assumed that the concentration of HAPs in copper concentrate is equivalent to the concentration of HAPs in the PM_{10} emitted. The HAP concentrations of the copper concentrate is presented in Table G.8.

The emission factors for the pressure leaching operations under AOS2 are presented in Table G.7.

G.6.3 Control Efficiencies

For CAM Analysis purposes, the potential pre-control device emissions from each PSEU are analyzed. Consequently, control efficiencies are not applied.

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
Operation 001: Mining Operations									
001-006	In-Pit Crusher 2	In-Pit Crusher 2 FFDC	65,700,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	Minimum of 3.2%	N/A	See Section G.4.2
	In-Pit Crusher 2 to Discharge Conveyor DC2		65,700,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	Minimum of 3.2%	Protected	See Section G.2.2.1
001-250	In-Pit Crusher 3	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	59,130,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	Minimum of 3.2%	N/A	See Section G.4.2
	In-Pit Crusher 3 to Feeder Belt FB3		59,130,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
001-250 (cont'd)	Feeder Belt FB3 to Discharge Conveyor P11	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside) (cont'd)	59,130,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	Minimum of 3.2%	Protected	See Section G.2.2.1
001-251	Discharge Conveyor P11 to Conveyor Belt P5	P11/P5 and P11/P12 FFDC	63,072,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Discharge Conveyor P11 to Conveyor Belt P12		63,072,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-015	Conveyor Belt P5 to Conveyor Belt P6	P5/P6 FFDC	78,840,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-225	Discharge Conveyor DC2 to Conveyor Belt P9 via Diverter Gate 2	DC2/P9 and P9/P10 FFDC	63,072,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt P9 to Conveyor Belt P10		61,320,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
001-325	Discharge Conveyor DC2 to Conveyor Belt P5 via Diverter Gate 2	DC2/P5 FFDC	65,700,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-299	Reclaim Feeder 1 to Conveyor Belt R1A	Mill IOS/R1A FFDC	17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Reclaim Feeder 2 to Conveyor Belt R1A		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Reclaim Feeder 3 to Conveyor Belt R1A		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Reclaim Feeder 4 to Conveyor Belt R1A		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-300	Reclaim Feeder 5 to Conveyor Belt R1B	Mill IOS/R1B FFDC	21,024,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
001-300 (cont'd)	Reclaim Feeder 6 to Conveyor Belt R1B	Mill IOS/R1B FFDC (cont'd)	21,024,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Reclaim Feeder 7 to Conveyor Belt R1B		21,024,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Combination of Morenci Concentrator and Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-272	Conveyor Belt R1A to Conveyor Belt R7	R1A and R1B/R7 FFDC	48,180,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt R1B to Conveyor Belt R7		48,180,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-277	Conveyor Belt R1A to Conveyor Belt R2	R1A and R1B/R2 Bag Collector 1	48,512,880	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt R1B to Conveyor Belt R2		48,512,880	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
001-278	Conveyor Belt R2 to Conveyor Belt R11	R2/R11 FFDC	48,512,880	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-228	Apron Feeder 1 to Conveyor Belt R8	MFL IOS/R8 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2 to Conveyor Belt R8		52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
001-229	Conveyor Belt R8 to Conveyor Belt R9	R8/R9 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
Operation 002: Morenci Concentrator									
002-022	Conveyor Belt R7 to Conveyor Belt 1A via Coarse Ore Splitter	R7/1A and 1B FFDC (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt R7 to Conveyor Belt 1B via Coarse Ore Splitter		24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-023	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 1 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 2 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 3 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 4 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 5 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 6 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-023 (cont'd)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 7 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 8 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	1A/COSB FFDC 9 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-024	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 1 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 2 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 3 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-024 (cont'd)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 4 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 5 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 6 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 7 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 8 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	1B/COSB FFDC 9 (vented inside)	24,090,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-025	Coarse Ore Storage Bin (COSB) to Apron Feeder A1	COSB/AFA/2A FFDC (vented inside)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder A2		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder A3		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder A4		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder A1 to Conveyor Belt 2A		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder A2 to Conveyor Belt 2A		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-025 (cont'd)	Apron Feeder A3 to Conveyor Belt 2A	COSB/AFA/2A FFDC (vented inside) (cont'd)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder A4 to Conveyor Belt 2A		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-026	Coarse Ore Storage Bin (COSB) to Apron Feeder B1	COSB/AFB/2B FFDC (vented inside)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder B2		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder B3		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder B4		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-026 (cont'd)	Apron Feeder B1 to Conveyor Belt 2B	COSB/AFB/2B FFDC (vented inside) (cont'd)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder B2 to Conveyor Belt 2B		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder B3 to Conveyor Belt 2B		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder B4 to Conveyor Belt 2B		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-027	Coarse Ore Storage Bin (COSB) to Apron Feeder C1	COSB/AFC/2C FFDC (vented inside)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder C2		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-027 (cont'd)	Coarse Ore Storage Bin (COSB) to Apron Feeder C3	COSB/AFC/2C FFDC (vented inside) (cont'd)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder C4		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder C1 to Conveyor Belt 2C		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder C2 to Conveyor Belt 2C		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder C3 to Conveyor Belt 2C		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder C4 to Conveyor Belt 2C		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-028	Coarse Ore Storage Bin (COSB) to Apron Feeder D1	COSB/AFD/2D FFDC (vented inside)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder D2		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder D3		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Coarse Ore Storage Bin (COSB) to Apron Feeder D4		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder D1 to Conveyor Belt 2D		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder D2 to Conveyor Belt 2D		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-028 (cont'd)	Apron Feeder D3 to Conveyor Belt 2D	COSB/AFD/2D FFDC (vented inside) (cont'd)	3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder D4 to Conveyor Belt 2D		3,504,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-029	Conveyor Belt 2A to Vibrating Grizzly 1 and Operation of Vibrating Grizzly 1	Fine Crushing Line A FFDC 1 (vented inside)	11,388,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 1 Oversize to Secondary Crusher 1 and Operation of Secondary Crusher 1		6,657,600	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Vibrating Grizzly 1 Undersize to Shaker Screen 1AN and Operation of Shaker Screen 1AN		2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-029 (cont'd)	Vibrating Grizzly 1 Undersize to Shaker Screen 1BN and Operation of Shaker Screen 1BN	Fine Crushing Line A FFDC 1 (vented inside) (cont'd)	2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 1 to Shaker Screen 1AS and Operation of Shaker Screen 1AS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 1 to Shaker Screen 1BS and Operation of Shaker Screen 1BS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Shaker Screen 1AN and Shaker Screen 1AS Oversize to Tertiary Crusher 1A and Operation of Tertiary Crusher 1A		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Shaker Screen 1BN and Shaker Screen 1BS Oversize to Tertiary Crusher 1B and Operation of Tertiary Crusher 1B		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-033	Shaker Screen 1AN Undersize to Conveyor Belt 3	Fine Crushing Line A FFDC 2 (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1AS Undersize to Conveyor Belt 3		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1BN Undersize to Conveyor Belt 3		2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1BS Undersize to Conveyor Belt 3		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 1A to Conveyor Belt 3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 1B to Conveyor Belt 3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-030	Conveyor Belt 2B to Vibrating Grizzly 2 and Operation of Vibrating Grizzly 2	Fine Crushing Line B FFDC 1	11,388,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 2 Oversize to Secondary Crusher 2 and Operation of Secondary Crusher 2		6,657,600	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Vibrating Grizzly 2 Undersize to Shaker Screen 2AN and Operation of Shaker Screen 2AN		2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 2 Undersize to Shaker Screen 2BN and Operation of Shaker Screen 2BN		2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 2 to Shaker Screen 2AS and Operation of Shaker Screen 2AS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-030 (cont'd)	Secondary Crusher 2 to Shaker Screen 2BS and Operation of Shaker Screen 2BS	Fine Crushing Line B FFDC 1 (cont'd)	3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Shaker Screen 2AN and Shaker Screen 2AS Oversize to Tertiary Crusher 2A and Operation of Tertiary Crusher 2A		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Shaker Screen 2BN and Shaker Screen 2BS Oversize to Tertiary Crusher 2B and Operation of Tertiary Crusher 2B		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
002-034	Shaker Screen 2AN Undersize to Conveyor Belt 3	Fine Crushing Line B FFDC 2 (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 2AS Undersize to Conveyor Belt 3		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-034 (cont'd)	Shaker Screen 2BN Undersize to Conveyor Belt 3	Fine Crushing Line B FFDC 2 (vented inside) (cont'd)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 2BS Undersize to Conveyor Belt 3		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 2A to Conveyor Belt 3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 2B to Conveyor Belt 3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-031	Conveyor Belt 2C to Vibrating Grizzly 3 and Operation of Vibrating Grizzly 3	Fine Crushing Line C FFDC 1	11,388,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 3 Oversize to Secondary Crusher 3 and Operation of Secondary Crusher 3		6,657,600	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-031 (cont'd)	Vibrating Grizzly 3 Undersize to Shaker Screen 3AN and Operation of Shaker Screen 3AN	Fine Crushing Line C FFDC 1 (cont'd)	2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 3 Undersize to Shaker Screen 3BN and Operation of Shaker Screen 3BN		2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 3 to Shaker Screen 3AS and Operation of Shaker Screen 3AS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 3 to Shaker Screen 3BS and Operation of Shaker Screen 3BS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Shaker Screen 3AN and Shaker Screen 3AS Oversize to Tertiary Crusher 3A and Operation of Tertiary Crusher 3A		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-031 (cont'd)	Shaker Screen 3BN and Shaker Screen 3BS Oversize to Tertiary Crusher 3B and Operation of Tertiary Crusher 3B	Fine Crushing Line C FFDC 1 (cont'd)	6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
002-035	Shaker Screen 3AN Undersize to Conveyor Belt 3B	Fine Crushing Line C to 3B to 3 FFDC	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 3AS Undersize to Conveyor Belt 3B		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 3A to Conveyor Belt 3B		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3B to Conveyor Belt 3		11,388,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-036	Shaker Screen 3BN Undersize to Conveyor Belt 3B	Fine Crushing Line C to 3B to 3A FFDC	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-036 (cont'd)	Shaker Screen 3BS Undersize to Conveyor Belt 3B	Fine Crushing Line C to 3B to 3A FFDC (cont'd)	3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 3B to Conveyor Belt 3B		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3B to Conveyor Belt 3A		11,388,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-032	Conveyor Belt 2D to Vibrating Grizzly 4 and Operation of Vibrating Grizzly 4	Fine Crushing Line D FFDC 1	11,388,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Vibrating Grizzly 4 Oversize to Secondary Crusher 4 and Operation of Secondary Crusher 4		6,657,600	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Vibrating Grizzly 4 Undersize to Shaker Screen 4AN and Operation of Shaker Screen 4AN		2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-032 (cont'd)	Vibrating Grizzly 4 Undersize to Shaker Screen 4BN and Operation of Shaker Screen 4BN	Fine Crushing Line D FFDC 1 (cont'd)	2,505,360	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 4 to Shaker Screen 4AS and Operation of Shaker Screen 4AS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher 4 to Shaker Screen 4BS and Operation of Shaker Screen 4BS		3,188,640	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Shaker Screen 4AN and Shaker Screen 4AS Oversize to Tertiary Crusher 4A and Operation of Tertiary Crusher 4A		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Shaker Screen 4BN and Shaker Screen 4BS Oversize to Tertiary Crusher 4B and Operation of Tertiary Crusher 4B		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-326	Shaker Screen 4AN Undersize to Conveyor Belt 3A	Fine Crushing Line D FFDC 2 (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 4AS Undersize to Conveyor Belt 3A		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 4BN Undersize to Conveyor Belt 3A		2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 4BS Undersize to Conveyor Belt 3A		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 4A to Conveyor Belt 3A		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 4B to Conveyor Belt 3A		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-038	Conveyor Belt 3 to Conveyor Belt 4	3/4/5 FFDC (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 4 to Conveyor Belt 5		22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-039	Conveyor Belt 3A to Conveyor Belt 4A	3A/4A/5A FFDC (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 4A to Conveyor Belt 5A		22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-040	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 1 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 2 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-040 (cont'd)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 3 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 4 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 5 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 6 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 7 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 8 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-040 (cont'd)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	5A/FOSB FFDC 9 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-041	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 1 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 2 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 3 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 4 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 5 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-041 (cont'd)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 6 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 7 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 8 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	5/FOSB FFDC 9 (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
Operation 003: MFL Fine Crushing Plant									
003-273	Conveyor Belt R9 to Conveyor Belt R10	R9/R10 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-330	Conveyor Belt R10 to Conveyor Belt R3	R10/R3 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-079	Conveyor Belt R3 to Conveyor Belt R4	R3/R4 Bag Collector 3	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-080	Conveyor Belt R4 to Conveyor Belt R5	R4/R5/R6 Bag Collector 4	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt R5 to Conveyor Belt R6		52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-082	Conveyor Belt R6 to Metcalf Track Hopper Storage Bin (MTHSB)	Scrubber 3C	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-317	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C1	FFDC 3A	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C2		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-317 (cont'd)	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C3	FFDC 3A (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C4		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B4		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B5		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B6		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-317 (cont'd)	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A3	FFDC 3A (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A4		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A5		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A6		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2C1 to Conveyor Belt 3C		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2C2 to Conveyor Belt 3C		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-317 (cont'd)	Apron Feeder 2C3 to Conveyor Belt 3C	FFDC 3A (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2C4 to Conveyor Belt 3C		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2B3 to Conveyor Belt 3B2		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2B4 to Conveyor Belt 3B2		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2B5 to Conveyor Belt 3B3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2B6 to Conveyor Belt 3B3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-317 (cont'd)	Apron Feeder 2A3 to Conveyor Belt 3A2	FFDC 3A (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2A4 to Conveyor Belt 3A2		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2A5 to Conveyor Belt 3A3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Apron Feeder 2A6 to Conveyor Belt 3A3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3C to MFL Conveyor Belt 4C		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3B2 to MFL Conveyor Belt 4B		13,140,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-317 (cont'd)	Conveyor Belt 3B3 to MFL Conveyor Belt 4B	FFDC 3A (cont'd)	13,140,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3A2 to MFL Conveyor Belt 4A		13,140,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3A3 to MFL Conveyor Belt 4A		13,140,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-301	MFL Conveyor Belt 4A to Scalping Screen A and Operation of Scalping Screen A	FFDC 6A	17,520,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Scalping Screen A Oversize to Secondary Crusher A and Operation of Secondary Crusher A		17,520,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-301 (cont'd)	Secondary Crusher A to Secondary Screen A1 and Operation of Secondary Screen A1	FFDC 6A (cont'd)	8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher A to Secondary Screen A2 and Operation of Secondary Screen A2		8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Screen A1 Oversize to Conveyor Belt 8		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen A2 Oversize to Conveyor Belt 7		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-302	MFL Conveyor Belt 4B to Scalping Screen B and Operation of Scalping Screen B	FFDC 6B	17,520,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-302 (cont'd)	Scalping Screen B Oversize to Secondary Crusher B and Operation of Secondary Crusher B	FFDC 6B (cont'd)	17,520,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Secondary Crusher B to Secondary Screen B1 and Operation of Secondary Screen B1		8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher B to Secondary Screen B2 and Operation of Secondary Screen B2		8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Screen B1 Oversize to Conveyor Belt 8		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen B2 Oversize to Conveyor Belt 7		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-304	MFL Conveyor Belt 4C to Scalping Screen C and Operation of Scalping Screen C	FFDC 1	17,520,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Scalping Screen C Oversize to Secondary Crusher C and Operation of Secondary Crusher C		17,520,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Secondary Crusher C to Secondary Screen C1 and Operation of Secondary Screen C1		8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Crusher C to Secondary Screen C2 and Operation of Secondary Screen C2		8,760,000	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Screen C1 Oversize to Conveyor Belt 8		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-304 (cont'd)	Secondary Screen C2 Oversize to Conveyor Belt 7	FFDC 1 (cont'd)	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-089	Conveyor Belt 7 to MFL Conveyor Belt 5	Scrubber 5	26,280,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 8 to MFL Conveyor Belt 11		26,280,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	MFL Conveyor Belt 11 to MFL Conveyor Belt 5		26,280,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-303	MFL Conveyor Belt 5 to Conveyor Belt 6	FFDC 8	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-088	Conveyor Belt 6 to Tertiary Crushing Surge Bin (TCSB)	Scrubber 4	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-088 (cont'd)	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-1	Scrubber 4 (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-2		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-3		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-4		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-5		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-6		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-306	Belt Feeder 12-1 to Tertiary Crusher C1 and Operation of Tertiary Crusher C1	Tertiary Crushing Dust Collector (vented inside)	6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Belt Feeder 12-2 to Tertiary Crusher C2 and Operation of Tertiary Crusher C2		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Belt Feeder 12-3 to Tertiary Crusher C3 and Operation of Tertiary Crusher C3		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Belt Feeder 12-4 to Tertiary Crusher C4 and Operation of Tertiary Crusher C4		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Belt Feeder 12-5 to Tertiary Crusher C5 and Operation of Tertiary Crusher C5		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Belt Feeder 12-6 to Tertiary Crusher C6 and Operation of Tertiary Crusher C6		6,570,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	MFL Fine Crushing Plant Ore	Minimum of 3.2%	N/A	See Section G.4.2

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-307	Scalping Screen A Undersize to Conveyor Belt 9	Conveyor Belt 9 Dust Collector (vented inside)	17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Scalping Screen B Undersize to Conveyor Belt 9		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Scalping Screen C Undersize to Conveyor Belt 9		17,520,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen A1 Undersize to Conveyor Belt 9		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen A2 Undersize to Conveyor Belt 9		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen B1 Undersize to Conveyor Belt 9		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-307 (cont'd)	Secondary Screen B2 Undersize to Conveyor Belt 9	Conveyor Belt 9 Dust Collector (vented inside) (cont'd)	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen C1 Undersize to Conveyor Belt 9		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen C2 Undersize to Conveyor Belt 9		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher C1 to Conveyor Belt 9		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher C2 to Conveyor Belt 9		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher C3 to Conveyor Belt 9		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-307 (cont'd)	Tertiary Crusher C4 to Conveyor Belt 9	Conveyor Belt 9 Dust Collector (vented inside) (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher C5 to Conveyor Belt 9		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher C6 to Conveyor Belt 9		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 9 to Conveyor Belt 14		52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-320	Conveyor Belt 14 to Conveyor Belt 15	14/15 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-331	Conveyor Belt 15 to Conveyor Belt 16	15/16 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
003-309	Conveyor Belt 16 to Conveyor Belt S11	16/S11 FFDC	52,560,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-201	Belt Feeder SF1 to Conveyor Belt A1A	FOIS/A1A Bag Collector 7	32,850,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Belt Feeder SF2 to Conveyor Belt A1A		32,850,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-202	Conveyor Belt A1A to Conveyor Belt A2A via Agglomeration Splitter	A1A/A2A Bag Collector 8	26,280,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
003-203	Conveyor Belt A1A to Conveyor Belt A2C via Agglomeration Splitter	A1A/A2C Bag Collector 9	26,280,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	MFL Fine Crushing Plant Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
Operation 004: Lime Slaking Plants and Lime Transloading									
004-445a	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	Lime Transloading Dust Collector	220,752	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Lime	--	N/A	See Section G.2.2.2
004-445b	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	Lime Transloading Dust Collector	220,752	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Lime	--	N/A	See Section G.2.2.2
Operation 017: Metcalf Concentrator									
017-318	Conveyor Belt R11 to Secondary Screen Feed Bin	Secondary Screen Feed Bin FFDC	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	B2 Secondary Crusher Discharge Conveyor to Secondary Screen Feed Bin		8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-280	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 1	Secondary Screening FFDC 1	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-280 (cont'd)	Secondary Screen Belt Feeder 1 to Secondary Screen 1 and Operation of Secondary Screen 1	Secondary Screening FFDC 1 (cont'd)	36,441,600	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Metcalf Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Screen 1 Oversize to B1 Secondary Crusher Feed Conveyor		36,441,600	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen 1 Undersize to B3 Crushed Ore A Conveyor		36,441,600	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-281	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 2	Secondary Screening FFDC 2	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Screen Belt Feeder 2 to Secondary Screen 2 and Operation of Secondary Screen 2		36,441,600	Based on the maximum hourly capacity of the screen and continuous operation.	Screening Operation	Metcalf Concentrator Ore	Minimum of 3.2%	N/A	See Section G.3.2
	Secondary Screen 2 Oversize to B1 Secondary Crusher Feed Conveyor		36,441,600	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-281 (cont'd)	Secondary Screen 2 Undersize to B3 Crushed Ore A Conveyor	Secondary Screening FFDC 2 (cont'd)	36,441,600	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-319	B1 Secondary Crusher Feed Conveyor to Secondary Crusher Feed Bin	Secondary Crusher Feed Bin FFDC	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-283	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 1	Secondary Crushing FFDC 1	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Crusher Belt Feeder 1 to Metcalf Secondary Crusher 1 and Operation of Metcalf Secondary Crusher 1		16,022,040	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Metcalf Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Metcalf Secondary Crusher 1 to B2 Secondary Crusher Discharge Conveyor		16,022,040	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-284	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 2	Secondary Crushing FFDC 2	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Secondary Crusher Belt Feeder 2 to Metcalf Secondary Crusher 2 and Operation of Metcalf Secondary Crusher 2		16,022,040	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Metcalf Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	Metcalf Secondary Crusher 2 to B2 Secondary Crusher Discharge Conveyor		16,022,040	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-285	B3 Crushed Ore A Conveyor to B4 Crushed Ore B Conveyor	Crushed Ore A/B Conveyor Transfer Point FFDC	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-286	B4 Crushed Ore B Conveyor to B5 Crushed Ore Bin Tripper Conveyor	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-287	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin A	Crushed Ore Bin FFDC 1	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-287 (cont'd)	Crushed Ore Bin A to Crushed Ore Belt Feeder 1	Crushed Ore Bin FFDC 1 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin A to Crushed Ore Belt Feeder 2		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin A to Crushed Ore Belt Feeder 3		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin A to Crushed Ore Belt Feeder 4		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin A to Crushed Ore Belt Feeder 5		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin A to Crushed Ore Belt Feeder 6		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-287 (cont'd)	Crushed Ore Belt Feeder 1 to B6 Crushed Ore Feed Conveyor	Crushed Ore Bin FFDC 1 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 2 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 3 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 4 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 5 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 6 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-287 (cont'd)	B6 Crushed Ore Feed Conveyor to B7 Crushed Ore Feed Transfer Conveyor	Crushed Ore Bin FFDC 1 (cont'd)	68,328,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-288	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	Crushed Ore Bin FFDC 2	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 7		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 8		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 9		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 10		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-288 (cont'd)	Crushed Ore Bin B to Crushed Ore Belt Feeder 11	Crushed Ore Bin FFDC 2 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 12		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 7 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 8 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 9 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 10 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-288 (cont'd)	Crushed Ore Belt Feeder 11 to B6 Crushed Ore Feed Conveyor	Crushed Ore Bin FFDC 2 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 12 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-289	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	Crushed Ore Bin FFDC 3	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 13		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 14		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 15		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-289 (cont'd)	Crushed Ore Bin B to Crushed Ore Belt Feeder 16	Crushed Ore Bin FFDC 3 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 17		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin B to Crushed Ore Belt Feeder 18		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 13 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 14 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 15 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-289 (cont'd)	Crushed Ore Belt Feeder 16 to B6 Crushed Ore Feed Conveyor	Crushed Ore Bin FFDC 3 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 17 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 18 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-290	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin C	Crushed Ore Bin FFDC 4	42,048,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin C to Crushed Ore Belt Feeder 19		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin C to Crushed Ore Belt Feeder 20		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-290 (cont'd)	Crushed Ore Bin C to Crushed Ore Belt Feeder 21	Crushed Ore Bin FFDC 4 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin C to Crushed Ore Belt Feeder 22		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin C to Crushed Ore Belt Feeder 23		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Bin C to Crushed Ore Belt Feeder 24		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 19 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 20 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-290 (cont'd)	Crushed Ore Belt Feeder 21 to B6 Crushed Ore Feed Conveyor	Crushed Ore Bin FFDC 4 (cont'd)	31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 22 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 23 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crushed Ore Belt Feeder 24 to B6 Crushed Ore Feed Conveyor		31,938,960	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-291	B7 Crushed Ore Feed Transfer Conveyor to Crusher Surge Bin	Crushed Ore Transfers FFDC	68,328,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Crusher Surge Bin to B8-A Crusher Belt Feeder		29,740,200	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-291 (cont'd)	Crusher Surge Bin to B8-B Crusher Belt Feeder	Crushed Ore Transfers FFDC (cont'd)	29,740,200	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	B8-A Crusher Belt Feeder to B9 Crusher Feed Conveyor		29,740,200	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	B8-B Crusher Belt Feeder to B9 Crusher Feed Conveyor		29,740,200	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	B9 Crusher Feed Conveyor to Crusher Feed Hopper		68,328,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
017-292	HRC/HPGR Crusher	HRC/HPGR Crusher FFDC	63,948,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Metcalf Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	HRC/HPGR Crusher to B10 Crusher Discharge Conveyor		63,948,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
017-294	B10 Crusher Discharge Conveyor to Wet Screen Feed Bin	Wet Screen Feed FFDC	8,760,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Metcalf Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
AOS1: Morenci Concentrator Quaternary Crushing Operations									
002-033 (AOS1)	Shaker Screen 1AN Undersize to Conveyor Belt 3 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1AS Undersize to Conveyor Belt 3 (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1BN Undersize to Conveyor Belt 3 (AOS1)		2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 1BS Undersize to Conveyor Belt 3 (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 1A to Conveyor Belt 3 (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-033 (AOS1) (cont'd)	Tertiary Crusher 1B to Conveyor Belt 3 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside) (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-034 (AOS1)	Shaker Screen 2AN Undersize to Conveyor Belt 3 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 2AS Undersize to Conveyor Belt 3 (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 2BN Undersize to Conveyor Belt 3 (AOS1)		2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 2BS Undersize to Conveyor Belt 3 (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 2A to Conveyor Belt 3 (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-034 (AOS1) (cont'd)	Tertiary Crusher 2B to Conveyor Belt 3 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside) (cont'd)	6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-035 (AOS1)	Shaker Screen 3AN Undersize to Conveyor Belt 3B (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 3AS Undersize to Conveyor Belt 3B (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 3A to Conveyor Belt 3B (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3B (AOS1) to Conveyor Belt 3 (AOS1)		11,388,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-036 (AOS1)	Shaker Screen 3BN Undersize to Conveyor Belt 3B (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-036 (AOS1) (cont'd)	Shaker Screen 3BS Undersize to Conveyor Belt 3B (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1) (cont'd)	3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 3B to Conveyor Belt 3B (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 3B (AOS1) to Conveyor Belt 3A (AOS1)		11,388,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-326 (AOS1)	Shaker Screen 4AN Undersize to Conveyor Belt 3A (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 4AS Undersize to Conveyor Belt 3A (AOS1)		3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Shaker Screen 4BN Undersize to Conveyor Belt 3A (AOS1)		2,505,360	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-326 (AOS1) (cont'd)	Shaker Screen 4BS Undersize to Conveyor Belt 3A (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside) (cont'd)	3,188,640	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 4A to Conveyor Belt 3A (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Tertiary Crusher 4B to Conveyor Belt 3A (AOS1)		6,570,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-311 (AOS1)	Conveyor Belt 3 (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 1 (AOS1)	West Transfer Points FFDC (AOS1)	20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	West RC Product Conveyor (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)		20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-311 (AOS1) (cont'd)	West RC Product Conveyor (AOS1) to West Transfer Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	West Transfer Points FFDC (AOS1) (cont'd)	15,330,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	West Transfer Conveyor (AOS1) to Conveyor Belt 4 (AOS1)		15,330,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-312 (AOS1)	West RC Feed Conveyor (AOS1) to West Surge Bin (AOS1)	West Surge Bin FFDC (AOS1)	2,628,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-313 (AOS1)	West Surge Bin (AOS1) to West RC Feeder (AOS1)	West RC FFDC (AOS1)	2,628,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	West RC Feeder (AOS1) to West RC Feed Bin (AOS1) via West Flop Gate (AOS1)		20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-313 (AOS1) (cont'd)	West RC Feeder (AOS1) to West RC Product Conveyor (AOS1) via West Flop Gate (AOS1)	West RC FFDC (AOS1) (cont'd)	20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	West RC (AOS1)		20,148,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	West RC (AOS1) to West RC Product Conveyor (AOS1)		20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-314 (AOS1)	Conveyor Belt 3A (AOS1) to East RC Feed Conveyor (AOS1) via East Proportioning Gate 1 (AOS1)	East Transfer Points FFDC (AOS1)	20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	East RC Product Conveyor (AOS1) to East Transfer Conveyor (AOS1) via East Proportioning Gate 2 (AOS1)		4,818,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-314 (AOS1) (cont'd)	East Transfer Conveyor (AOS1) to East RC Feed Conveyor (AOS1)	East Transfer Points FFDC (AOS1) (cont'd)	4,818,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	East RC Product Conveyor (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 2 (AOS1)		15,330,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-315 (AOS1)	East RC Feed Conveyor (AOS1) to East Surge Bin (AOS1)	East Surge Bin FFDC (AOS1)	2,628,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-316 (AOS1)	East Surge Bin (AOS1) to East RC Feeder (AOS1)	East RC FFDC (AOS1)	2,628,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	East RC Feeder (AOS1) to East RC Feed Bin (AOS1) via East Flop Gate (AOS1)		20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-316 (AOS1) (cont'd)	East RC Feeder (AOS1) to East RC Product Conveyor (AOS1) via East Flop Gate (AOS1)	East RC FFDC (AOS1) (cont'd)	20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	East RC (AOS1)		20,148,000	Based on the maximum hourly capacity of the crusher and continuous operation.	Crushing Operation	Morenci Concentrator Ore	Minimum of 3.2%	N/A	See Section G.4.2
	East RC (AOS1) to East RC Product Conveyor (AOS1)		20,148,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-038 (AOS1)	Conveyor Belt 3 (AOS1) to Conveyor Belt 4 (AOS1) via West Proportioning Gate 1 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 4 (AOS1) to Conveyor Belt 5 (AOS1)		22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-039 (AOS1)	Conveyor Belt 3A (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 1 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	15,330,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-039 (AOS1) (cont'd)	Conveyor Belt 4A (AOS1) to Conveyor Belt 5A (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside) (cont'd)	15,330,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
002-040 (AOS1)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 2 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 3 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 4 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 5 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1

Table G.1 Process Rate Information and Emission Factor Reference for Material Transfer Point, Crushing, and Screening Operations

Process Number	Pollutant Specific Emission Unit Description	Pollution Control Device Associated with the PSEU	Annual Process Rate		Emission Unit Information				
			Quantity (tons/yr)	Description	Type of Emission Unit	Type of Material Transferred or Processed	Moisture Content of the Material	Protected/ Unprotected Transfer Point	Emission Factor Details
002-040 (AOS1) (cont'd)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 6 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 7 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 8 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	5A/FOSB FFDC 9 (AOS1) (vented inside)	22,776,000	Based on the maximum hourly capacity of the transfer and continuous operation.	Material Transfer Point	Morenci Concentrator Ore	Minimum of 3.2%	Protected	See Section G.2.2.1
AOS3: Primary Crushing and Overland Conveying Operations									
001-256a (AOS3)	Crushers To Be Determined	Pollution Control Device for Crushers (AOS3)	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.						
001-256b (AOS3)	Conveyor Belts To Be Determined	Pollution Control Device for Conveyor Belts (AOS3)	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.						

Table G.2 Emission Factors for the Material Transfer of Ore

Pollutant	Type of Material Processed	Emission Factor	Reference
PM	All Ore	0.00021 lb/ton	AP-42 Section 13.2.4, Expression 1 (11/06)
PM_{10}		0.00010 lb/ton	
$PM_{2.5}$		0.000015 lb/ton	
Lead Compounds	Morenci Concentrator Ore	7.65E-09 lb/ton	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.34E-08 lb/ton	
Lead Compounds	MFL Fine Crushing Plant Ore	7.65E-09 lb/ton	
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.50E-08 lb/ton	
Lead Compounds	Combination of Morenci Concentrator and Metcalf Concentrator Ore	7.65E-09 lb/ton	
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.50E-08 lb/ton	
Lead Compounds	Metcalf Concentrator Ore	7.65E-09 lb/ton	
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.66E-08 lb/ton	
Lead Compounds	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	7.65E-09 lb/ton	
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.50E-08 lb/ton	
Lead Compounds	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	7.65E-09 lb/ton	
Greatest Single HAP		7.65E-09 lb/ton	
Total HAPs		1.50E-08 lb/ton	

Table G.3 Emission Factors for the Material Transfer of Lime

Pollutant	Emission Factor	Reference
PM	0.61 lb/ton	AP-42 Table 11.17-4 (02/98) for product loading enclosed truck, particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
PM_{10}	0.21 lb/ton	
$PM_{2.5}$	0.032 lb/ton	

Table G.4 Emission Factors for the Screening Operations

Pollutant	Type of Material Processed	Emission Factor	Reference
PM	All Ore	0.0022 lb/ton	AP-42 Table 11.19.2-2 (08/04), Screening (controlled)
PM_{10}		0.00074 lb/ton	
$PM_{2.5}$		0.000050 lb/ton	
Lead Compounds	Morenci Concentrator Ore	5.62E-08 lb/ton	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Greatest Single HAP		5.62E-08 lb/ton	
Total HAPs		9.82E-08 lb/ton	
Lead Compounds	MFL Fine Crushing Plant Ore	5.62E-08 lb/ton	
Greatest Single HAP		5.62E-08 lb/ton	
Total HAPs		1.10E-07 lb/ton	
Lead Compounds	Metcalf Concentrator Ore	5.62E-08 lb/ton	
Greatest Single HAP		5.62E-08 lb/ton	
Total HAPs		1.22E-07 lb/ton	

Table G.5 Emission Factors for the Crushing Operations

Pollutant	Type of Material Processed	Emission Factor	Reference
PM	All Ore	0.0012 lb/ton	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled)
PM_{10}		0.00054 lb/ton	
$PM_{2.5}$		0.00010 lb/ton	
Lead Compounds	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	4.10E-08 lb/ton	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Greatest Single HAP		4.10E-08 lb/ton	
Total HAPs		8.03E-08 lb/ton	
Lead Compounds	Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	4.10E-08 lb/ton	
Greatest Single HAP		4.10E-08 lb/ton	
Total HAPs		8.03E-08 lb/ton	
Lead Compounds	Morenci Concentrator Ore	4.10E-08 lb/ton	
Greatest Single HAP		4.10E-08 lb/ton	
Total HAPs		7.17E-08 lb/ton	
Lead Compounds	MFL Fine Crushing Plant Ore	4.10E-08 lb/ton	
Greatest Single HAP		4.10E-08 lb/ton	
Total HAPs		8.03E-08 lb/ton	
Lead Compounds	Metcalf Concentrator Ore	4.10E-08 lb/ton	
Greatest Single HAP		4.10E-08 lb/ton	
Total HAPs		8.89E-08 lb/ton	

Table G.6 Emission Factors for Pressure Leaching Operations Under Existing Operations

Pollutant	Emission Factor	Reference
PM	20.16 lb/hr	Statistical analysis of performance tests at a 95% confidence interval with the uncontrolled emission rate back-calculated using the maximum control efficiency of 99% from AP-42 Table B.2-3 for a venturi scrubber, Assume $PM=PM_{10}=PM_{2.5}$
PM_{10}	20.16 lb/hr	
$PM_{2.5}$	20.16 lb/hr	
Lead Compounds	3.97E-03 lb/hr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Greatest Single HAP	3.97E-03 lb/hr	
Total HAPs	1.43E-02 lb/hr	

Table G.7 Emission Factors for Pressure Leaching Operations Under AOS2

Pollutant	Emission Factor	Reference
PM	5.20 lb/hr	Engineering estimate for the particulate matter entrained in the vent gas from the Spray Condensers, Assume $PM=PM_{10}=PM_{2.5}$
PM_{10}	5.20 lb/hr	
$PM_{2.5}$	5.20 lb/hr	
Lead Compounds	1.02E-03 lb/hr	PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Greatest Single HAP	1.02E-03 lb/hr	
Total HAPs	3.70E-03 lb/hr	

Table G.8 HAP Concentrations of the Process Material

Type of Material Processed	HAP Concentration (ppm)		
	Lead Compounds	Greatest Single HAP	Total HAPs
Morenci Concentrator Ore	76.00	76.00	132.72
MFL Fine Crushing Plant Ore	76.00	76.00	148.63
Combination of Morenci Concentrator and Metcalf Concentrator Ore	76.00	76.00	148.63
Metcalf Concentrator Ore	76.00	76.00	164.55
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	76.00	76.00	148.63
Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	76.00	76.00	148.63
Copper Concentrate	197.00	197.00	710.86

APPENDIX H EMISSION INVENTORY TABLES FOR THE CAM ANALYSIS

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
General Facility Information					
--	Moisture Content Information		3.2	%	Moisture content of the ore (minimum moisture content maintained for good operating practices)
--	Metal HAP Content of the Morenci Concentrator Ore		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			132.72	ppm	Concentration of the total HAPs
--	Metal HAP Content of the MFL Fine Crushing Plant Ore		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			148.63	ppm	Concentration of the total HAPs
--	Metal HAP Content of the Metcalf Concentrator Ore		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			164.55	ppm	Concentration of the total HAPs
--	Metal HAP Content of the Combination of Morenci Concentrator and Metcalf Concentrator Ore		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			148.63	ppm	Concentration of the total HAPs
--	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			148.63	ppm	Concentration of the total HAPs
--	Metal HAP Content of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3		76.00	ppm	Concentration of lead
			76.00	ppm	Concentration of the greatest single HAP
			148.63	ppm	Concentration of the total HAPs

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
--	Metal HAP Content of the Copper Concentrate		197.00	ppm	Concentration of lead
			197.00	ppm	Concentration of the greatest single HAP
			710.86	ppm	Concentration of the total HAPs
Operation 001: Mining Operations					
001-006	In-Pit Crusher 2 FFDC	In-Pit Crusher 2	65,700,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		In-Pit Crusher 2 to Discharge Conveyor DC2	65,700,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-250	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	In-Pit Crusher 3	59,130,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		In-Pit Crusher 3 to Feeder Belt FB3	59,130,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Feeder Belt FB3 to Discharge Conveyor P11	59,130,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-251	P11/P5 and P11/P12 FFDC	Discharge Conveyor P11 to Conveyor Belt P5	63,072,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Discharge Conveyor P11 to Conveyor Belt P12	63,072,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-015	P5/P6 FFDC	Conveyor Belt P5 to Conveyor Belt P6	78,840,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-225	DC2/P9 and P9/P10 FFDC	Discharge Conveyor DC2 to Conveyor Belt P9 via Diverter Gate 2	63,072,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt P9 to Conveyor Belt P10	61,320,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-325	DC2/P5 FFDC	Discharge Conveyor DC2 to Conveyor Belt P5 via Diverter Gate 2	65,700,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-299	Mill IOS/R1A FFDC	Reclaim Feeder 1 to Conveyor Belt R1A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Reclaim Feeder 2 to Conveyor Belt R1A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Reclaim Feeder 3 to Conveyor Belt R1A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Reclaim Feeder 4 to Conveyor Belt R1A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-300	Mill IOS/R1B FFDC	Reclaim Feeder 5 to Conveyor Belt R1B	21,024,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Reclaim Feeder 6 to Conveyor Belt R1B	21,024,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
001-300 (cont'd)	Mill IOS/R1B FFDC (cont'd)	Reclaim Feeder 7 to Conveyor Belt R1B	21,024,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-272	R1A and R1B/R7 FFDC	Conveyor Belt R1A to Conveyor Belt R7	48,180,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt R1B to Conveyor Belt R7	48,180,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-277	R1A and R1B/R2 Bag Collector 1	Conveyor Belt R1A to Conveyor Belt R2	48,512,880	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt R1B to Conveyor Belt R2	48,512,880	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-278	R2/R11 FFDC	Conveyor Belt R2 to Conveyor Belt R11	48,512,880	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-228	MFL IOS/R8 FFDC	Apron Feeder 1 to Conveyor Belt R8	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2 to Conveyor Belt R8	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
001-229	R8/R9 FFDC	Conveyor Belt R8 to Conveyor Belt R9	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
Operation 002: Morenci Concentrator					
002-022	R7/1A and 1B FFDC (vented inside)	Conveyor Belt R7 to Conveyor Belt 1A via Coarse Ore Splitter	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt R7 to Conveyor Belt 1B via Coarse Ore Splitter	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-023	1A/COSB FFDC 1 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 2 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 3 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 4 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 5 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 6 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 7 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 8 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1A/COSB FFDC 9 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-024	1B/COSB FFDC 1 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 2 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 3 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 4 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 5 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 6 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 7 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 8 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	1B/COSB FFDC 9 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	24,090,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-025	COSB/AFA/2A FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder A1	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder A2	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder A3	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder A4	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder A1 to Conveyor Belt 2A	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder A2 to Conveyor Belt 2A	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder A3 to Conveyor Belt 2A	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder A4 to Conveyor Belt 2A	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-026	COSB/AFB/2B FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder B1	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder B2	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder B3	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder B4	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-026 (cont'd)	COSB/AFB/2B FFDC (vented inside) (cont'd)	Apron Feeder B1 to Conveyor Belt 2B	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder B2 to Conveyor Belt 2B	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder B3 to Conveyor Belt 2B	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder B4 to Conveyor Belt 2B	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-027	COSB/AFC/2C FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder C1	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder C2	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder C3	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder C4	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder C1 to Conveyor Belt 2C	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder C2 to Conveyor Belt 2C	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder C3 to Conveyor Belt 2C	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder C4 to Conveyor Belt 2C	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-028	COSB/AFD/2D FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder D1	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder D2	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder D3	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Coarse Ore Storage Bin (COSB) to Apron Feeder D4	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder D1 to Conveyor Belt 2D	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder D2 to Conveyor Belt 2D	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder D3 to Conveyor Belt 2D	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder D4 to Conveyor Belt 2D	3,504,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-029	Fine Crushing Line A FFDC 1 (vented inside)	Conveyor Belt 2A to Vibrating Grizzly 1 and Operation of Vibrating Grizzly 1	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 1 Oversize to Secondary Crusher 1 and Operation of Secondary Crusher 1	6,657,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 1 Undersize to Shaker Screen 1AN and Operation of Shaker Screen 1AN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 1 Undersize to Shaker Screen 1BN and Operation of Shaker Screen 1BN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 1 to Shaker Screen 1AS and Operation of Shaker Screen 1AS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 1 to Shaker Screen 1BS and Operation of Shaker Screen 1BS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1AN and Shaker Screen 1AS Oversize to Tertiary Crusher 1A and Operation of Tertiary Crusher 1A	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		Shaker Screen 1BN and Shaker Screen 1BS Oversize to Tertiary Crusher 1B and Operation of Tertiary Crusher 1B	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
002-033	Fine Crushing Line A FFDC 2 (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1AS Undersize to Conveyor Belt 3	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1BN Undersize to Conveyor Belt 3	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1BS Undersize to Conveyor Belt 3	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 1A to Conveyor Belt 3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 1B to Conveyor Belt 3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-030	Fine Crushing Line B FFDC 1	Conveyor Belt 2B to Vibrating Grizzly 2 and Operation of Vibrating Grizzly 2	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 2 Oversize to Secondary Crusher 2 and Operation of Secondary Crusher 2	6,657,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 2 Undersize to Shaker Screen 2AN and Operation of Shaker Screen 2AN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 2 Undersize to Shaker Screen 2BN and Operation of Shaker Screen 2BN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 2 to Shaker Screen 2AS and Operation of Shaker Screen 2AS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 2 to Shaker Screen 2BS and Operation of Shaker Screen 2BS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2AN and Shaker Screen 2AS Oversize to Tertiary Crusher 2A and Operation of Tertiary Crusher 2A	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-030 (cont'd)	Fine Crushing Line B FFDC 1 (cont'd)	Shaker Screen 2BN and Shaker Screen 2BS Oversize to Tertiary Crusher 2B and Operation of Tertiary Crusher 2B	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
002-034	Fine Crushing Line B FFDC 2 (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2AS Undersize to Conveyor Belt 3	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2BN Undersize to Conveyor Belt 3	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2BS Undersize to Conveyor Belt 3	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 2A to Conveyor Belt 3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 2B to Conveyor Belt 3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-031	Fine Crushing Line C FFDC 1	Conveyor Belt 2C to Vibrating Grizzly 3 and Operation of Vibrating Grizzly 3	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 3 Oversize to Secondary Crusher 3 and Operation of Secondary Crusher 3	6,657,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 3 Undersize to Shaker Screen 3AN and Operation of Shaker Screen 3AN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 3 Undersize to Shaker Screen 3BN and Operation of Shaker Screen 3BN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 3 to Shaker Screen 3AS and Operation of Shaker Screen 3AS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 3 to Shaker Screen 3BS and Operation of Shaker Screen 3BS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 3AN and Shaker Screen 3AS Oversize to Tertiary Crusher 3A and Operation of Tertiary Crusher 3A	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		Shaker Screen 3BN and Shaker Screen 3BS Oversize to Tertiary Crusher 3B and Operation of Tertiary Crusher 3B	6,570,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
002-035	Fine Crushing Line C to 3B to 3 FFDC	Shaker Screen 3AN Undersize to Conveyor Belt 3B	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 3AS Undersize to Conveyor Belt 3B	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 3A to Conveyor Belt 3B	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B to Conveyor Belt 3	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-036	Fine Crushing Line C to 3B to 3A FFDC	Shaker Screen 3BN Undersize to Conveyor Belt 3B	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 3BS Undersize to Conveyor Belt 3B	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-036 (cont'd)	Fine Crushing Line C to 3B to 3A FFDC (cont'd)	Tertiary Crusher 3B to Conveyor Belt 3B	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B to Conveyor Belt 3A	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-032	Fine Crushing Line D FFDC 1	Conveyor Belt 2D to Vibrating Grizzly 4 and Operation of Vibrating Grizzly 4	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 4 Oversize to Secondary Crusher 4 and Operation of Secondary Crusher 4	6,657,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 4 Undersize to Shaker Screen 4AN and Operation of Shaker Screen 4AN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Vibrating Grizzly 4 Undersize to Shaker Screen 4BN and Operation of Shaker Screen 4BN	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 4 to Shaker Screen 4AS and Operation of Shaker Screen 4AS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher 4 to Shaker Screen 4BS and Operation of Shaker Screen 4BS	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4AN and Shaker Screen 4AS Oversize to Tertiary Crusher 4A and Operation of Tertiary Crusher 4A	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4BN and Shaker Screen 4BS Oversize to Tertiary Crusher 4B and Operation of Tertiary Crusher 4B	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-326	Fine Crushing Line D FFDC 2 (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4AS Undersize to Conveyor Belt 3A	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4BN Undersize to Conveyor Belt 3A	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4BS Undersize to Conveyor Belt 3A	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 4A to Conveyor Belt 3A	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 4B to Conveyor Belt 3A	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-038	3/4/5 FFDC (vented inside)	Conveyor Belt 3 to Conveyor Belt 4	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 4 to Conveyor Belt 5	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-039	3A/4A/5A FFDC (vented inside)	Conveyor Belt 3A to Conveyor Belt 4A	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 4A to Conveyor Belt 5A	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-040	5A/FOSB FFDC 1 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 2 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 3 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 4 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 5 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 6 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 7 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 8 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 9 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-041	5/FOSB FFDC 1 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 2 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 3 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 4 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 5 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 6 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 7 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 8 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5/FOSB FFDC 9 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
Operation 003: MFL Fine Crushing Plant					
003-273	R9/R10 FFDC	Conveyor Belt R9 to Conveyor Belt R10	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-330	R10/R3 FFDC	Conveyor Belt R10 to Conveyor Belt R3	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
003-079	R3/R4 Bag Collector 3	Conveyor Belt R3 to Conveyor Belt R4	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-080	R4/R5/R6 Bag Collector 4	Conveyor Belt R4 to Conveyor Belt R5	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt R5 to Conveyor Belt R6	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-082	Scrubber 3C	Conveyor Belt R6 to Metcalf Track Hopper Storage Bin (MTHSB)	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-317	FFDC 3A	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C1	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C4	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B4	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B5	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B6	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A4	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A5	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A6	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2C1 to Conveyor Belt 3C	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2C2 to Conveyor Belt 3C	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2C3 to Conveyor Belt 3C	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2C4 to Conveyor Belt 3C	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2B3 to Conveyor Belt 3B2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
003-317 (cont'd)	FFDC 3A (cont'd)	Apron Feeder 2B4 to Conveyor Belt 3B2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2B5 to Conveyor Belt 3B3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2B6 to Conveyor Belt 3B3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2A3 to Conveyor Belt 3A2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2A4 to Conveyor Belt 3A2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2A5 to Conveyor Belt 3A3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Apron Feeder 2A6 to Conveyor Belt 3A3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3C to MFL Conveyor Belt 4C	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B2 to MFL Conveyor Belt 4B	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B3 to MFL Conveyor Belt 4B	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3A2 to MFL Conveyor Belt 4A	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3A3 to MFL Conveyor Belt 4A	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-301	FFDC 6A	MFL Conveyor Belt 4A to Scalping Screen A and Operation of Scalping Screen A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Scalping Screen A Oversize to Secondary Crusher A and Operation of Secondary Crusher A	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher A to Secondary Screen A1 and Operation of Secondary Screen A1	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher A to Secondary Screen A2 and Operation of Secondary Screen A2	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen A1 Oversize to Conveyor Belt 8	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen A2 Oversize to Conveyor Belt 7	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-302	FFDC 6B	MFL Conveyor Belt 4B to Scalping Screen B and Operation of Scalping Screen B	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Scalping Screen B Oversize to Secondary Crusher B and Operation of Secondary Crusher B	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher B to Secondary Screen B1 and Operation of Secondary Screen B1	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
003-302 (cont'd)	FFDC 6B (cont'd)	Secondary Crusher B to Secondary Screen B2 and Operation of Secondary Screen B2	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen B1 Oversize to Conveyor Belt 8	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen B2 Oversize to Conveyor Belt 7	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-304	FFDC 1	MFL Conveyor Belt 4C to Scalping Screen C and Operation of Scalping Screen C	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Scalping Screen C Oversize to Secondary Crusher C and Operation of Secondary Crusher C	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher C to Secondary Screen C1 and Operation of Secondary Screen C1	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher C to Secondary Screen C2 and Operation of Secondary Screen C2	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen C1 Oversize to Conveyor Belt 8	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen C2 Oversize to Conveyor Belt 7	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-089	Scrubber 5	Conveyor Belt 7 to MFL Conveyor Belt 5	26,280,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 8 to MFL Conveyor Belt 11	26,280,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		MFL Conveyor Belt 11 to MFL Conveyor Belt 5	26,280,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-303	FFDC 8	MFL Conveyor Belt 5 to Conveyor Belt 6	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-088	Scrubber 4	Conveyor Belt 6 to Tertiary Crushing Surge Bin (TCSB)	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-1	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-4	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-5	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-6	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
003-306	Tertiary Crushing Dust Collector (vented inside)	Belt Feeder 12-1 to Tertiary Crusher C1 and Operation of Tertiary Crusher C1	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder 12-2 to Tertiary Crusher C2 and Operation of Tertiary Crusher C2	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder 12-3 to Tertiary Crusher C3 and Operation of Tertiary Crusher C3	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder 12-4 to Tertiary Crusher C4 and Operation of Tertiary Crusher C4	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder 12-5 to Tertiary Crusher C5 and Operation of Tertiary Crusher C5	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder 12-6 to Tertiary Crusher C6 and Operation of Tertiary Crusher C6	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-307	Conveyor Belt 9 Dust Collector (vented inside)	Scalping Screen A Undersize to Conveyor Belt 9	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Scalping Screen B Undersize to Conveyor Belt 9	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Scalping Screen C Undersize to Conveyor Belt 9	17,520,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen A1 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen A2 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen B1 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen B2 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen C1 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen C2 Undersize to Conveyor Belt 9	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C1 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C2 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C3 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C4 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C5 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher C6 to Conveyor Belt 9	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
003-307 (cont'd)	Conveyor Belt 9 Dust Collector (vented inside) (cont'd)	Conveyor Belt 9 to Conveyor Belt 14	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-320	14/15 FFDC	Conveyor Belt 14 to Conveyor Belt 15	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-331	15/16 FFDC	Conveyor Belt 15 to Conveyor Belt 16	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-309	16/S11 FFDC	Conveyor Belt 16 to Conveyor Belt S11	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-201	FOIS/A1A Bag Collector 7	Belt Feeder SF1 to Conveyor Belt A1A	32,850,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Belt Feeder SF2 to Conveyor Belt A1A	32,850,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-202	A1A/A2A Bag Collector 8	Conveyor Belt A1A to Conveyor Belt A2A via Agglomeration Splitter	26,280,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
003-203	A1A/A2C Bag Collector 9	Conveyor Belt A1A to Conveyor Belt A2C via Agglomeration Splitter	26,280,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
Operation 004: Lime Slaking Plants and Lime Transloading					
004-445a	Lime Transloading Dust Collector	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	220,752	tons/year	Annual quantity of lime transferred (assume equal to the annual quantity of quicklime delivered to the various lime silos)
004-445b		Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	220,752	tons/year	Annual quantity of lime transferred (assume equal to the annual quantity of quicklime delivered to the various lime silos)
Operation 014: Concentrate Leach Plant					
014-239	PLV 2-Stage Scrubber	Pressure Leach Vessel 1 and Pressure Leach Vessel 2	8,760	hours/year	Annual hours of operation (assume continuous operation)
Operation 017: Metcalf Concentrator					
017-318	Secondary Screen Feed Bin FFDC	Conveyor Belt R11 to Secondary Screen Feed Bin	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		B2 Secondary Crusher Discharge Conveyor to Secondary Screen Feed Bin	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-280	Secondary Screening FFDC 1	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 1	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen Belt Feeder 1 to Secondary Screen 1 and Operation of Secondary Screen 1	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen 1 Oversize to B1 Secondary Crusher Feed Conveyor	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen 1 Undersize to B3 Crushed Ore A Conveyor	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
017-281	Secondary Screening FFDC 2	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 2	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen Belt Feeder 2 to Secondary Screen 2 and Operation of Secondary Screen 2	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen 2 Oversize to B1 Secondary Crusher Feed Conveyor	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Screen 2 Undersize to B3 Crushed Ore A Conveyor	36,441,600	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-319	Secondary Crusher Feed Bin FFDC	B1 Secondary Crusher Feed Conveyor to Secondary Crusher Feed Bin	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-283	Secondary Crushing FFDC 1	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 1	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher Belt Feeder 1 to Metcalf Secondary Crusher 1 and Operation of Metcalf Secondary Crusher 1	16,022,040	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Secondary Crusher 1 to B2 Secondary Crusher Discharge Conveyor	16,022,040	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-284	Secondary Crushing FFDC 2	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 2	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Secondary Crusher Belt Feeder 2 to Metcalf Secondary Crusher 2 and Operation of Metcalf Secondary Crusher 2	16,022,040	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Metcalf Secondary Crusher 2 to B2 Secondary Crusher Discharge Conveyor	16,022,040	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-285	Crushed Ore A/B Conveyor Transfer Point FFDC	B3 Crushed Ore A Conveyor to B4 Crushed Ore B Conveyor	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-286	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	B4 Crushed Ore B Conveyor to B5 Crushed Ore Bin Tripper Conveyor	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-287	Crushed Ore Bin FFDC 1	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin A	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 1	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 2	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 3	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 4	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 5	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin A to Crushed Ore Belt Feeder 6	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 1 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
017-287 (cont'd)	Crushed Ore Bin FFDC 1 (cont'd)	Crushed Ore Belt Feeder 2 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 3 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 4 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 5 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 6 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		B6 Crushed Ore Feed Conveyor to B7 Crushed Ore Feed Transfer Conveyor	68,328,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-288	Crushed Ore Bin FFDC 2	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 7	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 8	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 9	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 10	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 11	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 12	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 7 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 8 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 9 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 10 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 11 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 12 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-288	Crushed Ore Bin FFDC 2	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 13	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
017-288 (cont'd)	Crushed Ore Bin FFDC 2 (cont'd)	Crushed Ore Bin B to Crushed Ore Belt Feeder 14	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 15	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 16	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 17	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin B to Crushed Ore Belt Feeder 18	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 13 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 14 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 15 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 16 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 17 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 18 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-290	Crushed Ore Bin FFDC 4	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin C	42,048,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 19	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 20	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 21	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 22	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 23	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Bin C to Crushed Ore Belt Feeder 24	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 19 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 20 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 21 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
017-290 (cont'd)	Crushed Ore Bin FFDC 4 (cont'd)	Crushed Ore Belt Feeder 22 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 23 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crushed Ore Belt Feeder 24 to B6 Crushed Ore Feed Conveyor	31,938,960	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-291	Crushed Ore Transfers FFDC	B7 Crushed Ore Feed Transfer Conveyor to Crusher Surge Bin	68,328,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crusher Surge Bin to B8-A Crusher Belt Feeder	29,740,200	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Crusher Surge Bin to B8-B Crusher Belt Feeder	29,740,200	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		B8-A Crusher Belt Feeder to B9 Crusher Feed Conveyor	29,740,200	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		B8-B Crusher Belt Feeder to B9 Crusher Feed Conveyor	29,740,200	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		B9 Crusher Feed Conveyor to Crusher Feed Hopper	68,328,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-292	HRC/HPGR Crusher FFDC	HRC/HPGR Crusher	63,948,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		HRC/HPGR Crusher to B10 Crusher Discharge Conveyor	63,948,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
017-294	Wet Screen Feed FFDC	B10 Crusher Discharge Conveyor to Wet Screen Feed Bin	8,760,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
AOS1: Morenci Concentrator Quaternary Crushing Operations					
002-033 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3 (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1AS Undersize to Conveyor Belt 3 (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1BN Undersize to Conveyor Belt 3 (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 1BS Undersize to Conveyor Belt 3 (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 1A to Conveyor Belt 3 (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 1B to Conveyor Belt 3 (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-034 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3 (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2AS Undersize to Conveyor Belt 3 (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-034 (AOS1) (cont'd)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside) (cont'd)	Shaker Screen 2BN Undersize to Conveyor Belt 3 (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 2BS Undersize to Conveyor Belt 3 (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 2A to Conveyor Belt 3 (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 2B to Conveyor Belt 3 (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-035 (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Shaker Screen 3AN Undersize to Conveyor Belt 3B (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 3AS Undersize to Conveyor Belt 3B (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 3A to Conveyor Belt 3B (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3 (AOS1)	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-036 (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Shaker Screen 3BN Undersize to Conveyor Belt 3B (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 3BS Undersize to Conveyor Belt 3B (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 3B to Conveyor Belt 3B (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3A (AOS1)	11,388,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-326 (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4AS Undersize to Conveyor Belt 3A (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4BN Undersize to Conveyor Belt 3A (AOS1)	2,505,360	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Shaker Screen 4BS Undersize to Conveyor Belt 3A (AOS1)	3,188,640	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 4A to Conveyor Belt 3A (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Tertiary Crusher 4B to Conveyor Belt 3A (AOS1)	6,570,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-311 (AOS1)	West Transfer Points FFDC (AOS1)	Conveyor Belt 3 (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 1 (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		West RC Product Conveyor (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-311 (AOS1) (cont'd)	West Transfer Points FFDC (AOS1) (cont'd)	West RC Product Conveyor (AOS1) to West Transfer Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	15,330,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		West Transfer Conveyor (AOS1) to Conveyor Belt 4 (AOS1)	15,330,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-312 (AOS1)	West Surge Bin FFDC (AOS1)	West RC Feed Conveyor (AOS1) to West Surge Bin (AOS1)	2,628,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-313 (AOS1)	West RC FFDC (AOS1)	West Surge Bin (AOS1) to West RC Feeder (AOS1)	2,628,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		West RC Feeder (AOS1) to West RC Feed Bin (AOS1) via West Flop Gate (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		West RC Feeder (AOS1) to West RC Product Conveyor (AOS1) via West Flop Gate (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		West RC (AOS1)	20,148,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		West RC (AOS1) to West RC Product Conveyor (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-314 (AOS1)	East Transfer Points FFDC (AOS1)	Conveyor Belt 3A (AOS1) to East RC Feed Conveyor (AOS1) via East Proportioning Gate 1 (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East RC Product Conveyor (AOS1) to East Transfer Conveyor (AOS1) via East Proportioning Gate 2 (AOS1)	4,818,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East Transfer Conveyor (AOS1) to East RC Feed Conveyor (AOS1)	4,818,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East RC Product Conveyor (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 2 (AOS1)	15,330,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-315 (AOS1)	East Surge Bin FFDC (AOS1)	East RC Feed Conveyor (AOS1) to East Surge Bin (AOS1)	2,628,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-316 (AOS1)	East RC FFDC (AOS1)	East Surge Bin (AOS1) to East RC Feeder (AOS1)	2,628,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East RC Feeder (AOS1) to East RC Feed Bin (AOS1) via East Flop Gate (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East RC Feeder (AOS1) to East RC Product Conveyor (AOS1) via East Flop Gate (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		East RC (AOS1)	20,148,000	tons/year	Annual quantity of ore processed (assume equal to the maximum hourly capacity at continuous operation)
		East RC (AOS1) to East RC Product Conveyor (AOS1)	20,148,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-038 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	Conveyor Belt 3 (AOS1) to Conveyor Belt 4 (AOS1) via West Proportioning Gate 1 (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 4 (AOS1) to Conveyor Belt 5 (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)

Table H.1 Emission Inventory Inputs - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Potential Emissions	Units	Information Description
002-039 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	Conveyor Belt 3A (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 1 (AOS1)	15,330,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
		Conveyor Belt 4A (AOS1) to Conveyor Belt 5A (AOS1)	15,330,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
002-040 (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 2 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 3 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 4 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 5 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 6 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 7 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 8 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
	5A/FOSB FFDC 9 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	22,776,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum hourly capacity of the transfer at continuous operation)
AOS2: Concentrate Leach Plant Upgrades					
014-458 (AOS2)	PLV Scrubber 1 (AOS2)	Pressure Leach Vessel 1 (AOS2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
014-459 (AOS2)	PLV Scrubber 2 (AOS2)	Pressure Leach Vessel 2 (AOS2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
AOS3: Primary Crushing and Overland Conveying Operations					
001-256a (AOS3)	Pollution Control Device for Crushers (AOS3)	Crushers To Be Determined	TBD	tons/year	To be determined
001-256b (AOS3)	Pollution Control Device for Conveyor Belts (AOS3)	Conveyor Belts To Be Determined	TBD	tons/year	To be determined

Table H.2 Particulate Matter Emission Factors - CAM Analysis

Process Code	Process Description	Emission Factors							Process Rate Units	Particulate Matter Emission Factor Inputs [a]					Reference
		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	
Material Transfer Operations															
Ore2TrPrt	Material Transfer of the Morenci Concentrator Ore (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Ore3TrPrt	Material Transfer of the MFL Fine Crushing Plant Ore (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Ore4TrPrt	Material Transfer of the Combination of Morenci Concentrator and Metcalf Concentrator Ore (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Ore7TrPrt	Material Transfer of the Metcalf Concentrator Ore (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Ore8TrPrt	Material Transfer of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2 (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Ore9TrPrt	Material Transfer of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3 (Protected)	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	tons	0.74	0.35	0.053	1.30	3.20	AP-42 Section 13.2.4, Expression 1 (11/06), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
LimeLd	Lime Loading	0.61	0.21	0.032	0.00E+00	0.00E+00	0.00E+00	lb/ton	tons	1	0.35	0.053	--	--	AP-42 Table 11.17-4 (02/98) for product loading enclosed truck, particle size fractions from AP-42 Section 13.2.4, Expression 1 (11/06)
Screening Operations															
V2Screen	Vibrating Grizzly Screening of the Morenci Concentrator Ore	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Sh2Screen	Shaker Screening of the Morenci Concentrator Ore	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Sc3Screen	Scalping Screening of the MFL Fine Crushing Plant Ore	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Se3Screen	Secondary Screening of the MFL Fine Crushing Plant Ore	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Se7Screen	Secondary Screening of the Metcalf Concentrator Ore	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.22E-07	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Screening (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)

Table H.2 Particulate Matter Emission Factors - CAM Analysis

Process Code	Process Description	Emission Factors							Process Rate Units	Particulate Matter Emission Factor Inputs [a]					Reference
		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	
Crushing Operations															
P8Crush	Primary Crushing of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC2	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
P9Crush	Primary Crushing of the Combination of Morenci Concentrator, Metcalf Concentrator, and MFL Fine Crushing Plant Ore at IPC3	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
S2Crush	Secondary Crushing of the Morenci Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
S3Crush	Secondary Crushing of the MFL Fine Crushing Plant Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
S7Crush	Secondary Crushing of the Metcalf Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
T2Crush	Tertiary Crushing of the Morenci Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
T3Crush	Tertiary Crushing of the MFL Fine Crushing Plant Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
R2Crush	Roll Crushing of the Morenci Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
R7Crush	Roll Crushing of the Metcalf Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
H7Crush	HPGR Crushing of the Metcalf Concentrator Ore	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	tons	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled), PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
Pressure Leaching Operations															
PLVs	Pressure Leach Vessel 1 and Pressure Leach Vessel 2	20.16	20.16	20.16	3.97E-03	3.97E-03	1.43E-02	lb/hr	hours	--	--	--	--	--	Statistical analysis of performance tests at a 95% confidence interval with the uncontrolled emission rate back-calculated using the maximum control efficiency of 99% from AP-42 Table B.2-3 for a venturi scrubber, Assume $PM=PM_{10}=PM_{2.5}$, PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)

Table H.2 Particulate Matter Emission Factors - CAM Analysis

Process Code	Process Description	Emission Factors							Process Rate Units	Particulate Matter Emission Factor Inputs [a]					Reference
		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs	Units		k (PM)	k (PM_{10})	k ($PM_{2.5}$)	U (mph)	M (%)	
PLV1 (AOS2)	Pressure Leach Vessel 1 (AOS2)	5.20	5.20	5.20	1.02E-03	1.02E-03	3.70E-03	lb/hr	hours	--	--	--	--	--	Engineering estimate for the particulate matter entrained in the vent gas from Spray Condenser 1, Assume PM=PM_{10}=$PM_{2.5}$, PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)
PLV2 (AOS2)	Pressure Leach Vessel 2 (AOS2)	5.20	5.20	5.20	1.02E-03	1.02E-03	3.70E-03	lb/hr	hours	--	--	--	--	--	Engineering estimate for the particulate matter entrained in the vent gas from Spray Condenser 2, Assume PM=PM_{10}=$PM_{2.5}$, PM_{10} emission factor multiplied by the concentration of the HAPs (assume the concentration of the HAP in the process material is equal to the concentration of the HAP in the PM_{10} emissions)

[a] k = particle size multipliers, U = mean wind speed, M = material moisture content

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
Operation 001: Mining Operations																		
001-006	In-Pit Crusher 2 FFDC	In-Pit Crusher 2	P8Crush	65,700,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	39.42	17.74	3.29	0.001	0.001	0.003
		In-Pit Crusher 2 to Discharge Conveyor DC2	Ore8TrPrt	65,700,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.99	3.31	0.50	0.0003	0.0003	0.0005
001-250	In-Pit Crusher 3 and FB3/P11 FFDC (vented inside)	In-Pit Crusher 3	P9Crush	59,130,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	35.48	15.97	2.96	0.001	0.001	0.002
		In-Pit Crusher 3 to Feeder Belt FB3	Ore9TrPrt	59,130,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.29	2.98	0.45	0.0002	0.0002	0.0004
		Feeder Belt FB3 to Discharge Conveyor P11	Ore9TrPrt	59,130,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.29	2.98	0.45	0.0002	0.0002	0.0004
001-251	P11/P5 and P11/P12 FFDC	Discharge Conveyor P11 to Conveyor Belt P5	Ore4TrPrt	63,072,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.71	3.17	0.48	0.0002	0.0002	0.0005
		Discharge Conveyor P11 to Conveyor Belt P12	Ore3TrPrt	63,072,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.71	3.17	0.48	0.0002	0.0002	0.0005
001-015	P5/P6 FFDC	Conveyor Belt P5 to Conveyor Belt P6	Ore4TrPrt	78,840,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	8.39	3.97	0.60	0.0003	0.0003	0.0006
001-225	DC2/P9 and P9/P10 FFDC	Discharge Conveyor DC2 to Conveyor Belt P9 via Diverter Gate 2	Ore3TrPrt	63,072,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.71	3.17	0.48	0.0002	0.0002	0.0005
		Conveyor Belt P9 to Conveyor Belt P10	Ore3TrPrt	61,320,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.53	3.09	0.47	0.0002	0.0002	0.0005
001-325	DC2/P5 FFDC	Discharge Conveyor DC2 to Conveyor Belt P5 via Diverter Gate 2	Ore4TrPrt	65,700,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	6.99	3.31	0.50	0.0003	0.0003	0.0005
001-299	Mill IOS/R1A FFDC	Reclaim Feeder 1 to Conveyor Belt R1A	Ore4TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Reclaim Feeder 2 to Conveyor Belt R1A	Ore4TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Reclaim Feeder 3 to Conveyor Belt R1A	Ore4TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Reclaim Feeder 4 to Conveyor Belt R1A	Ore4TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
001-300	Mill IOS/R1B FFDC	Reclaim Feeder 5 to Conveyor Belt R1B	Ore4TrPrt	21,024,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.24	1.06	0.16	0.00008	0.00008	0.0002
		Reclaim Feeder 6 to Conveyor Belt R1B	Ore4TrPrt	21,024,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.24	1.06	0.16	0.00008	0.00008	0.0002
		Reclaim Feeder 7 to Conveyor Belt R1B	Ore4TrPrt	21,024,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.24	1.06	0.16	0.00008	0.00008	0.0002
001-272	R1A and R1B/R7 FFDC	Conveyor Belt R1A to Conveyor Belt R7	Ore2TrPrt	48,180,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	5.13	2.43	0.37	0.0002	0.0002	0.0003
		Conveyor Belt R1B to Conveyor Belt R7	Ore2TrPrt	48,180,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	5.13	2.43	0.37	0.0002	0.0002	0.0003
001-277	R1A and R1B/R2 Bag Collector 1	Conveyor Belt R1A to Conveyor Belt R2	Ore7TrPrt	48,512,880	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	5.16	2.44	0.37	0.0002	0.0002	0.0004
		Conveyor Belt R1B to Conveyor Belt R2	Ore7TrPrt	48,512,880	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	5.16	2.44	0.37	0.0002	0.0002	0.0004
001-278	R2/R11 FFDC	Conveyor Belt R2 to Conveyor Belt R11	Ore7TrPrt	48,512,880	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	5.16	2.44	0.37	0.0002	0.0002	0.0004
001-228	MFL IOS/R8 FFDC	Apron Feeder 1 to Conveyor Belt R8	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
		Apron Feeder 2 to Conveyor Belt R8	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
001-229	R8/R9 FFDC	Conveyor Belt R8 to Conveyor Belt R9	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
Operation 002: Morenci Concentrator																		
002-022	R7/1A and 1B FFDC (vented inside)	Conveyor Belt R7 to Conveyor Belt 1A via Coarse Ore Splitter	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
		Conveyor Belt R7 to Conveyor Belt 1B via Coarse Ore Splitter	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-023	1A/COSB FFDC 1 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 2 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 3 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 4 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 5 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 6 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 7 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 8 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1A/COSB FFDC 9 (vented inside)	Conveyor Belt 1A to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
002-024	1B/COSB FFDC 1 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 2 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 3 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 4 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 5 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 6 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 7 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 8 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
	1B/COSB FFDC 9 (vented inside)	Conveyor Belt 1B to Coarse Ore Storage Bin (COSB)	Ore2TrPrt	24,090,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.56	1.21	0.18	0.00009	0.00009	0.0002
002-025	COSB/AFA/2A FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder A1	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder A2	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder A3	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder A4	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder A1 to Conveyor Belt 2A	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder A2 to Conveyor Belt 2A	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder A3 to Conveyor Belt 2A	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder A4 to Conveyor Belt 2A	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
002-026	COSB/AFB/2B FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder B1	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder B2	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder B3	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder B4	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-026 (cont'd)	COSB/AFB/2B FFDC (vented inside) (cont'd)	Apron Feeder B1 to Conveyor Belt 2B	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder B2 to Conveyor Belt 2B	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder B3 to Conveyor Belt 2B	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder B4 to Conveyor Belt 2B	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
002-027	COSB/AFC/2C FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder C1	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder C2	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder C3	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder C4	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder C1 to Conveyor Belt 2C	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder C2 to Conveyor Belt 2C	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder C3 to Conveyor Belt 2C	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder C4 to Conveyor Belt 2C	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
002-028	COSB/AFD/2D FFDC (vented inside)	Coarse Ore Storage Bin (COSB) to Apron Feeder D1	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder D2	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder D3	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Coarse Ore Storage Bin (COSB) to Apron Feeder D4	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder D1 to Conveyor Belt 2D	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder D2 to Conveyor Belt 2D	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder D3 to Conveyor Belt 2D	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
		Apron Feeder D4 to Conveyor Belt 2D	Ore2TrPrt	3,504,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.37	0.18	0.03	0.00001	0.00001	0.00002
002-029	Fine Crushing Line A FFDC 1 (vented inside)	Conveyor Belt 2A to Vibrating Grizzly 1 and Operation of Vibrating Grizzly 1	V2Screen	11,388,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	12.53	4.21	0.28	0.0003	0.0003	0.0006
		Vibrating Grizzly 1 Oversize to Secondary Crusher 1 and Operation of Secondary Crusher 1	S2Crush	6,657,600	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.99	1.80	0.33	0.0001	0.0001	0.0002
		Vibrating Grizzly 1 Undersize to Shaker Screen 1AN and Operation of Shaker Screen 1AN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Vibrating Grizzly 1 Undersize to Shaker Screen 1BN and Operation of Shaker Screen 1BN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Secondary Crusher 1 to Shaker Screen 1AS and Operation of Shaker Screen 1AS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Secondary Crusher 1 to Shaker Screen 1BS and Operation of Shaker Screen 1BS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Shaker Screen 1AN and Shaker Screen 1AS Oversize to Tertiary Crusher 1A and Operation of Tertiary Crusher 1A	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
		Shaker Screen 1BN and Shaker Screen 1BS Oversize to Tertiary Crusher 1B and Operation of Tertiary Crusher 1B	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-033	Fine Crushing Line A FFDC 2 (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1AS Undersize to Conveyor Belt 3	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1BN Undersize to Conveyor Belt 3	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1BS Undersize to Conveyor Belt 3	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 1A to Conveyor Belt 3	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 1B to Conveyor Belt 3	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
002-030	Fine Crushing Line B FFDC 1	Conveyor Belt 2B to Vibrating Grizzly 2 and Operation of Vibrating Grizzly 2	V2Screen	11,388,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	12.53	4.21	0.28	0.0003	0.0003	0.0006
		Vibrating Grizzly 2 Oversize to Secondary Crusher 2 and Operation of Secondary Crusher 2	S2Crush	6,657,600	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.99	1.80	0.33	0.0001	0.0001	0.0002
		Vibrating Grizzly 2 Undersize to Shaker Screen 2AN and Operation of Shaker Screen 2AN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Vibrating Grizzly 2 Undersize to Shaker Screen 2BN and Operation of Shaker Screen 2BN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Secondary Crusher 2 to Shaker Screen 2AS and Operation of Shaker Screen 2AS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Secondary Crusher 2 to Shaker Screen 2BS and Operation of Shaker Screen 2BS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Shaker Screen 2AN and Shaker Screen 2AS Oversize to Tertiary Crusher 2A and Operation of Tertiary Crusher 2A	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
		Shaker Screen 2BN and Shaker Screen 2BS Oversize to Tertiary Crusher 2B and Operation of Tertiary Crusher 2B	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
002-034	Fine Crushing Line B FFDC 2 (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2AS Undersize to Conveyor Belt 3	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2BN Undersize to Conveyor Belt 3	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2BS Undersize to Conveyor Belt 3	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 2A to Conveyor Belt 3	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 2B to Conveyor Belt 3	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
002-031	Fine Crushing Line C FFDC 1	Conveyor Belt 2C to Vibrating Grizzly 3 and Operation of Vibrating Grizzly 3	V2Screen	11,388,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	12.53	4.21	0.28	0.0003	0.0003	0.0006
		Vibrating Grizzly 3 Oversize to Secondary Crusher 3 and Operation of Secondary Crusher 3	S2Crush	6,657,600	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.99	1.80	0.33	0.0001	0.0001	0.0002
		Vibrating Grizzly 3 Undersize to Shaker Screen 3AN and Operation of Shaker Screen 3AN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Vibrating Grizzly 3 Undersize to Shaker Screen 3BN and Operation of Shaker Screen 3BN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Secondary Crusher 3 to Shaker Screen 3AS and Operation of Shaker Screen 3AS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Secondary Crusher 3 to Shaker Screen 3BS and Operation of Shaker Screen 3BS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Shaker Screen 3AN and Shaker Screen 3AS Oversize to Tertiary Crusher 3A and Operation of Tertiary Crusher 3A	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-031 (cont'd)	Fine Crushing Line C FFDC 1 (cont'd)	Shaker Screen 3BN and Shaker Screen 3BS Oversize to Tertiary Crusher 3B and Operation of Tertiary Crusher 3B	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
002-035	Fine Crushing Line C to 3B to 3 FFDC	Shaker Screen 3AN Undersize to Conveyor Belt 3B	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 3AS Undersize to Conveyor Belt 3B	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 3A to Conveyor Belt 3B	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Conveyor Belt 3B to Conveyor Belt 3	Ore2TrPrt	11,388,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.21	0.57	0.09	0.00004	0.00004	0.00008
002-036	Fine Crushing Line C to 3B to 3A FFDC	Shaker Screen 3BN Undersize to Conveyor Belt 3B	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 3BS Undersize to Conveyor Belt 3B	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 3B to Conveyor Belt 3B	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Conveyor Belt 3B to Conveyor Belt 3A	Ore2TrPrt	11,388,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.21	0.57	0.09	0.00004	0.00004	0.00008
002-032	Fine Crushing Line D FFDC 1	Conveyor Belt 2D to Vibrating Grizzly 4 and Operation of Vibrating Grizzly 4	V2Screen	11,388,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	12.53	4.21	0.28	0.0003	0.0003	0.0006
		Vibrating Grizzly 4 Oversize to Secondary Crusher 4 and Operation of Secondary Crusher 4	S2Crush	6,657,600	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.99	1.80	0.33	0.0001	0.0001	0.0002
		Vibrating Grizzly 4 Undersize to Shaker Screen 4AN and Operation of Shaker Screen 4AN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Vibrating Grizzly 4 Undersize to Shaker Screen 4BN and Operation of Shaker Screen 4BN	Sh2Screen	2,505,360	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	2.76	0.93	0.06	0.00007	0.00007	0.0001
		Secondary Crusher 4 to Shaker Screen 4AS and Operation of Shaker Screen 4AS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Secondary Crusher 4 to Shaker Screen 4BS and Operation of Shaker Screen 4BS	Sh2Screen	3,188,640	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	9.82E-08	lb/ton	3.51	1.18	0.08	0.00009	0.00009	0.0002
		Shaker Screen 4AN and Shaker Screen 4AS Oversize to Tertiary Crusher 4A and Operation of Tertiary Crusher 4A	T2Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
		Shaker Screen 4BN and Shaker Screen 4BS Oversize to Tertiary Crusher 4B and Operation of Tertiary Crusher 4B	T2Crush	6,570,000	tons	0.00120	0.00054	0.000100	4.10E-08	4.10E-08	7.17E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0002
002-326	Fine Crushing Line D FFDC 2 (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4AS Undersize to Conveyor Belt 3A	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4BN Undersize to Conveyor Belt 3A	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4BS Undersize to Conveyor Belt 3A	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 4A to Conveyor Belt 3A	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 4B to Conveyor Belt 3A	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
002-038	3/4/5 FFDC (vented inside)	Conveyor Belt 3 to Conveyor Belt 4	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
		Conveyor Belt 4 to Conveyor Belt 5	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
002-039	3A/4A/5A FFDC (vented inside)	Conveyor Belt 3A to Conveyor Belt 4A	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
		Conveyor Belt 4A to Conveyor Belt 5A	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-040	5A/FOSB FFDC 1 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 2 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 3 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 4 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 5 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 6 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 7 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 8 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 9 (vented inside)	Conveyor Belt 5A to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
002-041	5/FOSB FFDC 1 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 2 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 3 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 4 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 5 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 6 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 7 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 8 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5/FOSB FFDC 9 (vented inside)	Conveyor Belt 5 to Fine Ore Storage Bin (FOSB)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
Operation 003: MFL Fine Crushing Plant																		
003-273	R9/R10 FFDC	Conveyor Belt R9 to Conveyor Belt R10	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-330	R10/R3 FFDC	Conveyor Belt R10 to Conveyor Belt R3	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-079	R3/R4 Bag Collector 3	Conveyor Belt R3 to Conveyor Belt R4	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-080	R4/R5/R6 Bag Collector 4	Conveyor Belt R4 to Conveyor Belt R5	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
		Conveyor Belt R5 to Conveyor Belt R6	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-082	Scrubber 3C	Conveyor Belt R6 to Metcalf Track Hopper Storage Bin (MTHSB)	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-317	FFDC 3A	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C1	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2C4	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
003-317 (cont'd)	FFDC 3A (cont'd)	Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B4	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B5	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2B6	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A4	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A5	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Metcalf Track Hopper Storage Bin (MTHSB) to Apron Feeder 2A6	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2C1 to Conveyor Belt 3C	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2C2 to Conveyor Belt 3C	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2C3 to Conveyor Belt 3C	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2C4 to Conveyor Belt 3C	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2B3 to Conveyor Belt 3B2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2B4 to Conveyor Belt 3B2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2B5 to Conveyor Belt 3B3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2B6 to Conveyor Belt 3B3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2A3 to Conveyor Belt 3A2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2A4 to Conveyor Belt 3A2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2A5 to Conveyor Belt 3A3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Apron Feeder 2A6 to Conveyor Belt 3A3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Conveyor Belt 3C to MFL Conveyor Belt 4C	Ore3TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Conveyor Belt 3B2 to MFL Conveyor Belt 4B	Ore3TrPrt	13,140,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.40	0.66	0.10	0.00005	0.00005	0.0001
		Conveyor Belt 3B3 to MFL Conveyor Belt 4B	Ore3TrPrt	13,140,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.40	0.66	0.10	0.00005	0.00005	0.0001
		Conveyor Belt 3A2 to MFL Conveyor Belt 4A	Ore3TrPrt	13,140,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.40	0.66	0.10	0.00005	0.00005	0.0001
		Conveyor Belt 3A3 to MFL Conveyor Belt 4A	Ore3TrPrt	13,140,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.40	0.66	0.10	0.00005	0.00005	0.0001
003-301	FFDC 6A	MFL Conveyor Belt 4A to Scalping Screen A and Operation of Scalping Screen A	Sc3Screen	17,520,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	19.27	6.48	0.44	0.0005	0.0005	0.001
		Scalping Screen A Oversize to Secondary Crusher A and Operation of Secondary Crusher A	S3Crush	17,520,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	10.51	4.73	0.88	0.0004	0.0004	0.0007
		Secondary Crusher A to Secondary Screen A1 and Operation of Secondary Screen A1	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Crusher A to Secondary Screen A2 and Operation of Secondary Screen A2	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Screen A1 Oversize to Conveyor Belt 8	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen A2 Oversize to Conveyor Belt 7	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
003-302	FFDC 6B	MFL Conveyor Belt 4B to Scalping Screen B and Operation of Scalping Screen B	Sc3Screen	17,520,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	19.27	6.48	0.44	0.0005	0.0005	0.001
		Scalping Screen B Oversize to Secondary Crusher B and Operation of Secondary Crusher B	S3Crush	17,520,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	10.51	4.73	0.88	0.0004	0.0004	0.0007
		Secondary Crusher B to Secondary Screen B1 and Operation of Secondary Screen B1	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Crusher B to Secondary Screen B2 and Operation of Secondary Screen B2	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Screen B1 Oversize to Conveyor Belt 8	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen B2 Oversize to Conveyor Belt 7	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
003-304	FFDC 1	MFL Conveyor Belt 4C to Scalping Screen C and Operation of Scalping Screen C	Sc3Screen	17,520,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	19.27	6.48	0.44	0.0005	0.0005	0.001
		Scalping Screen C Oversize to Secondary Crusher C and Operation of Secondary Crusher C	S3Crush	17,520,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	10.51	4.73	0.88	0.0004	0.0004	0.0007
		Secondary Crusher C to Secondary Screen C1 and Operation of Secondary Screen C1	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Crusher C to Secondary Screen C2 and Operation of Secondary Screen C2	Se3Screen	8,760,000	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.10E-07	lb/ton	9.64	3.24	0.22	0.0002	0.0002	0.0005
		Secondary Screen C1 Oversize to Conveyor Belt 8	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen C2 Oversize to Conveyor Belt 7	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
003-089	Scrubber 5	Conveyor Belt 7 to MFL Conveyor Belt 5	Ore3TrPrt	26,280,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.80	1.32	0.20	0.0001	0.0001	0.0002
		Conveyor Belt 8 to MFL Conveyor Belt 11	Ore3TrPrt	26,280,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.80	1.32	0.20	0.0001	0.0001	0.0002
		MFL Conveyor Belt 11 to MFL Conveyor Belt 5	Ore3TrPrt	26,280,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.80	1.32	0.20	0.0001	0.0001	0.0002
003-303	FFDC 8	MFL Conveyor Belt 5 to Conveyor Belt 6	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-088	Scrubber 4	Conveyor Belt 6 to Tertiary Crushing Surge Bin (TCSB)	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-1	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-2	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-3	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-4	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-5	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crushing Surge Bin (TCSB) to Belt Feeder 12-6	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
003-306	Tertiary Crushing Dust Collector (vented inside)	Belt Feeder 12-1 to Tertiary Crusher C1 and Operation of Tertiary Crusher C1	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003
		Belt Feeder 12-2 to Tertiary Crusher C2 and Operation of Tertiary Crusher C2	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003
		Belt Feeder 12-3 to Tertiary Crusher C3 and Operation of Tertiary Crusher C3	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003
		Belt Feeder 12-4 to Tertiary Crusher C4 and Operation of Tertiary Crusher C4	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003
		Belt Feeder 12-5 to Tertiary Crusher C5 and Operation of Tertiary Crusher C5	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003
		Belt Feeder 12-6 to Tertiary Crusher C6 and Operation of Tertiary Crusher C6	T3Crush	6,570,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.03E-08	lb/ton	3.94	1.77	0.33	0.0001	0.0001	0.0003

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
003-307	Conveyor Belt 9 Dust Collector (vented inside)	Scalping Screen A Undersize to Conveyor Belt 9	Ore3TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Scalping Screen B Undersize to Conveyor Belt 9	Ore3TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Scalping Screen C Undersize to Conveyor Belt 9	Ore3TrPrt	17,520,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	1.86	0.88	0.13	0.00007	0.00007	0.0001
		Secondary Screen A1 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen A2 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen B1 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen B2 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen C1 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen C2 Undersize to Conveyor Belt 9	Ore3TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Tertiary Crusher C1 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crusher C2 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crusher C3 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crusher C4 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crusher C5 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Tertiary Crusher C6 to Conveyor Belt 9	Ore3TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00005
		Conveyor Belt 9 to Conveyor Belt 14	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-320	14/15 FFDC	Conveyor Belt 14 to Conveyor Belt 15	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-331	15/16 FFDC	Conveyor Belt 15 to Conveyor Belt 16	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-309	16/S11 FFDC	Conveyor Belt 16 to Conveyor Belt S11	Ore3TrPrt	52,560,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	5.59	2.65	0.40	0.0002	0.0002	0.0004
003-201	FOIS/A1A Bag Collector 7	Belt Feeder SF1 to Conveyor Belt A1A	Ore3TrPrt	32,850,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	3.50	1.65	0.25	0.0001	0.0001	0.0002
		Belt Feeder SF2 to Conveyor Belt A1A	Ore3TrPrt	32,850,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	3.50	1.65	0.25	0.0001	0.0001	0.0002
003-202	A1A/A2A Bag Collector 8	Conveyor Belt A1A to Conveyor Belt A2A via Agglomeration Splitter	Ore3TrPrt	26,280,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.80	1.32	0.20	0.0001	0.0001	0.0002
003-203	A1A/A2C Bag Collector 9	Conveyor Belt A1A to Conveyor Belt A2C via Agglomeration Splitter	Ore3TrPrt	26,280,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.50E-08	lb/ton	2.80	1.32	0.20	0.0001	0.0001	0.0002
Operation 004: Lime Slaking Plants and Lime Transloading																		
004-445a	Lime Transloading Dust Collector	Transfer of Quicklime from Railcars to the Lime Transloading Conveyor	LimeLd	220,752	tons	0.61	0.21	0.032	0.00E+00	0.00E+00	0.00E+00	lb/ton	67.33	23.57	3.57	0	0	0
004-445b	Lime Transloading Dust Collector	Transfer of Quicklime from the Lime Transloading Conveyor to Trucks	LimeLd	220,752	tons	0.61	0.21	0.032	0.00E+00	0.00E+00	0.00E+00	lb/ton	67.33	23.57	3.57	0	0	0
Operation 014: Concentrate Leach Plant																		
014-239	PLV 2-Stage Scrubber	Pressure Leach Vessel 1 and Pressure Leach Vessel 2	PLVs	8,760	hours	20.16	20.16	20.16	3.97E-03	3.97E-03	1.43E-02	lb/hr	88.30	88.30	88.30	0.02	0.02	0.06
Operation 017: Metcalf Concentrator																		
017-318	Secondary Screen Feed Bin FFDC	Conveyor Belt R11 to Secondary Screen Feed Bin	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
017-318 (cont'd)	Secondary Screen Feed Bin FFDC (cont'd)	B2 Secondary Crusher Discharge Conveyor to Secondary Screen Feed Bin	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
017-280	Secondary Screening FFDC 1	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 1	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen Belt Feeder 1 to Secondary Screen 1 and Operation of Secondary Screen 1	Se7Screen	36,441,600	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.22E-07	lb/ton	40.09	13.48	0.91	0.001	0.001	0.002
		Secondary Screen 1 Oversize to B1 Secondary Crusher Feed Conveyor	Ore7TrPrt	36,441,600	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.88	1.83	0.28	0.0001	0.0001	0.0003
		Secondary Screen 1 Undersize to B3 Crushed Ore A Conveyor	Ore7TrPrt	36,441,600	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.88	1.83	0.28	0.0001	0.0001	0.0003
017-281	Secondary Screening FFDC 2	Secondary Screen Feed Bin to Secondary Screen Belt Feeder 2	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Screen Belt Feeder 2 to Secondary Screen 2 and Operation of Secondary Screen 2	Se7Screen	36,441,600	tons	0.0022	0.00074	0.000050	5.62E-08	5.62E-08	1.22E-07	lb/ton	40.09	13.48	0.91	0.001	0.001	0.002
		Secondary Screen 2 Oversize to B1 Secondary Crusher Feed Conveyor	Ore7TrPrt	36,441,600	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.88	1.83	0.28	0.0001	0.0001	0.0003
		Secondary Screen 2 Undersize to B3 Crushed Ore A Conveyor	Ore7TrPrt	36,441,600	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.88	1.83	0.28	0.0001	0.0001	0.0003
017-319	Secondary Crusher Feed Bin FFDC	B1 Secondary Crusher Feed Conveyor to Secondary Crusher Feed Bin	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
017-283	Secondary Crushing FFDC 1	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 1	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Crusher Belt Feeder 1 to Metcalf Secondary Crusher 1 and Operation of Metcalf Secondary Crusher 1	S7Crush	16,022,040	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	9.61	4.33	0.80	0.0003	0.0003	0.0007
		Metcalf Secondary Crusher 1 to B2 Secondary Crusher Discharge Conveyor	Ore7TrPrt	16,022,040	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	1.71	0.81	0.12	0.00006	0.00006	0.0001
017-284	Secondary Crushing FFDC 2	Secondary Crusher Feed Bin to Secondary Crusher Belt Feeder 2	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
		Secondary Crusher Belt Feeder 2 to Metcalf Secondary Crusher 2 and Operation of Metcalf Secondary Crusher 2	S7Crush	16,022,040	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	9.61	4.33	0.80	0.0003	0.0003	0.0007
		Metcalf Secondary Crusher 2 to B2 Secondary Crusher Discharge Conveyor	Ore7TrPrt	16,022,040	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	1.71	0.81	0.12	0.00006	0.00006	0.0001
017-285	Crushed Ore A/B Conveyor Transfer Point FFDC	B3 Crushed Ore A Conveyor to B4 Crushed Ore B Conveyor	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
017-286	Crushed Ore B/Tripper Conveyor Transfer Point FFDC	B4 Crushed Ore B Conveyor to B5 Crushed Ore Bin Tripper Conveyor	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
017-287	Crushed Ore Bin FFDC 1	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin A	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 1	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 2	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 3	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 4	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 5	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin A to Crushed Ore Belt Feeder 6	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 1 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 2 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 3 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
017-287 (cont'd)	Crushed Ore Bin FFDC 1 (cont'd)	Crushed Ore Belt Feeder 4 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 5 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 6 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		B6 Crushed Ore Feed Conveyor to B7 Crushed Ore Feed Transfer Conveyor	Ore7TrPrt	68,328,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	7.27	3.44	0.52	0.0003	0.0003	0.0006
017-288	Crushed Ore Bin FFDC 2	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 7	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 8	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 9	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 10	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 11	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 12	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 7 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 8 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 9 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 10 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 11 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 12 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
017-289	Crushed Ore Bin FFDC 3	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin B	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 13	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 14	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 15	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 16	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 17	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin B to Crushed Ore Belt Feeder 18	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 13 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 14 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 15 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 16 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 17 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 18 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
017-290	Crushed Ore Bin FFDC 4	B5 Crushed Ore Bin Tripper Conveyor to Crushed Ore Bin C	Ore7TrPrt	42,048,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	4.48	2.12	0.32	0.0002	0.0002	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 19	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 20	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 21	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 22	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 23	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Bin C to Crushed Ore Belt Feeder 24	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 19 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 20 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 21 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 22 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 23 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
		Crushed Ore Belt Feeder 24 to B6 Crushed Ore Feed Conveyor	Ore7TrPrt	31,938,960	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.40	1.61	0.24	0.0001	0.0001	0.0003
017-291	Crushed Ore Transfers FFDC	B7 Crushed Ore Feed Transfer Conveyor to Crusher Surge Bin	Ore7TrPrt	68,328,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	7.27	3.44	0.52	0.0003	0.0003	0.0006
		Crusher Surge Bin to B8-A Crusher Belt Feeder	Ore7TrPrt	29,740,200	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.17	1.50	0.23	0.0001	0.0001	0.0002
		Crusher Surge Bin to B8-B Crusher Belt Feeder	Ore7TrPrt	29,740,200	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.17	1.50	0.23	0.0001	0.0001	0.0002
		B8-A Crusher Belt Feeder to B9 Crusher Feed Conveyor	Ore7TrPrt	29,740,200	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.17	1.50	0.23	0.0001	0.0001	0.0002
		B8-B Crusher Belt Feeder to B9 Crusher Feed Conveyor	Ore7TrPrt	29,740,200	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	3.17	1.50	0.23	0.0001	0.0001	0.0002
		B9 Crusher Feed Conveyor to Crusher Feed Hopper	Ore7TrPrt	68,328,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	7.27	3.44	0.52	0.0003	0.0003	0.0006
017-292	HRC/HPGR Crusher FFDC	HRC/HPGR Crusher	R7Crush	63,948,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	8.89E-08	lb/ton	38.37	17.27	3.20	0.001	0.001	0.003
		HRC/HPGR Crusher to B10 Crusher Discharge Conveyor	Ore7TrPrt	63,948,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	6.81	3.22	0.49	0.0002	0.0002	0.0005
017-294	Wet Screen Feed FFDC	B10 Crusher Discharge Conveyor to Wet Screen Feed Bin	Ore7TrPrt	8,760,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.66E-08	lb/ton	0.93	0.44	0.07	0.00003	0.00003	0.00007
AOS1: Morenci Concentrator Quaternary Crushing Operations																		
002-033 (AOS1)	Fine Crushing Line A FFDC 2 (AOS1) (vented inside)	Shaker Screen 1AN Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1AS Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1BN Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 1BS Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 1A to Conveyor Belt 3 (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 1B to Conveyor Belt 3 (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors: PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs	EF Units	Potential Pre-Control Device Emissions (tpy): PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-034 (AOS1)	Fine Crushing Line B FFDC 2 (AOS1) (vented inside)	Shaker Screen 2AN Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2AS Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2BN Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 2BS Undersize to Conveyor Belt 3 (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 2A to Conveyor Belt 3 (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 2B to Conveyor Belt 3 (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
002-035 (AOS1)	Fine Crushing Line C to 3B to 3 FFDC (AOS1)	Shaker Screen 3AN Undersize to Conveyor Belt 3B (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 3AS Undersize to Conveyor Belt 3B (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 3A to Conveyor Belt 3B (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3 (AOS1)	Ore2TrPrt	11,388,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.21	0.57	0.09	0.00004	0.00004	0.00008
002-036 (AOS1)	Fine Crushing Line C to 3B to 3A FFDC (AOS1)	Shaker Screen 3BN Undersize to Conveyor Belt 3B (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 3BS Undersize to Conveyor Belt 3B (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 3B to Conveyor Belt 3B (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Conveyor Belt 3B (AOS1) to Conveyor Belt 3A (AOS1)	Ore2TrPrt	11,388,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.21	0.57	0.09	0.00004	0.00004	0.00008
002-326 (AOS1)	Fine Crushing Line D FFDC 2 (AOS1) (vented inside)	Shaker Screen 4AN Undersize to Conveyor Belt 3A (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4AS Undersize to Conveyor Belt 3A (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4BN Undersize to Conveyor Belt 3A (AOS1)	Ore2TrPrt	2,505,360	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.27	0.13	0.02	0.00001	0.00001	0.00002
		Shaker Screen 4BS Undersize to Conveyor Belt 3A (AOS1)	Ore2TrPrt	3,188,640	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.34	0.16	0.02	0.00001	0.00001	0.00002
		Tertiary Crusher 4A to Conveyor Belt 3A (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
		Tertiary Crusher 4B to Conveyor Belt 3A (AOS1)	Ore2TrPrt	6,570,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.70	0.33	0.05	0.00003	0.00003	0.00004
002-311 (AOS1)	West Transfer Points FFDC (AOS1)	Conveyor Belt 3 (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 1 (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		West RC Product Conveyor (AOS1) to West RC Feed Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		West RC Product Conveyor (AOS1) to West Transfer Conveyor (AOS1) via West Proportioning Gate 2 (AOS1)	Ore2TrPrt	15,330,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.63	0.77	0.12	0.00006	0.00006	0.0001
		West Transfer Conveyor (AOS1) to Conveyor Belt 4 (AOS1)	Ore2TrPrt	15,330,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.63	0.77	0.12	0.00006	0.00006	0.0001
002-312 (AOS1)	West Surge Bin FFDC (AOS1)	West RC Feed Conveyor (AOS1) to West Surge Bin (AOS1)	Ore2TrPrt	2,628,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.28	0.13	0.02	0.00001	0.00001	0.00002
002-313 (AOS1)	West RC FFDC (AOS1)	West Surge Bin (AOS1) to West RC Feeder (AOS1)	Ore2TrPrt	2,628,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.28	0.13	0.02	0.00001	0.00001	0.00002
		West RC Feeder (AOS1) to West RC Feed Bin (AOS1) via West Flop Gate (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		West RC Feeder (AOS1) to West RC Product Conveyor (AOS1) via West Flop Gate (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
002-313 (AOS1) (cont'd)	West RC FFDC (AOS1) (cont'd)	West RC (AOS1)	R2Crush	20,148,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	12.09	5.44	1.01	0.0004	0.0004	0.0007
		West RC (AOS1) to West RC Product Conveyor (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
002-314 (AOS1)	East Transfer Points FFDC (AOS1)	Conveyor Belt 3A (AOS1) to East RC Feed Conveyor (AOS1) via East Proportioning Gate 1 (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		East RC Product Conveyor (AOS1) to East Transfer Conveyor (AOS1) via East Proportioning Gate 2 (AOS1)	Ore2TrPrt	4,818,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.51	0.24	0.04	0.00002	0.00002	0.00003
		East Transfer Conveyor (AOS1) to East RC Feed Conveyor (AOS1)	Ore2TrPrt	4,818,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.51	0.24	0.04	0.00002	0.00002	0.00003
		East RC Product Conveyor (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 2 (AOS1)	Ore2TrPrt	15,330,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.63	0.77	0.12	0.00006	0.00006	0.0001
002-315 (AOS1)	East Surge Bin FFDC (AOS1)	East RC Feed Conveyor (AOS1) to East Surge Bin (AOS1)	Ore2TrPrt	2,628,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.28	0.13	0.02	0.00001	0.00001	0.00002
002-316 (AOS1)	East RC FFDC (AOS1)	East Surge Bin (AOS1) to East RC Feeder (AOS1)	Ore2TrPrt	2,628,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	0.28	0.13	0.02	0.00001	0.00001	0.00002
		East RC Feeder (AOS1) to East RC Feed Bin (AOS1) via East Flop Gate (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		East RC Feeder (AOS1) to East RC Product Conveyor (AOS1) via East Flop Gate (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
		East RC (AOS1)	R2Crush	20,148,000	tons	0.0012	0.00054	0.00010	4.10E-08	4.10E-08	7.17E-08	lb/ton	12.09	5.44	1.01	0.0004	0.0004	0.0007
		East RC (AOS1) to East RC Product Conveyor (AOS1)	Ore2TrPrt	20,148,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.14	1.01	0.15	0.00008	0.00008	0.0001
002-038 (AOS1)	3/4/5 FFDC (AOS1) (vented inside)	Conveyor Belt 3 (AOS1) to Conveyor Belt 4 (AOS1) via West Proportioning Gate 1 (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
		Conveyor Belt 4 (AOS1) to Conveyor Belt 5 (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
002-039 (AOS1)	3A/4A/5A FFDC (AOS1) (vented inside)	Conveyor Belt 3A (AOS1) to Conveyor Belt 4A (AOS1) via East Proportioning Gate 1 (AOS1)	Ore2TrPrt	15,330,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.63	0.77	0.12	0.00006	0.00006	0.0001
		Conveyor Belt 4A (AOS1) to Conveyor Belt 5A (AOS1)	Ore2TrPrt	15,330,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	1.63	0.77	0.12	0.00006	0.00006	0.0001
002-040 (AOS1)	5A/FOSB FFDC 1 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 2 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 3 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 4 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 5 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 6 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 7 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 8 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
	5A/FOSB FFDC 9 (AOS1) (vented inside)	Conveyor Belt 5A (AOS1) to Fine Ore Storage Bin (FOSB) (AOS1)	Ore2TrPrt	22,776,000	tons	0.00021	0.00010	0.000015	7.65E-09	7.65E-09	1.34E-08	lb/ton	2.42	1.15	0.17	0.00009	0.00009	0.0002
AOS2: Concentrate Leach Plant Upgrades																		
014-458 (AOS2)	PLV Scrubber 1 (AOS2)	Pressure Leach Vessel 1 (AOS2)	PLV1 (AOS2)	8,760	hours	5.20	5.20	5.20	1.02E-03	1.02E-03	3.70E-03	lb/hr	22.78	22.78	22.78	0.004	0.004	0.02
014-459 (AOS2)	PLV Scrubber 2 (AOS2)	Pressure Leach Vessel 2 (AOS2)	PLV2 (AOS2)	8,760	hours	5.20	5.20	5.20	1.02E-03	1.02E-03	3.70E-03	lb/hr	22.78	22.78	22.78	0.004	0.004	0.02

Table H.3 Annual Pre-Control Device Particulate Matter Emissions - CAM Analysis

Process Number	Pollution Control Device Associated with the PSEU	Pollutant Specific Emission Unit Description	Process Code	Annual Process Rate	Rate Units	Emission Factors						EF Units	Potential Pre-Control Device Emissions (tpy)					
						PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs		PM	PM_{10}	$PM_{2.5}$	Lead Compounds	Greatest Single HAP	Total HAPs
AOS3: Primary Crushing and Overland Conveying Operations																		
001-256a (AOS3)	Pollution Control Device for Crushers (AOS3)	Crushers To Be Determined	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.															
001-256b (AOS3)	Pollution Control Device for Conveyor Belts (AOS3)	Conveyor Belts To Be Determined	Emissions from the PSEU(s) cannot be determined until equipment is rented/purchased. However, emissions will be no more than the PSEU(s) being replaced, which are not subject to CAM requirements.															

APPENDIX I APPLICATION ADMINISTRATIVE COMPLETENESS CHECKLIST

Requirement		Meets Requirement?			Comment
		Yes	No	N/A	
1.	Has the standard application form been completed?	X			See Appendix A.
2.	Has the responsible official signed the standard application form?	X			See Appendix A.
3.	Has a process description been provided?	X			See Section 3.1.
4.	Are the facility's emissions documented with all appropriate supporting information?	X			See Section 6 and Appendices C, E, and F.
5.	Is the facility subject to Minor NSR requirements? [If the answer is "Yes,", answer 6a, 6b, and 6c, as applicable. If the answer is "No," skip to 7.]		X		See Section 17.
6.a	If the facility chooses to implement RACT, is the RACT determination included for the affected pollutants for all affected emission units?			X	The facility is not subject to minor NSR requirements. See Section 17.
6.b	If the facility chooses to demonstrate compliance with NAAQS by screen modeling, is the modeling analysis included?				
6.c	If refined modeling has been conducted, is a comprehensive modeling report along with all modeling files included?				
7.	Does the application include an equipment list with the type, name, make, model, serial number, maximum rated capacity, and date of manufacture?	X			See Appendix B.
8.	Does the application include an identification and description of pollution controls? (if applicable)	X			See Section 5.
9.	For any application component claimed as confidential, are the requirements of A.R.S. 49-432 and A.A.C. R18-2-305 addressed?	X			See Section 19.
10.	For any current non-compliance issue, is a compliance schedule attached?			X	See Section 13.2.
11.	For minor permit revision that will make a modification upon submittal of application, has a suggested draft permit been attached?			X	Suggested draft permit language will be provided following submittal of this application.

Requirement		Meets Requirement?			Comment
		Yes	No	N/A	
12.	For major sources, have all applicable requirements been identified?	X			See Sections 8 and 9.1.
13.	For major sources, has a CAM applicability analysis been provided? For CAM applicable units, have CAM plans been provided?	X			See Section 18 and Appendices G and H.
14.	For major sources subject to requirements under Article 4 of the A.A.C., have all necessary New Source Review analyses identified in the application been presented?			X	See Section 16.