

**Freeport-McMoRan Bagdad Inc.
Amended Class II Permit Renewal
Application
Class II Air Quality Permit #77414
Bagdad, Arizona**



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SIGN-OFF SHEET

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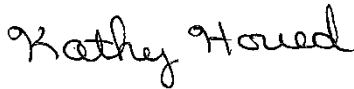
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EXECUTIVE SUMMARY

Freeport-McMoRan Bagdad Inc. (FMBI) operates a copper and molybdenum ore mining and processing facility in Bagdad, Arizona as authorized by Class II Air Quality Permit #77414, issued by the Arizona Department of Environmental Quality (ADEQ) on November 20, 2019. In accordance with Title 18, Chapter 2, Section 304.D.2 (R18-2-304.D.2) of the Arizona Administrative Code (A.A.C.), FMBI submitted a Class II permit application on May 16, 2024. FMBI is now submitting this amended Class II permit application to incorporate new and previously authorized facility changes as well as to make corrections, clarifications, and updates to information submitted in the original application.

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 G.

Overview of Operations

The FMBI facility is a large industrial complex located in Yavapai County in north central Arizona and is comprised of mining, ore processing, and multiple support operations. The nine major operations at the FMBI facility include:

- Mining Operations;
- Primary Crushing and Overland Conveying Operations;
- Milling Operations;
- Bulk and Molybdenum Flotation Operations;
- Copper Concentrate Processing and Loading Operations;
- Molybdenum Concentrate Processing and Bagging Operations;
- Tailings Operations;
- Concentrate Leach Plant; and
- Solution Extraction/Electrowinning Operations.

FMBI also has eleven supporting operations. These operations include:

- Lime Storage and Handling Operations;
- Ammonium Nitrate Prill Delivery and Handling Operations;
- Portable Aggregate System;
- Copper Decant Solids Handling Operations;
- Storage Tanks and Parts Cleaning;
- Diesel Emergency Internal Combustion Engines (ICE);
- Propane Emergency ICE;

- Natural Gas Emergency ICE;
- Diesel Non-Emergency ICE;
- Propane Non-Emergency ICE; and
- Miscellaneous Fuel Burning Equipment.

The standard industrial classification (SIC) for FMBI's operations is metal mining of copper ores, SIC Code 1021. Copper (concentrate and cathodes) is the primary product of FMBI, 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 FMBI facility have the potential to emit (PTE) the following regulated air pollutants: particulate matter (PM)¹; particulate matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀)²; particulate matter less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5})³; carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); volatile organic compounds (VOCs); sulfuric acid mist (H₂SO₄); hydrogen sulfide (H₂S); hazardous air pollutants (HAPs); and greenhouse gases (GHGs or CO₂e)⁴, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). CO₂e emissions are calculated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). The GWP of CO₂ is 1, the GWP of CH₄ is 28, and the GWP of N₂O is 265.

The PTE of the entire FMBI facility is presented in Table ES.1 (in tons per year [tpy]). The primary activity of the FMBI 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.

¹ PM is not considered a "regulated air pollutant" for purposes of Class I (Title V) permitting requirements (see EPA. Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V (Oct. 16, 1995)), However, PM is considered a "regulated air pollutant" for purposes of determining applicability of Class II permitting requirements (see A.A.C. R18-2-101.131.b (providing a 25 tpy PM significant threshold for purposes of determining the applicability of R18-2-302.B.2) and R18-2-302.B.2.a (requiring a Class II permit for any source that emits, or has the maximum capacity to emit with any elective limits, any regulated NSR pollutant in an amount greater than or equal to the significant level). Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM does not include condensable particulate matter (CPM).

² Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM₁₀ includes CPM.

³ Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM_{2.5} includes CPM.

⁴ 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 federal PSD program at 40 C.F.R. § 52.21(b)(50) (which ADEQ implements via a delegation agreement with EPA) and therefore included here for informational purposes.

As shown in Table ES.1, the PTE of facility-wide operations is greater than the Class II permitting thresholds, but less than the Class I (Title V) “major source” permitting thresholds, the Prevention of Significant Deterioration (PSD) “major source” thresholds for all regulated NSR air pollutants (for a non-categorical source in an attainment/unclassifiable area), and the HAP “major source” thresholds. Consequently, FMBI’s facility-wide operations are a “minor 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 and therefore FMBI’s operations require a Class II permit.

Information Required to be Included in the Application

A.A.C. R18-2-304.B states that applicants applying for a Class II renewal permit must “complete the applicable standard application form provided by the Director and supply all information required by the form’s filing instructions.” It is assumed that “all information required by the form’s filing instructions” refers to Section 3.2 (Standard Class II Permit Application Components) of ADEQ’s Application Packet for a Class II Permit. An application for a Class II permit renewal must also include the information required by A.A.C. R18-2-304.F. Identification of the information presented in this application, including the Standard Permit Application Form and the application components from ADEQ’s Application Packet for a Class II Permit, are listed 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

Air Pollutant Emitted	PTE (tpy)		Thresholds (tpy)			
	Primary Operating Scenario	Alternate Operating Scenario 1	Class I Major Source Permitting	PSD Major Source ^a	HAP Major Source	Class II Permitting
PM (w/ CPM)	117.75	106.31	--	--	--	--
PM (w/o CPM)	103.50	91.83	--	250	--	25 ^b
PM ₁₀	85.13	86.19	100	250	--	15
PM _{2.5}	64.18	74.92	100	250	--	10
CO	67.05	77.40	100	250	--	100
NO _x	61.19	64.58	100	250	--	40
SO ₂	1.42	1.43	100	250	--	40
VOC	37.87	47.52	100	250	--	40
H ₂ SO ₄	2.98	2.98	100	250	--	7
H ₂ S	--	0.17	100	250	--	10
CO _{2e}	42,066.11	42,520.48	--	--	--	--
Greatest Single HAP	7.73	9.04	--	--	10	--
Lead	0.08	0.14	--	250	10	0.6
Total HAPs	14.55	17.61	--	--	25	--

^a Non-categorical sources in attainment/unclassifiable areas

^b The 25 tpy PM significant threshold provided in A.A.C. R18-2-101.131.b for purposes of determining the applicability of A.A.C. R18-2-302.B.2.a is assumed to not include CPM, consistent with the definition of PM in the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)).

Table ES.2 Identification of Application Components

Application Component	Location in the Application
Standard Class II Permit Application Form Including a Certification from the Responsible Official	Appendix A.
Description of Each Process at the Facility and Identification of Equipment Subject to Permitting	Sections 3.1 and 3.2.
Process Flow Diagrams	Appendix D.
Description of Alternate Operating Scenarios	Section 4.
Identification and Description of Pollution Controls ^a	Section 5.
Emissions Calculations Including the Calculation Methodology and an Electronic Copy	Section 6 and Appendices C, E, and F.
Minor NSR Applicability Determination	Section 11.
Applicable Requirements ^b and Explanation of Any Proposed Exemptions from Otherwise Applicable Requirements	Section 8.
Proposed Voluntary Limitations	Section 7.
Equipment List	Appendix B.
Emission Source Form	Appendix C.
Listing of Insignificant and Trivial Activities	Section 9.
Identification of Confidential Information	Section 12.
Compliance Schedule (only if not currently in compliance)	Section 10.
Description of Requested Updates, Clarifications, and Corrections	Section 2.
Suggested Draft Permit Language	Not required for applications that do not involve a minor permit revision.

^a While this is not included in Section 3.2, Standard Class II Permit Application Components of ADEQ's Application Packet for Class II Permit, it is identified in Item 8 of the Section 5.0 – Application Administrative Completeness Checklist and therefore included as part of the application.

^b While this is not included in Section 3.2, Standard Class II Permit Application Components of ADEQ's Application Packet for Class II Permit, it is included as part of the application for purposes of clarification and completeness.

ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ANFO	Ammonium Nitrate Fuel Oil
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
CAERS	Combined Air Emissions Reporting System
CFR	Code of Federal Regulations
CH ₄	Methane
CI	Compression Ignition
CLP	Concentrate Leach Plant
cm ²	Square Centimeter
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Greenhouse Gases Expressed as Carbon Dioxide Equivalent Calculated by Summing the Individual Greenhouse Gas Emissions Multiplied by Their Global Warming Potential
CPM	Condensable Particulate Matter
dscf	Dry Standard Cubic Feet
EPA	U.S. Environmental Protection Agency
EW	Electrowinning
FMBI	Freeport-McMoRan Bagdad Inc.
ft ²	Square Feet
ft ³	Cubic Feet
g	Gram
gal	Gallon
GDF	Gasoline Dispensing Facility
GHG	Greenhouse Gas
gr	Grains
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
H ₂ SO ₄	Sulfuric Acid
HAP	Hazardous Air Pollutant

ABBREVIATIONS (cont'd)

hp	Horsepower
hr	Hour
ICE	Internal Combustion Engine
kW	Kilowatt
lb	Pound
m ²	Square Meter
MM	Million
MoO ₃	Molybdenum Trioxide
MoS ₂	Molybdenum Disulfide
mph	Miles Per Hour
MPR	Minor Permit Revision
N ₂ O	Nitrous Oxide
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O&M	Operation and Maintenance
PAS	Portable Aggregate System
PLS	Pregnant Leach Solution
PLV	Pressure Leach Vessel
PM	Particulate Matter
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
PTE	Potential to Emit
SCC	Source Classification Code
scf	Standard Cubic Foot
scfm	Standard Cubic Feet per minute
SDS	Safety Data Sheet
SI	Spark Ignition
SIC	Standard Industrial Classification

ABBREVIATIONS (cont'd)

SO ₂	Sulfur Dioxide
SX	Solution Extraction
tpd	Tons per Day
tph	Tons per Hour
tpy	Tons per Year
TSP	Total Suspended Particulate
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
Yr	Year
°F	Degrees Fahrenheit

1 INTRODUCTION

Freeport-McMoRan Bagdad Inc. (FMBI) operates a copper and molybdenum ore mining and processing facility in Bagdad, Arizona as authorized by Class II Air Quality Permit #77414, issued by the Arizona Department of Environmental Quality (ADEQ) on November 20, 2019. In accordance with Title 18, Chapter 2, Section 304.D.2 (R18-2-304.D.2) of the Arizona Administrative Code (A.A.C.), FMBI submitted a Class II permit application on May 16, 2024. FMBI is now submitting this amended Class II permit application to incorporate new and previously authorized facility changes as well as to make corrections, clarifications, and updates to information submitted in the original application.

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 II source as set forth in ADEQ's Application Packet for Class II Permit. Detailed information about the requested corrections, clarifications, and updates to equipment details and emission calculations are presented in Section 2. ADEQ's Standard Class II 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 G.

2 REQUESTED CHANGES, UPDATES, CLARIFICATIONS, AND CORRECTIONS

In the original Class II renewal application submitted May 16, 2024, FMBI requested to make changes intended to: (a) confirm sources subject to permitting and correctly identify equipment details; and (b) update emission calculations based on best available information. The proposed changes are described in Sections 2.1 and 2.2, respectively. As part of this amended application, FMBI proposes to incorporate new and previously authorized facility changes as well as to make corrections, clarifications, and updates. These items are described in Section 2.3. The remainder of this application incorporates all the requested changes, updates, clarifications, and corrections.

2.1 CONFIRM SOURCES SUBJECT TO PERMITTING AND CORRECTLY IDENTIFY EQUIPMENT DETAILS

In preparation for this application, FMBI personnel completed a full comparison of the equipment and emission sources: (1) currently operated and/or located at the FMBI facility; (2) expressly identified in FMBI's Class II Air Quality Permit #77414; and (3) typically included in air quality permits for copper mining facilities. Based on the results of the comparison, FMBI proposes to make the following changes to properly identify equipment subject to permitting and to correctly identify associated equipment details.

- FMBI simplified their Copper Concentrate Processing and Loading Operations and removed several pieces of equipment. FMBI therefore requests to update the process flow description and remove the following equipment from its Class II renewal permit. FMBI also requests to revise emission calculations to reflect the updated operations.
 - Filtered Concentrate Feed Bin (CuSB);
 - Filtered Concentrate Screw Feeder (CuSC);
 - Filtered Concentrate Loadout Conveyor (CuBC5); and
 - Filtered Concentrate Dust Collector CuDC.
- Attachment "C" of Class II Air Quality Permit #77414 includes Prill Bin Vent 6 (no filter) (Alternate Operating Scenario 1, AOS1). Because the bin vent is not an emission unit, does not capture or control emissions, and is not subject to any specifically applicable requirements, FMBI proposes to remove it from its Class II renewal permit.
- FMBI proposes to update the name of the Steam Deoiler to just Deoiler in its Class II renewal permit. FMBI is currently using nitrogen in the Deoiler. Steam from the Natural Gas Steam Generator is optional.
- As part of Minor Permit Revision (MPR) #93110, FMBI was authorized to install leaching catalyst unloading systems and associated equipment as part of a test program for enhancing copper recovery during leaching. The test program has now concluded, and the unloading systems have been removed from the FMBI facility. Consequently, FMBI requests to remove

the following equipment from its Class II renewal permit. The only equipment from the test program that remains onsite is a Pregnant Leach Solution (PLS) Tank and a Raffinate Tank. These tanks were considered trivial activities during the test program and will remain classified as trivial activities (see Section 9).

- LC Feed Hopper 1 (SX-LCH1)
 - LC Dust Collector 1 (SX-LCDC1)
 - LC Screw Conveyor 1 (SX-LCSC1)
 - LC Metered Hopper 1 (SX-LCMH1)
 - LC Metered Screw Conveyor 1 (SX-LCMSC1)
 - LC Feed Hopper 2 (SX-LCH2)
 - LC Dust Collector 2 (SX-LCDC2)
 - LC Screw Conveyor 2 (SX-LCSC2)
 - LC Metered Hopper 2 (SX-LCMH2)
 - LC Metered Screw Conveyor 2 (SX-LCMSC2)
- FMBI obtained information on the make, model, and serial number of the Natural Gas Flare (M-F) and requests to update this information in the equipment list of FMBI's Class II renewal permit.
 - FMBI obtained information on the serial number of the Security Gate Diesel Emergency Generator IA49-D and requests to update this information in the equipment list of FMBI's Class II renewal permit.

2.2 UPDATE EMISSION CALCULATIONS

As part of this application, FMBI proposes to make several updates to the calculation methodologies used to determine potential facility-wide emissions. The updates are to ensure FMBI 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 provided 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 2018-2019. Emission calculations are updated to use meteorological data from 2020-2023.
- Metal-based hazardous air pollutant (HAP) emissions are calculated from all particulate matter emission sources that process material containing metal compounds. The metal HAP content of various material processed at the FMBI facility was updated to be based on the maximum values from 2020-2023.

- The Environmental Protection Agency (EPA) TANKS Program, Version 4.09B 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.
- FMBI is currently using lead anodes for electrowinning, which requires the addition of cobalt to the electrowinning solution. Consequently, FMBI proposes to update the estimated emissions from Process #011-1 (Electrowinning - Main System) to include cobalt compounds.
- In FMBI's Portable Aggregate System, there are no physical water sprays used to control particulate matter emissions from Process #009-12 (Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor) and Process #009-14 (Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)). Instead, emissions are minimized by the moisture in the material carried over from upstream water sprays. FMBI proposes to update emission calculations to no longer include a control efficiency due to water sprays/wet suppression. Alternatively, the carryover moisture will be reflected in the moisture content input of the emission factor. This is consistent with FMBI's existing emission calculation methodology.
- FMBI uses a variety of dust collectors to capture and control particulate matter emissions from process operations. The manufacturers of the dust collectors provided the particulate matter control efficiencies shown below. While the control efficiencies are accurate, FMBI proposes to reduce the control efficiencies to 99.9%. EPA's Combined Air Emissions Reporting System (CAERS) restricts control efficiencies to a maximum of 99.9% and FMBI would prefer to be consistent with documentation and emission calculations for both permitting and annual emission inventory efforts.
 - Dust Collector C51 – 99.99% control efficiency
 - GL1 Dust Collector C1 – 99.99% control efficiency
 - GL2 Dust Collector C2 – 99.99% control efficiency
 - GL3 Dust Collector DC3 – 99.99% control efficiency
 - GL4 Dust Collector DC4 – 99.99% control efficiency
 - GL5 Dust Collector DC5 – 99.99% control efficiency
 - Soda Ash Storage Bin Bin Vent – 99.99% control efficiency
 - Lime Storage Bin 1 Bin Vent – 99.95% control efficiency
 - Dust Collector C51 (AOS1) – 99.99% control efficiency
 - PC1 Dust Collector 1 (AOS1) – 99.99% control efficiency
 - PC1 CCC1 Dust Collector 2 (AOS1) – 99.99% control efficiency
 - PC1 CCC2 Dust Collector 3 (AOS1) – 99.99% control efficiency

- PC1 CCC3 Dust Collector 4 (AOS1) – 99.99% control efficiency
 - Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1) – 99.99% control efficiency
 - Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1) – 99.99% control efficiency
 - HPGR Discharge Dust Collector 7 (AOS1) – 99.99% control efficiency
 - HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1) – 99.99% control efficiency
 - HPGR Product Bin Dust Collector 9 (AOS1) – 99.99% control efficiency
 - HPGR Product Transfer Dust Collector 10 (AOS1) – 99.99% control efficiency
 - HPGR Product Transfer Dust Collector 11 (AOS1) – 99.99% control efficiency
- Emissions from the gasoline storage tanks at the FMBI facility are calculated using EPA's TANKS Program, Version 4.09B. One of the input parameters for the TANKS program includes the contents of the tanks. FMBI has previously assumed the gasoline storage tanks contain gasoline with a worst-case Reid vapor pressure of 10. The speciation of the individual chemicals within the gasoline (many considered HAPs) have been set to the default values in the TANKS program. FMBI has since obtained a safety data sheet (SDS) from the gasoline supplier that provides site-specific information about the percent of the total liquid weight of the individual chemicals within the gasoline. Consequently, FMBI proposes to update the percentages within the speciation profile in the TANKS program to be more representative of actual operations. This in turn affects certain HAP percentages in the vapor space of gasoline storage tanks and therefore the calculated emissions output from the TANKS program.

2.3 ADDITIONAL REQUESTED CHANGES, UPDATES, CLARIFICATIONS, AND CORRECTIONS

2.3.1 Incorporate the Authorized Changes from MPR #105227

FMBI was issued minor permit revision (MPR) #105227 to authorize the following changes:

- Upgrade the lime storage and handling operations (Process #s 007-3, 007-8, and 007-9);
- Add the Command Center Diesel Emergency Generator IA54-D (Process #049-68);
- Add the Sycamore Communication Tower Propane Emergency Generator IA55-P (Process #049-69);
- Add the Mill Compressor Diesel Non-Emergency Engine IA53-DN (Process #049-67);
- Add the Mill Locker Room Boiler (Process #049-13);
- Add the Natural Gas Primary Package Boiler G3 (Process #042-10); and
- Remove the CLP cleanup operations (Process #s 042-12, 042-13, and 042-14).

Because MPR #105227 was issued following submittal of the original Class II renewal application, the changes were not included. The remainder of this application now includes the changes. Further details about the changes can be found in the application for MPR #105227.

2.3.2 Incorporate and Update the Changes from SPR #105717

SPR #105717 authorized FMBI to add a generically designed Supplemental Portable Aggregate System (SPAS). The equipment to be used in the SPAS was planned to be temporarily rented from contractors or purchased by Freeport-McMoRan entities and limited to an annual throughput of 2,200,000 tons per year (tpy). FMBI has now decided to purchase equipment for a SPAS that will be permanently located at the FMBI facility. Because the specific design for the planned SPAS is different than the design permitted in SPR #105717 and FMBI proposes to increase the annual throughput limit to 4,400,000 tpy, it is necessary to update the design and associated requirements in FMBI's Class II renewal permit. The remainder of this application includes the updates to the design of the SPAS, including a revised minor New Source Review (NSR) applicability determination in Section 11.

2.3.3 Remove Equipment No Longer Onsite

Since submittal of the original Class II renewal application on May 16, 2024, the following processes have been removed from the FMBI facility. Consequently, FMBI requests to remove the processes from its Class II renewal permit.

- Diesel Emergency Compressor IA50-D (Process #049-64).
- Diesel Emergency Compressor IA05-D (Process #049-2).
- Mill Recycle Operations (Process #s 051-1, 051-2, 051-3, 051-4, and 051-5).
- Mulholland Wash Diesel Emergency Generator (Process #024-1).

2.3.4 Incorporate the Changes from Recently Submitted Notifications of Facility Changes that Do Not Require a Permit Revision

FMBI recently submitted two notifications of facility changes that do not require permit revisions according to A.A.C. R18-2-317.02. The changes included:

- Adding the Gasoline Storage Tank Mine Operations (Gasoline Dispensing Facility [GDF] 4) (Process #033-5); and
- Adding Molybdenum Re-bagging Operations (Process #s 047-14 and 047-15).

The remainder of this application includes the changes. Further details about the changes can be found in the notifications.

2.3.5 Incorporate the Logged Change for Replacement of Dust Collector C51

FMBI recently logged replacement of Dust Collector C51 (Process #001-5) according to A.A.C. R18-2-317.02.B.4. The remainder of this application includes the replacement. Further details about the replacement can be found in the log.

2.3.6 Porta Batch Clarification

As part of MPR #70863, FMBI was authorized to add a Lime Porta Batch operation (Process #007-5) with a maximum capacity of 9.6 tons per hour (tph). Porta Batches are portable lime slaking systems

that are used to produce lime slurry from quicklime. FMBI rents and operates Porta Batches onsite in situations when the existing lime system is not operational or not producing the necessary quantity of lime slurry.

While FMBI generally only rents/operates a single Porta Batch at one time, it is noted that operation of multiple Porta Batches may occasionally be needed. FMBI clarifies that the permitted Lime Porta Batch operation (Process #007-5) covers multiple Porta Batches with a total maximum capacity of no more than 9.6 tph.

2.3.7 Emission Calculations for the Main Solution Extraction (SX) System

Volatile organic compound (VOC) and HAP emissions from FMBI's Main Solution Extraction (SX) System (Process #029-1) and Molybdenum Pressure Leaching SX System (Process #047-8) have been calculated following the procedure in the document called *Hydrometallurgy of Copper* (i.e., the BHP study, which can be provided upon request). Concentration of VOC at the surface of the SX vessels is an input in the calculation. 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 FMBI's Main Solution Extraction System. This allows FMBI flexibility in switching between chemicals without needing to go through the permitting process. FMBI will continue to verify that worst-case diluent and extractant chemicals are represented in the emission calculations when considering any future changes.

2.3.8 Metal Recovery Operations

FMBI proposes to add a confidential metals recovery process to their SX operations. All portions of the metals recovery process will be considered trivial activities as emissions are negligible, and the operations are not subject to any specifically applicable requirements. Table 9.2 of this application includes the proposed trivial activities.

2.3.9 Serial Number and Year of Manufacture of the New Clayton Boiler (G3)

FMBI obtained information on the serial number and year of manufacture of the new Natural Gas Primary Package Boiler G3 and requests to update this information in the equipment list of FMBI's Class II renewal permit.

2.3.10 Silt Content Updates

Potential emission calculations are to be based on the best information reasonably available. FMBI has recently obtained better information regarding the silt contents of unpaved roads, ore, and aggregate. Consequently, FMBI requests to update the silt contents used to calculate potential emissions from the following processes.

- Haul Truck and Other Vehicle Travel on Unpaved Roads (Process #s 022-1, 022-2, 022-3, 022-1 (AOS1), 022-2 (AOS1), and 022-3 (AOS1)).
 - The silt content is updated from 7% to 4.6% based on testing completed at a similar Freeport facility.

- Wind Erosion of the Coarse Ore Stockpiles (Process #s 027-1, 027-1 (AOS1), and 027-7 (AOS1)).
 - The silt content is updated from 7.4% to 4%, which is a conservative estimate based on testing completed on crushed ore on Overland Conveyor 4. The testing showed a silt content of 0.07%.
- Wind Erosion of Portable Aggregate System (PAS) and Supplemental Portable Aggregate System (SPAS) Stockpiles (Process #s 009-20 and 009-40).
 - The silt content is updated from 7.4% to 6.5% based on the average value from testing completed on the Coarse and Fine Aggregate Stockpiles.
- Wind Erosion of Temporary Oversize Stockpile (Process #027-6 (AOS5)).
 - The silt content is updated from 7.4% to 4% based on testing completed on crushed ore on Overland Conveyor 4. This is considered a worst-case estimate since the Temporary Oversize Stockpile will only store non-crushed ore and the testing of crushed ore on Overland Conveyor 4 showed a silt content of 0.07%.

The emission calculations in this application include the updates.

2.3.11 Kimberly Diesel Non-Emergency Pump Engine

FMBI proposes to permit the following non-emergency diesel engine:

- Kimberly Diesel Non-Emergency Pump Engine (Process #049-70).

The Kimberly Diesel Non-Emergency Pump Engine is currently being used at the FMBI facility to support the pumping of water to maintain the pond at a level critical for pit wall stability. It is frequently relocated and has consistently maintained its status as a nonroad engine. However, FMBI now anticipates potentially needing to keep the Kimberly Diesel Non-Emergency Pump Engine in a single location for a period of greater than 12 months, which necessitates the permitting. The Kimberly Diesel Non-Emergency Pump Engine has a maximum rated power output of 300 horsepower (hp) and meets the emission standards required by 40 CFR 60 Subpart IIII and 40 CFR 1039.101 for non-emergency engines.

The remainder of this application, including the minor NSR applicability determination presented in Section 11, includes the proposed addition of the Kimberly Diesel Non-Emergency Pump Engine.

3 PROCESS DESCRIPTION AND IDENTIFICATION OF EQUIPMENT SUBJECT TO PERMITTING

3.1 DESCRIPTION OF EACH PROCESS AT THE FACILITY

The FMBI facility is a large industrial complex located in Yavapai County in north central Arizona and is comprised of mining, ore processing, and multiple support operations. The nine major operations at the FMBI facility include:

- Mining Operations;
- Primary Crushing and Overland Conveying Operations;
- Milling Operations;
- Bulk and Molybdenum Flotation Operations;
- Copper Concentrate Processing and Loading Operations;
- Molybdenum Concentrate Processing and Bagging Operations;
- Tailings Operations;
- Concentrate Leach Plant (CLP); and
- Solution Extraction/Electrowinning Operations.

FMBI also has eleven supporting operations. These operations include:

- Lime Storage and Handling Operations;
- Ammonium Nitrate Prill Delivery and Handling Operations;
- Portable Aggregate System;
- Copper Decant Solids Handling Operations;
- Storage Tanks and Parts Cleaning;
- Diesel Emergency Internal Combustion Engines (ICE);
- Propane Emergency ICE;
- Natural Gas Emergency ICE;
- Diesel Non-Emergency ICE;
- Propane Non-Emergency ICE; and
- Miscellaneous Fuel Burning Equipment.

The standard industrial classification (SIC) for FMBI's operations is metal mining of copper ores, SIC Code 1021. Copper (concentrate and cathodes) is the primary product of FMBI, 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 FMBI facility have the potential to emit (PTE) the following regulated air pollutants: particulate matter (PM)⁵; particulate matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀)⁶; particulate matter less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5})⁷; carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); VOCs; sulfuric acid mist (H₂SO₄); hydrogen sulfide (H₂S); HAPs; and greenhouse gases (GHGs or CO_{2e})⁸, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). CO_{2e} emissions are calculated by summing the individual greenhouse gas emissions multiplied by their global warming potential (GWP). The GWP of CO₂ is 1, the GWP of CH₄ is 28, and the GWP of N₂O is 265.

Descriptions of all major and supporting operations at the FMBI facility are presented in the following sections. The process flow diagram showing an overview of the FMBI 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.34 of Appendix D.

3.1.1 Mining Operations

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 that floats. Stemming from the PAS (see Section 3.1.12) 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 (i.e., sulfide ore, oxide ore, and overburden/low grade ore) into haul trucks. The haul trucks then transport the sulfide ore to the Primary Crushing Operations (see Section 3.1.2), the oxide ore to leaching areas, and overburden/low grade ore to storage areas. Other nonroad vehicles that support Mining Operations include loaders, dozers, graders, low boys, compactors, excavators/trackhoes, backhoes, cable reels, and dump trucks.

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

⁵ PM is not considered a “regulated air pollutant” for purposes of Class I (Title V) permitting requirements (see EPA. Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V (Oct. 16, 1995)), However, PM is considered a “regulated air pollutant” for purposes of determining applicability of Class II permitting requirements (see A.A.C. R18-2-101.131.b (providing a 25 tpy PM significant threshold for purposes of determining the applicability of R18-2-302.B.2) and R18-2-302.B.2.a (requiring a Class II permit for any source that emits, or has the maximum capacity to emit with any elective limits, any regulated NSR pollutant in an amount greater than or equal to the significant level). Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM does not include condensable particulate matter (CPM).

⁶ Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM₁₀ includes CPM.

⁷ Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM_{2.5} includes CPM.

⁸ 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 federal PSD program at 40 C.F.R. § 52.21(b)(50) (which ADEQ implements via a delegation agreement with EPA) and therefore included here for informational purposes.

3.1.2 Primary Crushing and Overland Conveying Operations

The process flow diagram of the Primary Crushing and Overland Conveying Operations is presented in Figure D.2 of Appendix D. Ore is delivered to the Primary Crushing and Overland Conveying Operations via haul trucks from the Mining Operations (see Section 3.1.1). The trucks dump the ore directly into the dump pockets associated with the two primary crushers (Primary Crushers 1 and 2). Primary Crusher 2 is currently operating at the FMBI facility, while Primary Crusher 1 is temporarily shut down. A Rock Breaker associated with Primary Crusher 2 is used as needed to split and break up larger sized ore to fit into the crusher.

The PC1 Apron Feeder receives crushed ore from Primary Crusher 1 via the PC1 Surge Bin. It then feeds Overland Conveyor 1, Overland Conveyor 2, and Overland Conveyor 3, in series. The PC2 Apron Feeder receives crushed ore from Primary Crusher 2 via the PC2 Surge Bin and feeds Overland Conveyor 3A. Any ore that passes through the gaps of the apron feeder is collected on the PC2 Dribble Conveyor, which also feeds Overland Conveyor 3A. Overland Conveyor 3A subsequently discharges to Overland Conveyor 3, to join the ore from Primary Crusher 2.

Overland Conveyor 3 then feeds Overland Conveyor 4 and Radial Stacker 5 in series. Radial Stacker 5 can discharge to Coarse Ore Stockpiles 1 through 4 or feed Free-Standing Stacker 6, which discharges to Coarse Ore Stockpile 5. Ore from the Coarse Ore Stockpiles is processed by the Milling Operations (see Section 3.1.3).

FMBI has existing alternate operating scenarios for the Primary Crushing and Overland Conveying Operations: (1) a modified design of the Primary Crushing and Overland Conveying Operations when a second concentrator is added (AOS1 – see Section 4.1); and (2) the use of the Emergency Grizzly Systems when a primary crusher malfunctions or is otherwise inoperative (AOS5 – see Section 4.3).

As shown in Figure D.2, particulate emissions from the Primary Crushing Operations are controlled by the following pollution control devices:

- Scrubber C18 (exhausted to the atmosphere); and
- Dust Collector C51 (exhausted to the atmosphere).

Additionally, as shown in Figure D.2, wet suppression is used when necessary to control emissions at the following locations of the Primary Crushing and Overland Conveying Operations:

- Material transfer points from the haul trucks to Primary Crusher 1;
- Material transfer points from the haul trucks to Primary Crusher 2;
- Material transfer point from Overland Conveyor 2 to Overland Conveyor 3;
- Material transfer point from Overland Conveyor 4 to Radial Stacker 5;
- Material transfer point from Radial Stacker 5 to Free-Standing Stacker 6;
- Discharge of Radial Stacker 5 to Coarse Ore Stockpiles 1 through 4; and
- Discharge of Free-Standing Stacker 6 to Coarse Ore Stockpile 5.

3.1.3 Milling Operations

Process flow diagrams of the Milling Operations are presented in Figures D.3 through D.5 of Appendix D. All five grinding lines are identical in design and process ore from one of the Coarse Ore Stockpiles.

Ore is reclaimed from the Coarse Ore Stockpiles using four enclosed vibrating feeders per stockpile (Vibrating Feeders 2 through 5). Only two of the Vibrating Feeders (per stockpile) are operational at any one time. The vibrating feeders deposit ore onto Belt Conveyors A, which feed the Primary Grinding Mills. In the Primary Grinding Mills, water is added, and the size of the ore is reduced. The wetted ore is then sent to the Vibrating Screens for wet size separation. Oversize ore from the Vibrating Screens is conveyed via Belt Conveyors 2 and Belt Conveyors 3, in series, before Diverter Gates are used to direct the flow of the ore. Belt Conveyors 3 primarily discharge to Belt Conveyors B via the Diverter Gates for transfer to the Secondary Crushers for size reduction. When the Secondary Crushers are not operating or are already at capacity, Belt Conveyors 3 can discharge to Belt Conveyors 5 via the Diverter Gates to bypass the crushers. The discharge from Belt Conveyors 5 and the Secondary Crushers are combined in a transfer chute and drop onto Belt Conveyors A.

Undersize ore from the Vibrating Screens is sent to the Hydroclone Sets for further size separation. Undersize ore from the hydroclones is in the form of a wet slurry and sent to the Bulk Flotation Operations (see Section 3.1.4.1) while oversize is sent to the Secondary Grinding Mills. With the addition of water, the Secondary Grinding Mills reduce the size of the ore to the specification needed for the flotation operations.

As part of MPR #76822, FMBI was authorized to increase in the belt widths of Belt Conveyors B and replace the Secondary Crushers. However, at the time of this application's submittal, the changes have not been implemented. FMBI proposes to add Alternate Operating Scenario 3 (AOS3 – see Section 4.2) to allow for future implementation of the changes while FMBI continues to operate the existing Belt Conveyors B and Secondary Crushers. FMBI notes that there is an existing alternate operating scenario for additional milling operations when a second concentrator is added (AOS1 – see Section 4.1).

As shown in Figures D.3 through D.5, emissions from the Milling Operations are controlled by the following pollution control devices:

- GL1 Dust Collector C1 (exhausted to the atmosphere);
- GL2 Dust Collector C2 (exhausted to the atmosphere);
- GL3 Dust Collector DC3 (exhausted to the atmosphere);
- GL4 Dust Collector DC4 (exhausted to the atmosphere); and
- GL5 Dust Collector DC5 (exhausted to the atmosphere).

The following emission units in the Milling Operations are controlled by the inherent moisture content of the ore since they either involve a wet process or are transferred after being processed by the wet Vibrating Screens where the ore is cleaned/washed of any fine particulate matter:

- Primary Grinding Mills (wet process);

- Vibrating Screens (wet process);
- Secondary Grinding Mills (wet process);
- Material transfer point from the Vibrating Screens to Belt Conveyors 2 (cleaned, washed ore);
- Material transfer point from Belt Conveyors 2 to Belt Conveyors 3 (cleaned, washed ore);
- Material transfer point from Belt Conveyors 3 to Belt Conveyors B (cleaned, washed ore); and
- Material transfer point from Belt Conveyors 3 to Belt Conveyors 5 (cleaned, washed ore).

3.1.4 Bulk and Molybdenum Flotation Operations

3.1.4.1 Bulk Flotation Operations

The process flow diagram of the Bulk Flotation Operations is presented in Figure D.6 of Appendix D. The process flow diagram is limited to equipment subject to regulation and the primary components of the Bulk Flotation 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 are used to separate the wet slurry from the Milling Operations (see Section 3.1.3) into: (a) a combined copper/molybdenum concentrate; and (b) tailings. The process stream sent from the Hydroclone Sets is first cleaned using two Tramp Reject Screens to remove oversized trash (i.e., plastic material). Bulk Rougher Cells are then used to make the initial separation of the copper/molybdenum concentrate from the tailings. The tailings from the Bulk Rougher Cells are sent to the Tailings Thickeners and then pumped to the tailings storage locations (see Section 3.1.7). The copper/molybdenum concentrate from the Bulk Rougher Cells is pumped to the Cyclone Cluster for size separation. The undersize from the Cyclone Cluster is pumped to the 1st Cleaner Flotation Cells while the oversize is pumped to the Tower Mill for size reduction and reprocessing by the Cyclone Cluster. There are two Tower Mills, but one is primarily used for standby/backup purposes. As an option, the copper/molybdenum concentrate from the Bulk Rougher Cells can bypass the Cyclone Cluster and be pumped directly to the 1st Cleaner Flotation Cells.

The concentrate from the 1st Cleaner Flotation Cells is pumped to the 2nd Cleaner Flotation Column Cells. Concentrate from the 2nd Cleaner Flotation Column Cells is the final copper/molybdenum concentrate product and is piped to the Copper/Molybdenum Concentrate Thickeners prior to processing by the Molybdenum Flotation Operations (see Section 3.1.4.2). Tailings from the 2nd Cleaner Flotation Column Cells report back to the 1st Cleaner Flotation Cells via the Tower Mill circuit. Tailings from the 1st Cleaner Flotation Cells report to the Cleaner/Scavenger Flotation Cells. Concentrate from the Cleaner/Scavenger Flotation Cells reports to the Tower Mill circuit while tailings are pumped to either the Bulk Rougher Cells or to the Tailings Thickeners.

FMBI notes that there is an existing alternate operating scenario for additional bulk flotation operations when a second concentrator is added (AOS1 – see Section 4.1).

Bulk Flotation Operations are a wet process. Consequently, any particulate emissions are considered negligible. VOC and HAP emissions due to organic reagents added to the Bulk Flotation Operations are minimized using best operating practices.

3.1.4.2 Molybdenum Flotation Operations

The process flow diagram of the Molybdenum Flotation Operations is presented in Figure D.7 of Appendix D. The Molybdenum Flotation Operations utilize three stages to separate the bulk copper/molybdenum concentrate from the Copper/Molybdenum Concentrate Thickeners in the Bulk Flotation Operations (see Section 3.1.4.1) into: (a) a copper concentrate product; and (b) a molybdenum concentrate product.

The first stage utilizes 3 tanks (Molybdenum Plant Feed Tank and Molybdenum High Shear Conditioning Tanks 1 and 2) to condition the bulk copper/molybdenum concentrate prior to processing by the Molybdenum Rougher Flotation Cells. 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 processing by the Copper Concentrate Processing and Loading Operations (see Section 3.1.5). The second separation stage utilizes Molybdenum Cleaner Flotation Cells 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 back to the Molybdenum Rougher Flotation Cells for reprocessing. The third separation stage utilizes Molybdenum Flotation Column Cells to achieve the final separation of the copper concentrate from the molybdenum concentrate. The product from the column cells are pumped to the Larox Filter, the first step of the Molybdenum Concentrate Processing and Bagging Operations (see Section 3.1.6). The tailings from the column cells are pumped back to the Molybdenum Cleaner Flotation Cells for reprocessing.

FMBI notes that there is an existing alternate operating scenario for additional molybdenum flotation operations when a second concentrator is added (AOS1 – see Section 4.1).

Particulate emissions from the Molybdenum Flotation Operations are negligible due to the wet nature of the process. VOC and HAP emissions due to organic reagents added to the Molybdenum Flotation Operations are minimized using best management practices. H₂S emissions are minimized using best management practices, including monitoring and maintaining the pH of the process.

3.1.5 Copper Concentrate Processing and Loading Operations

The process flow diagram of the Copper Concentrate Processing and Loading Operations is presented in Figure D.8 of Appendix D. Copper concentrate from the Copper Concentrate Thickeners (see Section 3.1.4.2) is first collected in the Filter Feed Tank. The copper concentrate is then processed by two copper filters (Copper Concentrate Filters 1 and 2) to remove excess water. The copper filters discharge copper concentrate cake onto two conveyors (Concentrate Filter Conveyors 1 and 2), which both feed the Filtered Concentrate Transfer Conveyor. The Filtered Concentrate Transfer Conveyor discharges onto the Main Indoor Copper Concentrate Stockpile where copper concentrate is either transferred to the Outdoor Copper Concentrate Stockpile or the Secondary Indoor Copper Concentrate Stockpile. Following storage in any of the stockpiles, the copper concentrate is loaded into trucks via front-end loaders for shipping to offsite copper smelters. Copper Concentrate from the Secondary Indoor Copper Concentrate Stockpile has the option to be transferred to the Outdoor Copper Concentrate Stockpile for additional storage before truck loading.

FMBI notes that there is an existing alternate operating scenario for additional copper concentrate processing and loading operations when a second concentrator is added (AOS1 – see Section 4.1).

The majority of the emission units associated with the Copper Concentrate Processing Operations are located within the Enclosed Copper Concentrate Storage Building. The building design, in addition to the high amount of moisture remaining in the concentrate after being processed by the filters (9%), prevents the loss of the valuable copper concentrate and minimizes particulate emissions.

3.1.6 Molybdenum Concentrate Processing and Bagging Operations

The process flow diagram of the Molybdenum Concentrate Processing and Bagging Operations is presented in Figure D.7 of Appendix D. Molybdenum concentrate from the Molybdenum Flotation Column Cells (see Section 3.1.4.2) is first pumped to the Larox Filter. The Larox Filter is used to remove excess moisture from the molybdenum concentrate. The filtered molybdenum concentrate has a moisture content of 10% and is in the form of a cake. The molybdenum concentrate cake is transferred to the Molybdenum Concentrate Surge Bin via the Molybdenum Concentrate Screw Conveyor to be stored prior to further processing or shipping to customers. When a shipment is prepared or when molybdenum concentrate is transferred for further processing, the molybdenum concentrate cake is reclaimed from the surge bin using the Molybdenum Concentrate Bagger. Filled containers can then be loaded onto a truck for shipment or transport. Molybdenum concentrate is either shipped offsite or to the molybdenum concentrate feed hopper (Molybdenum Concentrate Feed Hoppers 1, 3, and 4) associated with the CLP (see Section 3.1.8).

FMBI notes that there is an existing alternate operating scenario for additional molybdenum concentrate processing and bagging operations when a second concentrator is added (AOS1 – see Section 4.1).

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

3.1.7 Tailings Operations

As described in Section 3.1.4.1, tailings are separated from the copper and molybdenum concentrates 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, crane 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 while the smaller particles are pumped to the center of the tailings storage areas. Each tailings storage area is filled and then left to develop and settle.

As a worst-case estimate, approximately 4,200 acres of the active tailings storage areas at the FMBI facility are considered “drying areas” such that they are susceptible to wind erosion and have the potential to emit particulate emissions. The remaining acres are covered in pond water, wetted with slurry, or are not subject to wind erosion.

3.1.8 Concentrate Leach Plant

Process flow diagrams of the CLP are presented in Figures D.9 through D.11 of Appendix D. Bagged molybdenum concentrate from the Molybdenum Concentrate Processing and Bagging Operations (see

Section 3.1.6) or from outside sources is delivered to either Molybdenum Concentrate Feed Hopper 1, 3, or 4 depending on the moisture content of the concentrate and if the concentrate needs to be deoiled (i.e., high-oil concentrate) or not (i.e., low-oil concentrate). High moisture, high-oil concentrate can be delivered to Molybdenum Concentrate Feed Hopper 1. High or low moisture, high-oil concentrate can be delivered to Molybdenum Concentrate Feed Hopper 3, as controlled by Molybdenum Concentrate Dust Collector 2. High or low moisture, low-oil concentrate is delivered to Molybdenum Concentrate Feed Hopper 4, as controlled by Molybdenum Concentrate Dust Collector 1. The low-oil concentrate is reclaimed from Molybdenum Concentrate Feed Hopper 4 by the Molybdenum Concentrate Tubular Drag Conveyor 1 and repulped through the addition of water in the Molybdenum Concentrate Repulp Tank 2. The high-oil concentrate is reclaimed from Molybdenum Concentrate Feed Hopper 1 by the Molybdenum Concentrate Belt Feeder and transferred to the Deoiler via Molybdenum Concentrate Screw Conveyor 1. Additional high-oil concentrate is reclaimed from Molybdenum Concentrate Feed Hopper 3 by the Molybdenum Concentrate Metering Screw Conveyor with Chute and transferred to the Deoiler via Molybdenum Concentrate Screw Conveyors 3 and 1, in series. The Deoiler removes the oil from the molybdenum concentrate and transfers it to Molybdenum Concentrate Repulp Tank 1.

While FMBI is currently using nitrogen in the Deoiler, steam from the Natural Gas Steam Generator can also be used. The Natural Gas Deoiler Heater supplies heat to the Deoiler. The combustion gases from the Natural Gas Steam Generator and the Natural Gas Deoiler Heater do not make contact with the molybdenum concentrate. The steam and oil mixture that is stripped from the molybdenum concentrate is vented to a three-stage system. The first stage is the Venturi Scrubbers (one operational, one redundant/alternate), which are used to recover any entrained molybdenum concentrate from the exhaust stream and control particulate emissions. The second stage is two packed scrubbers (Packed Scrubbers 1 and 2) operated in series to recover any oil in the exhaust stream. The recovered oil (that may contain some remaining concentrate) is directed to the Settling Tank via the Scrubber Solution Tank. Recovered concentrate is pumped to the Tailings Neutralization Tanks while the oil is recycled through the flotation process or shipped offsite. The temperature of the water used in the packed scrubbers is adjusted through the use of the CLP Cooling Tower. Finally, the third stage is the Natural Gas Flare, which is used to reduce VOC emissions to levels that will not contaminate the air intake to the Oxygen Plant. High organic levels at the air intake of the adjacent Oxygen Plant prevent it from operating at its design efficiency.

From Molybdenum Concentrate Repulp Tanks 1 and 2, the molybdenum concentrate can be processed by the Molybdenum Concentrate Fine Grinding Mills 1 and 2 prior to being pumped to the Pressure Leach Vessel (PLV) via Molybdenum Concentrate Storage Tanks 1 and 2 and the Molybdenum Concentrate Feed Tank. The function of the PLV is to oxidize the molybdenum disulfide concentrate (MoS_2) to molybdenum trioxide (MoO_3) with a rhenium solution and raffinate byproduct. Equipment and operations supporting the PLV include:

- Natural Gas Primary Package Boiler G3 and Natural Gas Backup Package Boiler G1;
- An Oxygen Plant; and
- CLP Cooling Tower.

As shown in Figure D.10, exhaust from the PLV is processed by two venturi scrubbers operated in series (Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03). While the primary purpose of the venturi scrubbers is industrial hygiene, the control of PM, PM₁₀, PM_{2.5}, VOC, H₂SO₄, and HAP emissions is a secondary benefit.

The molybdenum trioxide is then transferred through CCD Thickeners, a vibrating screen (MoO₃ HBF Feed Vibrating Screen), a feed tank (HBF Feed Tank), and belt filters (MoO₃ Belt Filter and MoO₃ Horizontal Belt Filter) to remove the rhenium containing liquid portion of the molybdenum trioxide slurry. The molybdenum trioxide is repulped with water in Filter Cake Repulp Tanks 1 and 2, processed by the MoO₃ Product Screen, transferred to the MoO₃ Product Tank, and pumped to the Tube Press Filter. The Tube Press Filter removes water and any rhenium that may remain in the molybdenum trioxide and discharges it to a screw feeder (MoO₃ Screw Feeder) followed by a screw conveyor (MoO₃ Inclined Screw Conveyor) prior to being bagged and shipped offsite.

Except for the transfer from the MoO₃ Inclined Screw Conveyor to bags, all processes after the PLV result in negligible emissions because of the wet nature of the processes or because the transfers are sealed. Molybdenum trioxide exiting the Tube Press Filter has a moisture content of 8-10%.

The rhenium containing aqueous solution separated from the molybdenum trioxide can be processed through two Mixer Extraction Settlers, a Mixer Washer Settler, and two Mixer Stripper Settlers to concentrate the rhenium, after which it is shipped offsite. Soda ash and an organic carrier are added to the settlers via the Soda Ash Slurry Tank to help facilitate the concentration process. The raffinate from the rhenium concentration process is reused during copper leaching (see Section 3.1.9.1). Emissions from the rhenium concentration process include VOC and HAPs resulting from the organic carrier added during the process. Emissions also include PM, PM₁₀, and PM_{2.5} emissions due to the unloading of soda ash into the Soda Ash Storage Bin. However, the Soda Ash Storage Bin Bin Vent helps to capture and recover any soda ash entrained in the air displaced during the bin filling process. Reclaim from the Soda Ash Storage Bin via the Soda Ash Screw Conveyor is a completely enclosed process.

During maintenance and cleaning of the CLP equipment, FMBI may reprocess any reclaimed material. This material would be hand shoveled to a sump (CLP Cleanup Sump, trivial activity) prior to reprocessing.

The Molybdenum Concentrate Re-Bagger will be operated on an as-needed basis when existing molybdenum concentrate bags are damaged and deemed unsafe for use in the processing system. A forklift places the damaged molybdenum concentrate bags on top of the Molybdenum Concentrate Re-Bagger. A knife is then used to cut the bag and empty it into the re-bagger. The re-bagger is then lifted via forklift over a bag holder and the molybdenum concentrate is fed into a new bag by opening a knife gate. Once the re-bagger is emptied into the new bag, the knife gate is closed, the new bag is detached from the re-bagger, and the re-bagger is set back down on the ground. The re-bagging operation is intended solely for material recovery and safety assurance.

3.1.9 Solution Extraction/Electrowinning Operations

The process flow diagram of SX/Electrowinning (EW) Operations is presented in Figure D.12 of Appendix D. Descriptions of SX/EW processes are presented in the following sections.

3.1.9.1 Copper Leaching

Copper leaching begins with ore from Mining Operations (see Section 3.1.1) 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 raffinate is either: (a) fresh; (b) recycled from the SX/EW process; or (c) a byproduct of the molybdenum concentrate processing in the CLP (see Section 3.1.8).

The copper-containing raffinate, referred to as PLS, flows by gravity to collection ponds (PLS Collection Ponds). The PLS is subsequently pumped from the ponds to the solution extraction facilities. PLS from copper concentrate processing in the CLP (see Section 3.1.8) supplements the PLS from copper leaching.

3.1.9.2 Solution Extraction

FMBI operates four solution extraction systems to extract copper from the PLS. Each solution extraction system 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 a mix of diluent (a refined petroleum-based reagent) and 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 via the Raffinate Pond. The copper containing organic solution (now called loaded organic) floats to the top of the settlers and is pumped to the Wash Mixer-Settler Units to rinse away any PLS entrained in the organic followed by the Strip Mixer-Settler Units via the Loaded Organic Tanks.

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 via the Barren Organic Tanks and the rich electrolyte is pumped to the electrowinning operations.

Evaporative loss of the organic solution is limited in the mixer-settler units by the use of covers.

3.1.9.3 Electrowinning

The FMBI facility contains 108 electrowinning cells to process the rich electrolyte from the solution extraction systems. 56 of the cells are associated with the old tank house and are all currently inactive. The remaining 52 cells are associated with the new tank house and 44 of the cells are currently active. 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 are removed from the cells after they have been fully plated in copper. The copper depleted electrolyte (lean electrolyte) is returned to the solution extraction systems.

The Natural Gas Electrolyte Heater is used to heat water that runs through a non-contact heat exchanger along with the rich electrolyte from the solution extraction systems. This process maintains the temperature of the electrolyte at a point optimal for copper plating.

H₂SO₄ mist emissions 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.

3.1.9.4 Cathode Preparation

The copper plated cathodes from the electrowinning operations 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.

Three pressure washers (Natural Gas Hot Water Pressure Washers 3 and 4 and Natural Gas SX Pressure Washer) and one hot water heater (Natural Gas Hot Water Heater) are used for cathode washing.

3.1.10 Lime Storage and Handling Operations

The process flow diagram of the Lime Storage and Handling Operations is presented in Figure D.13 of Appendix D. Milk of lime can be produced using either of the methods described in the following sections.

FMBI notes that there is an existing alternate operating scenario for additional lime storage and handling operations when a second concentrator is added (AOS1 – see Section 4.1).

3.1.10.1 Primary Lime System

MPR #s 100550 and 105227 authorized FMBI to upgrade their existing Primary Lime System. Because the changes to the Primary Lime System have yet to be implemented, both the current operations and the permitted future operations are described below. An alternate operating scenario is not needed for the upgrades because all existing emission units are reused in the upgraded design.

Current Operations

Quicklime is pneumatically delivered by truck to a lime storage bin (Lime Storage Bin 1). A bin vent system (Lime Storage Bin 1 Bin Vent) helps to capture and recover any lime entrained in the air displaced during the storage bin filling process. Lime Storage Bin 1 subsequently feeds a lime grinding mill (Lime Grinding Mill 1) using a feeder (Lime Weigh Feeder 1)

Quicklime is mixed/ground with water in the lime grinding mill to produce milk of lime. The milk of lime from the grinding mill is pumped to a discharge sump (Milk of Lime Discharge Sump 1) and then to two tanks (Milk of Lime Tanks 1 and 2) prior to being distributed for use in the Flotation Operations (see Section 3.1.4).

The operations following the lime storage bins are enclosed or process wet, saturated material, such that any emissions of regulated air pollutants are expected to be negligible.

Permitted Future Operations

Quicklime will be pneumatically delivered by truck a lime storage bin (Lime Storage Bin 1). A bin vent system (Lime Storage Bin 1 Bin Vent) will help to capture and recover any lime entrained in the air displaced during the storage bin filling process.

The storage bin will discharge to two new conveyors (Lime Slaker Conveyors 1 and 2, the transfer points will be enclosed). The conveyors will then each feed a new slaking mill (Lime Slaking Mills 1 and 2). Each mill incorporates an associated scrubber (Lime Slaking Scrubbers 1 and 2). The slaked lime will overflow into new tanks (Lime Separating Tanks 1 and 2) where coarser material will be sent back to the mills and finer material will be sent to new milk of lime tanks for distribution into the Flotation Operations (see Section 3.1.4).

The operations following the Lime Slaking Mills will be enclosed or process wet, saturated material, such that any emissions of regulated air pollutants are expected to be negligible.

3.1.10.2 Lime Porta Batches

Porta Batches are portable lime slaking systems that can be rented as necessary and used to produce milk of lime in situations where the primary lime system is not operational or not producing the necessary quantity of milk of lime. For operational flexibility purposes, FMBI decided to incorporate Lime Porta Batches into its air quality permit.

The Lime Porta Batches are cylindrical, steel mixing vessels that are completely enclosed with the exception of a vent pipe. They contain an off-centered, single shaft, and double pitch screw paddle agitation systems. Diesel engines are used to power the Lime Porta Batches. Because the Lime Porta Batches may be used for periods greater than 12 months in any one location, an associated engine is permitted as a stationary source (see Section 3.1.19).

Operation of a Lime Porta Batch begins by filling the mixing vessel with water to the desired level so that the lime fill pipe is 12 to 60 inches below the water surface. The lime is then pneumatically transferred into the vessel using an air compressor located on the lime delivery truck. The mixing paddles agitate the surface causing the lime to be thoroughly wet and creating a slurry. The reaction of lime with water is exothermic, so the temperature of the slurry increases, but not above its boiling point. Because the Lime Porta Batches are a closed system, air from the pneumatic transfer of the lime is vented through a vent pipe (where it may carry with it a small amount of particulate matter). After the lime is completely introduced and mixed, the density of the slurry is adjusted by adding more water. The slurry (i.e., slaked lime) can then be stored and/or distributed for use in the Flotation Operations (see Section 3.1.4).

3.1.11 Ammonium Nitrate Prill Delivery and Handling Operations

The process flow diagram of the Ammonium Nitrate Prill Delivery and Handling Operations is presented in Figure D.14 of Appendix D. Ammonium nitrate prill is pneumatically delivered to five prill bins (Prill Bins 1 through 5) from the prill supplier's trucks. 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, are not subject to any specifically applicable requirements, and are not subject to permitting.

When preparing for a blast at the FMBI 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 (see Section 3.1.1).

FMBI notes that there is an existing alternate operating scenario for additional prill delivery and handling operations when a second concentrator is added (AOS1 – see Section 4.1).

3.1.12 Portable Aggregate System (PAS)

The process flow diagram of the PAS is presented in Figure D.15 of Appendix D. The PAS is used to produce: (a) stemming material to fill blast holes; (b) dam rock; (c) road gravel to reduce haul truck tire wear; and (d) filter material. The PAS operations begin with nonmetallic minerals being received by the Hopper with an associated Vibrating Grizzly Feeder. Oversize from the Vibrating Grizzly Feeder is discharged to the Jaw Crusher, which reduces the size of the nonmetallic minerals. Undersize from the Vibrating Grizzly Feeder combines with the crushed nonmetallic minerals from the Jaw Crusher on the Jaw Crusher Discharge Conveyor. The Jaw Crusher Discharge Conveyor feeds the Triple Deck Screen via the Screen Feed Conveyor, where the nonmetallic minerals are again separated by size. The oversize nonmetallic minerals drop onto the Cone Feed Conveyor, which feeds the Cone Crusher. The crushed nonmetallic minerals from the Cone Crusher drop onto the associated Discharge Conveyor and is recirculated back to the Triple Deck Screen via the Screen Feed Conveyor. The midsize nonmetallic minerals from the Triple Deck Screen feed the Coarse Stacking Conveyor, which discharges to the Coarse Aggregate Stockpile. The undersize nonmetallic minerals from the Triple Deck Screen drop onto its associated Discharge Conveyor and then feed the Fines Stacking Conveyor prior to discharge to the Fines Aggregate Stockpile. The coarse nonmetallic minerals are used for stemming materials and dam rock while the fine nonmetallic minerals are used for road gravel and filter purposes.

As shown in Figure D.15, emissions from the following locations in the PAS are controlled by wet suppression (including from carryover moisture from water sprays):

- Transfer point from the Hopper to the Vibrating Grizzly Feeder and screening operations;
- Discharge of the Vibrating Grizzly Feeder undersize to the Jaw Crusher Discharge Conveyor;
- Discharge of the Vibrating Grizzly Feeder oversize to the Jaw Crusher and crushing operations;
- Discharge of the Jaw Crusher to the Jaw Crusher Discharge Conveyor;
- Conveyor transfer point from the Jaw Crusher Discharge Conveyor to the Screen Feed Conveyor;
- Conveyor transfer point from the Screen Feed Conveyor to the Triple Deck Screen and screening operations;
- Discharge of the Triple Deck Screen oversize to the Cone Feed Conveyor;

- Conveyor transfer point from the Cone Feed Conveyor to the Cone Crusher and crushing operations;
- Discharge of the Cone Crusher to the associated Discharge Conveyor;
- Conveyor transfer point from the Cone Crusher Discharge Conveyor to the Screen Feed Conveyor;
- Discharge of the Triple Deck Screen midsize to the Coarse Stacking Conveyor;
- Conveyor transfer point from the Coarse Stacking Conveyor to the Coarse Aggregate Stockpile;
- Discharge of the Triple Deck Screen undersize to the associated Discharge Conveyor;
- Conveyor transfer point from the Triple Deck Screen Discharge Conveyor to the Fines Stacking Conveyor; and
- Conveyor transfer point from the Fines Stacking Conveyor to the Fines Aggregate Stockpile.

3.1.13 Supplemental Portable Aggregate System (SPAS)

The process flow diagram of the SPAS is presented in Figure D.16 of Appendix D. The SPAS is used to produce: (a) stemming material; (b) midsize rock; and (c) base gravel material. The SPAS operations begin with nonmetallic minerals being received by the Item 1 SPAS Vibrating Grizzly Feeder. Oversize from the Item 1 SPAS Vibrating Grizzly Feeder is discharged to the Item 1 SPAS Jaw Crusher, which reduces the size of the nonmetallic minerals and discharges to Item 1 SPAS Conveyor 54x42 along with the undersize from the Item 1 SPAS Vibrating Grizzly Feeder. Item 1 SPAS Conveyor 54x42 transfers the crushed nonmetallic minerals to Item 2 SPAS Conveyor 48x80 and then feeds the Item 3 SPAS Vibrating Screen, where the nonmetallic minerals are separated by size.

The oversize nonmetallic minerals drop onto the Item 4 SPAS Conveyor 42x30, which feeds the Item 5 SPAS Conveyor 42x60, Item 6 SPAS Surge Bin with Belt Feeder, Item 7 SPAS Conveyor 42x60, and Item 8 SPAS Cone Crusher in series. The crushed nonmetallic minerals from the Item 8 SPAS Cone Crusher drop onto the Item 9 SPAS Conveyor 42x40 and is recirculated back to the Item 3 SPAS Vibrating Screen via the Item 2 SPAS Conveyor 48x80.

The larger midsize nonmetallic minerals from the Item 3 SPAS Vibrating Screen feed the Stemming Rock Stockpile via the Item 10 SPAS Conveyor 36x30, Item 11 SPAS Conveyor 36x300, and Item 12 SPAS Radial Stacker 36x100, designed in series. The smaller midsize nonmetallic minerals from the Item 3 SPAS Vibrating Screen are transferred to the Midsize Rock Stockpile via the Item 13 SPAS Conveyor 36x60, Item 14 SPAS Splitter Box, Item 15 SPAS Conveyor 36x100, and Item 16 SPAS Radial Stacker 36x100, designed in series.

The undersize nonmetallic minerals from the Item 3 SPAS Vibrating Screen drop onto its associated Item 3 SPAS Conveyor 48x22 and then feed the Item 17 SPAS Conveyor 36x60, Item 18 SPAS Conveyor 36x100, and Item 19 SPAS Radial Stacker 36x100, in series, prior to discharge to the Base Gravel Stockpile. Nonmetallic minerals can also be transferred to the Base Gravel Stockpile via the

Item 13 SPAS Conveyor 36x60, Item 14 SPAS Splitter Box, Item 18 SPAS Conveyor 36x100, and Item 19 SPAS Radial Stacker 36x100.

As shown in Figure D.16, emissions from the following locations in the SPAS are controlled by wet suppression (including from carryover moisture from water sprays):

- Transfer point from the Item 1 SPAS Vibrating Grizzly Feeder to the Item 1 SPAS Jaw Crusher and crushing operations;
- Discharge of the Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to the Item 1 SPAS Conveyor 54x42;
- Conveyor transfer points from the Item 1 SPAS Conveyor 54x42 to the Item 2 SPAS Conveyor 48x80;
- Conveyor transfer points from the Item 2 SPAS Conveyor 48x80 to the Item 3 SPAS Vibrating Screen and screening operations;
- Conveyor transfer point from the Item 4 SPAS Conveyor 42x30 to the Item 5 SPAS Conveyor 42x60;
- Conveyor transfer point from the Item 5 SPAS Conveyor 42x60 to the Item 6 SPAS Surge Bin with Belt Feeder;
- Conveyor transfer point from the Item 6 SPAS Surge Bin with Belt Feeder to the Item 7 SPAS Conveyor 42x60;
- Conveyor transfer point from the Item 7 SPAS Conveyor 42x60 to the Item 8 SPAS Cone Crusher and crushing operations;
- Discharge of the Item 8 SPAS Cone Crusher to the Item 9 SPAS Conveyor 42x40;
- Conveyor transfer points from the Item 9 SPAS Conveyor 42x40 to the Item 2 SPAS Conveyor 48x80;
- Conveyor transfer points from the Item 10 SPAS Conveyor 36x30 to the Item 11 SPAS Conveyor 36x300;
- Conveyor transfer points from the Item 11 SPAS Conveyor 36x300 to the Item 12 SPAS Radial Stacker 36x100;
- Conveyor transfer points from the Item 13 SPAS Conveyor 36x60 to the Item 14 SPAS Splitter Box;
- Conveyor transfer points from the Item 15 SPAS Conveyor 36x100 to the Item 16 SPAS Radial Stacker 36x100;
- Conveyor transfer points from the Item 3 SPAS Conveyor 48x22 to the Item 17 SPAS Conveyor 36x60;
- Conveyor transfer points from the Item 17 SPAS Conveyor 36x60 to the Item 18 SPAS Conveyor 36x100; and

- Conveyor transfer point from the Item 18 SPAS Conveyor 36x100 to the Item 19 SPAS Radial Stacker 36x100.

3.1.14 Copper Decant Solids Handling Operations

The process flow diagram of the Copper Decant Solids Handling Operations is presented in Figure D.17 of Appendix D. Operations begin with overflow from the Copper Concentrate Thickeners associated with Molybdenum Flotation Operations (see Section 3.1.4.2) being washed down to the Copper Decant Pond. The copper decant material is then mucked out of the pond and placed on the Copper Decant Drying and Storage Pad where the material is allowed to air dry. Any drainage from the Copper Decant Drying and Storage Pad (e.g., stormwater) is recycled back to the Copper Decant Pond.

Once the copper decant material reaches its target moisture content (8-10%), it is processed in one of two ways. The first method is to transfer the air-dried copper decant material to trucks via front-end loader for shipment to offsite smelters. However, if analysis of the air-dried copper decant material indicates that it would not be appropriate for a smelter, the second method involves washing the dried copper decant material back into FMBI's operations for better recovery.

Prior to air-drying, the copper decant is a wet, saturated material, such that any emission of regulated air pollutants is expected to be negligible. Emissions from the remaining operations are minimized using best operating practices.

3.1.15 Storage Tanks and Parts Cleaning

FMBI 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 FMBI facility to supply processes with necessary chemicals. The majority of the storage tanks are considered insignificant or trivial activities (see Section 9). The storage tanks subject to permitting include four gasoline storage tanks (each of them their own GDF) and various xanthate mixing and storage tanks. The process flow diagram of the permitted storage tanks is presented in Figure D.18 of Appendix D.

As a regular maintenance activity, FMBI degreases metal parts using tanks filled with solvent. Approximately every six weeks, a contractor removes the used solvent in the tanks and replaces it with fresh solvent. The used solvent is shipped offsite. Emissions from parts cleaning are minimized using best management practices.

3.1.16 Diesel Emergency ICE

The process flow diagram of the Diesel Emergency ICE at the FMBI facility is presented in Figure D.19 of Appendix D. FMBI is currently permitted to operate thirteen diesel stationary emergency engines. Eleven of the engines are associated with generators and two are associated with water pumps. The engines associated with the generators are used to provide power to various sources when electric power from the local utility is interrupted. The engines associated with the water pumps are used to facilitate the pumping of water in the case of fire or flood, etc. The engines are also used during maintenance checks, readiness testing, and/or certain non-emergency situations.

FMBI notes that there is an existing alternate operating scenario for additional diesel emergency ICE when a second concentrator is added (AOS1 – see Section 4.1).

3.1.17 Propane Emergency ICE

The process flow diagram of the Propane Emergency ICE at the FMBI facility is presented in Figure D.20 of Appendix D. FMBI currently operates eight propane stationary engines. All eight of the engines are associated with generators and are used to provide power to various sources when electric power from the local utility is interrupted. They are also used during maintenance checks, readiness testing, and/or certain non-emergency situations.

FMBI notes that there is an existing alternate operating scenario for additional propane emergency ICE when a second concentrator is added (AOS1 – see Section 4.1).

3.1.18 Natural Gas Emergency ICE

The process flow diagram of the Natural Gas Emergency ICE at the FMBI facility is presented in Figure D.21 of Appendix D. FMBI currently operates six natural gas stationary engines. All six of the engines are associated with generators and are used to provide power to various sources when electric power from the local utility is interrupted. They are also used during maintenance checks, readiness testing, and/or certain non-emergency situations.

3.1.19 Diesel Non-Emergency ICE

The process flow diagram of the Diesel Non-Emergency ICE at the FMBI facility is presented in Figure D.22 of Appendix D. FMBI is currently permitted to operate six diesel stationary non-emergency engines. Two of the engines are associated with generators, two are associated with water pumps, one is associated with the Lime Porta Batches (see Section 3.1.10.2), and one is associated with a compressor. They are permitted to be able to be used in non-emergency situations.

3.1.20 Propane Non-Emergency ICE

The process flow diagram of the Propane Non-Emergency ICE at the FMBI facility is presented in Figure D.23 of Appendix D. FMBI is currently permitted to operate two propane stationary non-emergency engines. Both engines are associated with generators. They will be used primarily to provide power during emergency situations as well as during maintenance checks, and readiness testing, but may also be used in non-emergency situations.

3.1.21 Miscellaneous Fuel Burning Equipment

The process flow diagram of the Miscellaneous Fuel Burning Equipment at the FMBI facility is presented in Figure D.24 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 operation at the FMBI facility. The equipment includes:

- Diesel Pressure Washer IA35-D;
- Natural Gas Mine Shop Pressure Washer 1;

- Natural Gas Mine Shop Pressure Washer 2;
- Natural Gas Small Space Heaters, Furnaces, and Boilers for human comfort;
- Propane Small Space Heaters, Furnaces, and Boilers for human comfort;
- Natural Gas Mill Wash Rack Pressure Washer IA51-NG; and
- Natural Gas Shower Facility Hot Water Heater IA52-NG.

Although the miscellaneous fuel burning equipment is operated only when necessary, this application assumes continuous operation to avoid operating limitations.

3.2 EQUIPMENT SUBJECT TO PERMITTING

The equipment associated with the FMBI facility that is subject to air quality permitting through ADEQ is presented in Table 3.1. Further detailed information about the equipment (maximum rated capacity, make, model, serial number, and date of manufacturer) is presented in Appendix B. Table 3.1 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 (New Source Performance Standards [NSPS] and National Emission Standards for Hazardous Air Pollutants [NESHAP]) requirements. Further details about the applicable requirements are presented in Section 8.

All other equipment at the FMBI facility that is not identified in Table 3.1 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 9.

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Primary Crushing and Overland Conveying Operations					
PC1	Primary Crusher 1	3-03-024-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 (prior to reconstruction) A.A.C. R18-2-901.1 A.A.C. R18-2-901.46 (following reconstruction)	40 CFR 60 Subpart LL (following reconstruction)	--
C18	Scrubber C18	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
PC1SB	PC1 Surge Bin	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
PC1AF	PC1 Apron Feeder	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
OC1	Overland Conveyor 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
OC2	Overland Conveyor 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
RB	Rock Breaker	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
PC2	Primary Crusher 2	3-03-024-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
C51	Dust Collector C51	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
PC2SB	PC2 Surge Bin	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
PC2AF	PC2 Apron Feeder	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
PC2DC	PC2 Dribble Conveyor	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
OC3A	Overland Conveyor 3A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
OC3	Overland Conveyor 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
OC4	Overland Conveyor 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
RST5	Radial Stacker 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
FSS6	Free-Standing Stacker 6	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
Milling Operations					
<i>Grinding Line 1</i>					
GL1-VF2	GL1 Vibrating Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-VF3	GL1 Vibrating Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL1-VF4	GL1 Vibrating Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-VF5	GL1 Vibrating Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-BCA	GL1 Belt Conveyor A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-GM1	GL1 Primary Grinding Mill	3-03-024-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-VS1	GL1 Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL1-BC2	GL1 Belt Conveyor 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-BC3	GL1 Belt Conveyor 3	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-DG	GL1 Diverter Gate	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL1-BCB	GL1 Belt Conveyor B	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-SC1	GL1 Secondary Crusher	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
C1	GL1 Dust Collector C1	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL1-BC5	GL1 Belt Conveyor 5	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-GM2	GL1 Secondary Grinding Mill	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
<i>Grinding Line 2</i>					
GL2-VF2	GL2 Vibrating Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-VF3	GL2 Vibrating Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-VF4	GL2 Vibrating Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-VF5	GL2 Vibrating Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-BCA	GL2 Belt Conveyor A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-GM1	GL2 Primary Grinding Mill	3-03-024-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-VS1	GL2 Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL2-BC2	GL2 Belt Conveyor 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL2-BC3	GL2 Belt Conveyor 3	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-DG	GL2 Diverter Gate	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL2-BCB	GL2 Belt Conveyor B	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-SC2	GL2 Secondary Crusher	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
C2	GL2 Dust Collector C2	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
GL2-BC5	GL2 Belt Conveyor 5	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-GM2	GL2 Secondary Grinding Mill	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
<i>Grinding Line 3</i>					
GL3-VF2	GL3 Vibrating Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-VF3	GL3 Vibrating Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-VF4	GL3 Vibrating Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL3-VF5	GL3 Vibrating Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-BCA	GL3 Belt Conveyor A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-GM1	GL3 Primary Grinding Mill	3-03-024-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-VS1	GL3 Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL3-BC2	GL3 Belt Conveyor 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-BC3	GL3 Belt Conveyor 3	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-DG	GL3 Diverter Gate	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL3-BCB	GL3 Belt Conveyor B	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-SC3	GL3 Secondary Crusher	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
DC3	GL3 Dust Collector DC3	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
GL3-BC5	GL3 Belt Conveyor 5	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL3-GM2	GL3 Secondary Grinding Mill	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
<i>Grinding Line 4</i>					
GL4-VF2	GL4 Vibrating Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-VF3	GL4 Vibrating Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-VF4	GL4 Vibrating Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-VF5	GL4 Vibrating Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-BCA	GL4 Belt Conveyor A	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-GM1	GL4 Primary Grinding Mill	3-03-024-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-VS1	GL4 Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL4-BC2	GL4 Belt Conveyor 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-BC3	GL4 Belt Conveyor 3	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL4-DG	GL4 Diverter Gate	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL4-BCB	GL4 Belt Conveyor B	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-SC4	GL4 Secondary Crusher	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
DC4	GL4 Dust Collector DC4	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
GL4-BC5	GL4 Belt Conveyor 5	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL4-GM2	GL4 Secondary Grinding Mill	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
<i>Grinding Line 5</i>					
GL5-VF2	GL5 Vibrating Feeder 2	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL5-VF3	GL5 Vibrating Feeder 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL5-VF4	GL5 Vibrating Feeder 4	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL5-VF5	GL5 Vibrating Feeder 5	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL5-BCA	GL5 Belt Conveyor A	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-GM1	GL5 Primary Grinding Mill	3-03-024-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL5-VS1	GL5 Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL5-BC2	GL5 Belt Conveyor 2	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-BC3	GL5 Belt Conveyor 3	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-DG	GL5 Diverter Gate	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
GL5-BCB	GL5 Belt Conveyor B	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-SC5	GL5 Secondary Crusher	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
DC5	GL5 Dust Collector DC5	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
GL5-BC5	GL5 Belt Conveyor 5	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-GM2	GL5 Secondary Grinding Mill	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Grinding Line Spare Equipment					
GL-Spare1	GL Spare Vibrating Screen 1	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
GL-Spare2	GL Spare Vibrating Screen 2	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
Bulk and Molybdenum Flotation Operations					
CMF-B1	Bulk Flotation Equipment	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- ^d	--
TRS1	Tramp Reject Screen 1	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
TRS2	Tramp Reject Screen 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
TM1	Tower Mill 1	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
TM2	Tower Mill 2	3-03-024-07	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
CMF-M	Molybdenum Flotation Equipment	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Copper Concentrate Processing and Loading Operations					
CuBC3a	Concentrate Filter Conveyor 1	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
CuBC3b	Concentrate Filter Conveyor 2	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
CuBC4	Filtered Concentrate Transfer Conveyor	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.46 (when transferring onto the conveyor)	40 CFR 60 Subpart LL (when transferring onto the conveyor) ^e	--
CuStB	Enclosed Copper Concentrate Storage Building	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
Molybdenum Concentrate Processing and Bagging Operations					
MPSC1	Molybdenum Concentrate Screw Conveyor	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
MPSB	Molybdenum Concentrate Surge Bin	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
MPBGR	Molybdenum Concentrate Bagger	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Concentrate Leach Plant					
Pressure Leach Vessel and Support Equipment					
G2	Pressure Leach Vessel	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
CH-02	Primary Venturi Scrubber CH-02	3-03-024-08	A.A.C. R18-2-306.01 A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	--	--
CH-03	Secondary Venturi Scrubber CH-03	3-03-024-08	A.A.C. R18-2-306.01 A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	--	--
G1	Natural Gas Backup Package Boiler G1	1-02-006-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subpart Dc	-- ^g
G3	Natural Gas Primary Package Boiler G3	1-02-006-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.5	40 CFR 60 Subpart Dc	-- ^g
G7	CLP Cooling Tower	3-85-001-01	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	-- ^m
Molybdenum Concentrate Handling					
M-CFH	Molybdenum Concentrate Feed Hopper 1	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-BFd	Molybdenum Concentrate Belt Feeder	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
M-CFH3	Molybdenum Concentrate Feed Hopper 3	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-DC2	Molybdenum Concentrate Dust Collector 2	--	--	-- ^c	--
M-MSC	Molybdenum Concentrate Metering Screw Conveyor with Chute	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-SC3	Molybdenum Concentrate Screw Conveyor 3	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-SC1	Molybdenum Concentrate Screw Conveyor 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-SD	Deoiler	3-03-024-04	A.A.C. R18-2-730 A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-SG	Natural Gas Steam Generator	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
M-DH	Natural Gas Deoiler Heater	3-03-900-03	A.A.C. R18-2-724	--	-- ^j
M-VS	Venturi Scrubber	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
M-VSa	Venturi Scrubber (alternate)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
M-PS1	Packed Scrubber 1	--	A.A.C. R18-2-306.01 ^{a,h}	--	--
M-PS2	Packed Scrubber 2	--	A.A.C. R18-2-306.01 ^{a,h}	--	--
M-F	Natural Gas Flare	--	A.A.C. R18-2-306.01 ^{a,h}	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
M-ST	Settling Tank	3-03-011-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
M-CFH4	Molybdenum Concentrate Feed Hopper 4	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-DC1	Molybdenum Concentrate Dust Collector 1	--	--	-- ^c	--
M-TDC1	Molybdenum Concentrate Tubular Drag Conveyor 1	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-FGM1	Molybdenum Concentrate Fine Grinding Mill 1	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-FGM2	Molybdenum Concentrate Fine Grinding Mill 2	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
M-RB	Molybdenum Concentrate Re-Bagger	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
<i>MoO₃ and Rhenium Processing</i>					
HBF Screen 1	MoO ₃ HBF Feed Vibrating Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-BFIt	MoO ₃ Belt Filter	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
M-BFIt2	MoO ₃ Horizontal Belt Filter	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
M-PrS	MoO3 Product Screen	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
M-SF	MoO3 Screw Feeder	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
M-ISC	MoO3 Inclined Screw Conveyor	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
M-MXS1	Mixer Extraction Settler 1	4-90-001-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
M-MXS2	Mixer Extraction Settler 2	4-90-001-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
M-MWS	Mixer Washer Settler	4-90-001-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
M-MSS1	Mixer Stripper Settler 1	4-90-001-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
M-MSS2	Mixer Stripper Settler 2	4-90-001-99	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
SASB-G4	Soda Ash Storage Bin	3-01-021-22	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
G4	Soda Ash Storage Bin Bin Vent	3-01-021-22	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	--	--
SASC	Soda Ash Screw Conveyor	3-01-021-22	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Solution Extraction/Electrowinning Operations					
--	SX Mixers (28)	4-90-001-99	A.A.C. R18-2-730	--	--
--	SX Settlers (28)	4-90-001-99	A.A.C. R18-2-730	--	--
TK-22	Organic Tank TK-22	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
TK-13	Organic Mix Tank TK-13	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
C23	Electrowinning Cells (108)	3-09-010-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
IA03c-NG	Natural Gas Hot Water Pressure Washer 3	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
IA03d-NG	Natural Gas Hot Water Pressure Washer 4	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
IA39-NG	Natural Gas SX Pressure Washer	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
C23b	Natural Gas Hot Water Heater	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
G5	Natural Gas Electrolyte Heater	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^j
Lime Storage and Handling Operations					
LHS-LSB1	Lime Storage Bin 1	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- ^k	-- ^k

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
BV01	Lime Storage Bin 1 Bin Vent	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	-- k	-- k
LHS-LWF1	Lime Weigh Feeder 1	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
LHS-GM1	Lime Grinding Mill 1	3-05-016-28	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
355-CV-001	Lime Slaker Conveyor 1	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
355-ML-001	Lime Slaking Mill 1	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	-- k	-- k
355-DC-001	Lime Slaking Scrubber 1	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
355-CV-002	Lime Slaker Conveyor 2	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
355-ML-002	Lime Slaking Mill 2	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	-- k	-- k
355-DC-002	Lime Slaking Scrubber 2	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
PoB1	Lime Porta Batches	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Ammonium Nitrate Prill Delivery and Handling Operations					
PB1	Prill Bin 1	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
PB2	Prill Bin 2	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
PB3	Prill Bin 3	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
PB4	Prill Bin 4	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
PB5	Prill Bin 5	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
Portable Aggregate System					
PASHG	Hopper with Vibrating Grizzly Feeder	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when truck dumping into the hopper) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual hopper and grizzly feeder)	40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when truck dumping into the hopper)	--
PASJC	Jaw Crusher	3-05-020-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--
PASBC3	Jaw Crusher Discharge Conveyor	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
PASBC1	Screen Feed Conveyor	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--
PASSC	Triple Deck Screen with Discharge Conveyor	3-05-020-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--
PASBC2	Cone Feed Conveyor	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--
PASCC	Cone Crusher with Discharge Conveyor	3-05-020-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart OOO	--
PASST1	Coarse Stacking Conveyor	3-05-020-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual belt conveyor)	40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when transferring to a stockpile)	--
PASST2	Fines Stacking Conveyor	3-05-020-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual belt conveyor)	40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when transferring to a stockpile)	--
Supplemental Portable Aggregate System					
SPAS_VGF1	Item 1 SPAS Vibrating Grizzly Feeder	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722	-- °	--
SPAS_C1	Item 1 SPAS Jaw Crusher	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
SPAS_CV1	Item 1 SPAS Conveyor 54x42	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV2	Item 2 SPAS Conveyor 48x80	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_S3	Item 3 SPAS Vibrating Screen	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV3	Item 3 SPAS Conveyor 48x22	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV4	Item 4 SPAS Conveyor 42x30	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV5	Item 5 SPAS Conveyor 42x60	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_SBF6	Item 6 SPAS Surge Bin with Belt Feeder	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV7	Item 7 SPAS Conveyor 42x60	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_C8	Item 8 SPAS Cone Crusher	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV9	Item 9 SPAS Conveyor 42x40	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV10	Item 10 SPAS Conveyor 36x30	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
SPAS_CV11	Item 11 SPAS Conveyor 36x300	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV12	Item 12 SPAS Radial Stacker 36x100	3-05-020-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual conveyor)	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when transferring to a stockpile)	--
SPAS_CV13	Item 13 SPAS Conveyor 36x60	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_SB14	Item 14 SPAS Splitter Box	3-05-020-13	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722	-- P	--
SPAS_CV15	Item 15 SPAS Conveyor 36x100	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV16	Item 16 SPAS Radial Stacker 36x100	3-05-020-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual conveyor)	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when transferring to a stockpile)	--
SPAS_CV17	Item 17 SPAS Conveyor 36x60	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--
SPAS_CV18	Item 18 SPAS Conveyor 36x100	3-05-020-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.71	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
SPAS_CV19	Item 19 SPAS Radial Stacker 36x100	3-05-020-06	A.A.C. R18-2-702.B.3 A.A.C. R18-2-722 (when transferring to a stockpile) A.A.C. R18-2-901.1 A.A.C. R18-2-901.71 (for the actual conveyor)	40 CFR 60 Subpart A 40 CFR 60 Subpart OOO (except the fugitive emission limit does not apply when transferring to a stockpile)	--
Storage Tanks and Parts Cleaning					
150	Gasoline Storage Tank 150 (GDF1)	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	-- ¹	40 CFR 63 Subpart CCCCCC
FT-3	Gasoline Storage Tank FT-3 (GDF2)	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	-- ¹	40 CFR 63 Subpart CCCCCC
GST-FF	Gasoline Storage Tank Sycamore TSF (GDF3)	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	-- ¹	40 CFR 63 Subpart CCCCCC
GST-MO	Gasoline Storage Tank Mine Operations (GDF4)	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	-- ¹	40 CFR 63 Subpart CCCCCC
PrtC	Parts Cleaning Equipment	4-01-002-96	A.A.C. R18-2-730	--	--
T-XMS	Xanthate Mixing and Storage Tanks	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Diesel Emergency ICE					
C41-D	Mammoth Seepage Pond 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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA04-D	Diesel Emergency Generator IA04-D	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 Subpart ZZZZ (existing emergency CI engine at an area source)
IA24-D	Diesel Emergency Generator IA24-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA25-D	Diesel Emergency Generator IA25-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA28-D	Diesel Emergency Generator IA28-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA36-D	Diesel Emergency Generator IA36-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
IA42-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA43-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04	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 Subpart ZZZZ (existing emergency CI engine at an area source)
IA44-D	Copper Cleaner Flotation Diesel Emergency Generator IA44-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA47-D	CLP Diesel Emergency Generator IA47-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA48-D	Mulholland Seepage Pond Diesel Emergency Generator IA48-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA49-D	Security Gate Diesel Emergency Generator IA49-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA54-D	Command Center Diesel Emergency Generator IA54-D	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 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
Propane Emergency ICE					
IA16-P	Propane Emergency Generator IA16-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA19-P	Propane Emergency Generator IA19-P	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 Subpart ZZZZ (new emergency engine at an area source)
IA21-P	Propane Emergency Generator IA21-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA31-P	Propane Emergency Generator IA31-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA32-P	Propane Emergency Generator IA32-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA37-P	Propane Emergency Generator IA37-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
IA38-P	Propane Emergency Generator IA38-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA55-P	Sycamore Communication Tower Propane Emergency Generator IA55-P	2-02-010-01	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
Natural Gas Emergency ICE					
IA13-NG	Natural Gas Emergency Generator IA13-NG	2-02-002-02	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 Subpart ZZZZ (existing emergency SI engine at an area source)
IA22-NG	Natural Gas Emergency Generator IA22-NG	2-02-002-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA23-NG	Natural Gas Emergency Generator IA23-NG	2-02-002-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA30-NG	Natural Gas Emergency Generator IA30-NG	2-02-002-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
IA33-NG	Natural Gas Emergency Generator IA33-NG	2-02-002-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
IA34-NG	Natural Gas Emergency Generator IA34-NG	2-02-002-02	A.A.C. R18-2-901.1 A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.1 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
Diesel Non-Emergency ICE					
IA14-DN	Diesel Non-Emergency Generator IA14-DN	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 Subpart ZZZZ (existing non-emergency CI engine at an area source)
IA15-DN	Diesel Non-Emergency Generator IA15-DN	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 Subpart IIII (non-emergency engine)	40 CFR 63 Subpart ZZZZ (new non-emergency engine at an area source)
IA45-DN	Copper Creek Flood Basin Diesel Non-Emergency 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 Subpart IIII (non-emergency engine)	40 CFR 63 Subpart ZZZZ (new non-emergency engine at an area source)
IA46-DN	Lime Porta Batch Diesel Non- Emergency 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 Subpart IIII (non-emergency engine)	40 CFR 63 Subpart ZZZZ (new non-emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
IA53-DN	Mill Compressor Diesel Non-Emergency Engine IA53-DN	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 Subpart IIII (non-emergency engine)	40 CFR 63 Subpart ZZZZ (new non-emergency engine at an area source)
IA56-DN	Kimberly Diesel Non-Emergency 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 Subpart IIII (non-emergency engine)	40 CFR 63 Subpart ZZZZ (new non-emergency engine at an area source)
Propane Non-Emergency ICE					
IA10-PN	Propane Non-Emergency Generator IA10-PN	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 Subpart ZZZZ (existing non-emergency SI engine at an area source)
IA18-PN	Propane Non-Emergency Generator IA18-PN	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 Subpart ZZZZ (existing non-emergency SI engine at an area source)
Miscellaneous Fuel Burning Equipment					
IA35-D	Diesel Pressure Washer IA35-D	1-02-005-03	A.A.C. R18-2-724	-- ⁱ	-- ⁿ
IA40-NG	Natural Gas Mine Shop Pressure Washer 1	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g
IA41-NG	Natural Gas Mine Shop Pressure Washer 2	1-02-006-03	A.A.C. R18-2-724	-- ⁱ	-- ^g

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
IA26-NG	Natural Gas Small Space Heaters, Furnaces, and Boilers	1-02-006-03	A.A.C. R18-2-724	-- i	-- g
IA27-P	Propane Small Space Heaters, Furnaces, and Boilers	1-02-010-02	A.A.C. R18-2-724	-- i	-- g
IA51-NG	Natural Gas Mill Wash Rack Pressure Washer IA51-NG	1-02-006-03	A.A.C. R18-2-724	-- i	-- g
IA52-NG	Natural Gas Shower Facility Hot Water Heater IA52-NG	1-02-006-03	A.A.C. R18-2-724	-- i	-- g
AOS1: Two Concentrator Operations					
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>					
RB	Rock Breaker (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
PC2	Primary Crusher 2 (AOS1)	3-03-024-01	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
C51	Dust Collector C51 (AOS1)	--	A.A.C. R18-2-306.01 a,b	-- c	--
PC2SB	PC2 Surge Bin (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
PC2AF	PC2 Apron Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
PC2DC	PC2 Dribble Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
OC3A	Overland Conveyor 3A (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
OC3	Overland Conveyor 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
OC4	Overland Conveyor 4 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
RST5	Radial Stacker 5 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
FSS6	Free-Standing Stacker 6 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>					
2110-RKB-0021	PC1 Rock Breaker (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
2110-CRG-0021	Primary Crusher 1 (AOS1)	3-03-024-01	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2140-DCD-0021	PC1 Dust Collector 1 (AOS1)	--	A.A.C. R18-2-306.01 ^{a,b}	-- ^c	--
2110-BIN-0021	PC1 Surge Pocket (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--
2110-FDA-0021	PC1 Discharge Apron Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2140-CVB-0021	PC1 Discharge Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2140-CVB-0022	PC1 Cross Country Conveyor 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2140-DCD-0022	PC1 CCC1 Dust Collector 2 (AOS1)	--	A.A.C. R18-2-306.01 ^{a,b}	--	--
2140-CVB-0023	PC1 Cross Country Conveyor 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2140-DCD-0023	PC1 CCC2 Dust Collector 3 (AOS1)	--	A.A.C. R18-2-306.01 ^{a,b}	--	--
2140-CVB-0024	PC1 Cross Country Conveyor 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2140-DCD-0024	PC1 CCC3 Dust Collector 4 (AOS1)	--	A.A.C. R18-2-306.01 ^{a,b}	--	--
<i>Second Concentrator Milling Operations (AOS1)</i>					
2210-FDA-0101	Coarse Ore Reclaim Feeder 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2210-FDA-0102	Coarse Ore Reclaim Feeder 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2210-FDA-0103	Coarse Ore Reclaim Feeder 3 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2210-CVB-0101	Coarse Ore Reclaim Conveyor 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2210-DCD-0101	Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2210-FDA-0201	Coarse Ore Reclaim Feeder 4 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2210-FDA-0202	Coarse Ore Reclaim Feeder 5 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2210-FDA-0203	Coarse Ore Reclaim Feeder 6 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2210-CVB-0201	Coarse Ore Reclaim Conveyor 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2210-DCD-0201	Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2310-MLA-0101	AG Mill 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2310-SCN-0101	AG Mill 1 Discharge Screen 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2310-SCN-0102	AG Mill 1 Discharge Screen 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2310-SCN-0103	AG Mill Rotatable Discharge Screen 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2340-MLB-0111	Ball Mill 1 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2310-MLA-0201	AG Mill 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2310-SCN-0201	AG Mill 2 Discharge Screen 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2310-SCN-0202	AG Mill 2 Discharge Screen 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2310-SCN-0203	AG Mill Rotatable Discharge Screen 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2340-MLB-0211	Ball Mill 2 (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2330-CVB-0121	Pebble Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-CVB-0122	HPGR Feed Bin Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DVT-0123	HPGR Feed Diverter (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2330-BIN-0130	HPGR Feed Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-FDB-0132	HPGR Belt Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2330-CVB-0134	HPGR Feed Conveyor (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-CRH-0140	High Pressure Grinding Roll (AOS1)	3-03-024-02	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DCD-0141	HPGR Discharge Dust Collector 7 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2330-CVB-0141	HPGR Discharge Conveyor 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-CVB-0142	HPGR Discharge Conveyor 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DCD-0142	HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2330-BIN-0150	HPGR Product Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DCD-0150	HPGR Product Bin Dust Collector 9 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2330-FDB-0152	HPGR Product Recycle Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-FDB-0163	HPGR Product Feeder 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-FDB-0263	HPGR Product Feeder 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2330-CVB-0163	HPGR Product Return Conveyor 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DCD-0163	HPGR Product Transfer Dust Collector 10 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
2330-CVB-0263	HPGR Product Return Conveyor 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2330-DCD-0263	HPGR Product Transfer Dust Collector 11 (AOS1)	--	A.A.C. R18-2-306.01 ^a	-- ^c	--
<i>Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)</i>					
S-FLO-B	Second Concentrator Bulk Flotation Equipment (AOS1)	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- ^d	--
2420-MLV-0303	Second Concentrator Regrind Mill 1 (AOS1)	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2420-MLV-0304	Second Concentrator Regrind Mill 2 (AOS1)	3-03-024-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
S-FLO-M	Second Concentrator Molybdenum Flotation Equipment (AOS1)	3-05-038-32	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721 A.A.C. R18-2-730	-- ^d	--
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>					
2630-SCN-0410	Copper Filter Feed Tank Trash Screen (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2520-SCN-0517	Molybdenum Thickener Trash Screen (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2520-HPR-0576	Molybdenum Concentrate Filter Discharge Hopper 1 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2520-HPR-0577	Molybdenum Concentrate Filter Discharge Hopper 2 (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2520-CVS-0576	Molybdenum Concentrate Dryer Screw Feeder (AOS1)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2520-DRY-0576	Molybdenum Concentrate Dryer (AOS1)	3-03-024-11	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
2520-SCU-0576	Molybdenum Dryer Wet Scrubber System (AOS1)	--	-- ^b	--	--
2520-BIN-0576	Dried Molybdenum Concentrate Storage Bin (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
2520-SYS-0576	Molybdenum Concentrate Bagging System (AOS1)	3-03-024-04	A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
<i>Second Concentrator Lime and Other Regent Operations (AOS1)</i>					
2360-SLO-0140	Second Concentrator Lime Silo (AOS1)	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- ^k	-- ^k
2360-BGH-0141	Second Concentrator Lime Silo Baghouse (AOS1)	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	-- ^k	-- ^k

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2360-FDR-0140	Second Concentrator Lime Screw Feeder (AOS1)	3-05-016-26	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
2360-MLV-0140	Second Concentrator Lime Slaker (AOS1)	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730 ^f	-- k	-- k
2360-SCU-0140	Second Concentrator Lime System Scrubber (AOS1)	3-02-016-88	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	-- k	-- k
2720-BIN-0720	Tailings Flocculant Bag Breaker Bin (AOS1)	3-01-810-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
2720-FDR-0720	Tailings Flocculant Screw Feeder (AOS1)	3-01-810-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
2510-BIN-0580	Concentrate Flocculant Bag Breaker Bin (AOS1)	3-01-810-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
2510-FDR-0580	Concentrate Flocculant Screw Feeder (AOS1)	3-01-810-03	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
2440-TNK-0150	Xanthate Mix Tank (AOS1)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
2440-TNK-0152	Xanthate Holding Tank (AOS1)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
2440-TNK-0160	Test Reagent Mix Tank (AOS1)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--
2440-TNK-0162	Test Reagent Holding Tank (AOS1)	4-07-146-97 4-07-146-98	A.A.C. R18-2-730	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
2520-TNK-0591	NaHS Storage Tank (AOS1)	3-01-875-97 3-01-875-98	A.A.C. R18-2-730	--	--
2520-TNK-0592	NaHS Distribution Tank (AOS1)	3-01-875-97 3-01-875-98	A.A.C. R18-2-730	--	--
2520-SCU-0591	Second Concentrator NaHS System Scrubber (AOS1)	3-01-875-97 3-01-875-98	A.A.C. R18-2-730 ^f	--	--
<i>Second Concentrator Prill Handling Operations (AOS1)</i>					
PB6	Prill Bin 6 (AOS1)	3-01-027-09	A.A.C. R18-2-702.B.3 A.A.C. R18-2-730	--	--
<i>Second Concentrator Emergency ICE (AOS1)</i>					
2440-GEN-0101	Second Concentrator Diesel Emergency Generator 1 (AOS1)	2-02-001-02	A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
2500-GEN-0501	Second Concentrator Diesel Emergency Generator 2 (AOS1)	2-02-001-02	A.A.C. R18-2-901.84 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart IIII (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
3650-GEN-0801	Second Concentrator Propane Emergency Generator 1 (AOS1)	2-02-010-01	A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)
3650-GEN-0802	Second Concentrator Propane Emergency Generator 2 (AOS1)	2-02-010-01	A.A.C. R18-2-901.85 A.A.C. R18-2-1101.B.81	40 CFR 60 Subpart JJJJ (emergency engine)	40 CFR 63 Subpart ZZZZ (new emergency engine at an area source)

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
AOS3: Upgrades to Milling Operations					
Grinding Line 1					
GL1-BCB	GL1 Belt Conveyor B (AOS3)	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL1-SC1	GL1 Secondary Crusher (AOS3)	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
Grinding Line 2					
GL2-BCB	GL2 Belt Conveyor B (AOS3)	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL2-SC2	GL2 Secondary Crusher (AOS3)	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
Grinding Line 3					
GL3-BCB	GL3 Belt Conveyor B (AOS3)	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--
GL3-SC3	GL3 Secondary Crusher (AOS3)	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
Grinding Line 4					
GL4-BCB	GL4 Belt Conveyor B (AOS3)	3-03-024-08	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	--	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP
GL4-SC4	GL4 Secondary Crusher (AOS3)	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
<i>Grinding Line 5</i>					
GL5-BCB	GL5 Belt Conveyor B (AOS3)	3-03-024-08	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL ^e	--
GL5-SC5	GL5 Secondary Crusher (AOS3)	3-03-024-06	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
AOS5: Emergency Grizzly Systems					
EG1	EGS Bar Grizzly 1 (AOS5)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
EG2	EGS Bar Grizzly 2 (AOS5)	3-03-024-04	A.A.C. R18-2-901.1 A.A.C. R18-2-901.46	40 CFR 60 Subpart LL	--
EGAF1	EGS Apron Feeder 1 (AOS5)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
EGAF2	EGS Apron Feeder 2 (AOS5)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
EGBC1	EGS Belt Conveyor 1 (AOS5)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--
EGBC2	EGS Belt Conveyor 2 (AOS5)	3-03-024-04	A.A.C. R18-2-702.B.3 A.A.C. R18-2-721	-- ^d	--

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP

^a 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.

^b 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.

^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 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.

^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).

^f 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.

^g The equipment is not subject to 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.

^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 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.

^j The equipment is not subject to from 40 CFR 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources) because it is not considered a boiler.

Table 3.1 Equipment Subject to Air Quality Permitting

Equipment ID Number	Equipment Description	SCC	Applicable Requirements Reference		
			State	NSPS	NESHAP

^k 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 FMBI is not a major source of HAP emissions and does not manufacture lime products through calcination.

^l 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 m³.

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

ⁿ The equipment is not subject to 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.

^o 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).

^p The equipment is not subject to 40 CFR 60 Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) because it is not a crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

4 DESCRIPTION OF ALTERNATE OPERATING SCENARIOS

FMBI is currently permitted to operate three existing AOSs. Description of the AOSs is presented in the following sections.

4.1 AOS1 – TWO CONCENTRATOR OPERATIONS

According to Condition II.D of Attachment “B” of Class II Air Quality Permit #77414, FMBI is authorized to operate sulfide ore processing in one of two operating scenarios. The Primary Operating Scenario corresponds to the current operations at the FMBI facility, which are described in Section 3.1. AOS1 – Two Concentrator Operations reflects FMBI’s expansion design to be implemented at a later date.

Process flow diagrams of AOS1 are presented in Figures D.25 through D.33 of Appendix D. The Primary Crushing and Overland Conveying Operations of AOS1 (see Figure D.25) are different than the Primary Operating Scenario, although the following equipment is used in both operating scenarios.

- Primary Crusher 1 (PC1) (a new crusher is assumed for AOS1);
- Rock Breaker (RB);
- Primary Crusher 2 (PC2);
- Dust Collector C51 (C51);
- PC2 Surge Bin (PC2SB);
- PC2 Apron Feeder (PC2AF);
- PC2 Dribble Conveyor (PC2DC);
- Overland Conveyor 3A (OC3A);
- Overland Conveyor 3 (OC3);
- Overland Conveyor 4 (OC4); and
- Radial Stacker 5 (RST5); and
- Free-Standing Stacker 6 (FSS6).

AOS1 also adds Second Concentrator operations consisting of milling operations, bulk and molybdenum flotation operations, concentrate handling operations, lime and other reagent operations, prill handling operations, and emergency ICE. These operations are presented in Figures D.26 through D.33. All remaining operations described in Section 3.1 for the Primary Operating Scenario are also included in AOS1 except the process rates for mining operations are increased and fogging systems are used to control emissions from the following transfer points.

- Material transfer point from Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1);
- Material transfer point from Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1); and
- Material transfer point from Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1).

AOS1 affects emission calculations for the FMBI facility. To remain consistent with past permitting documentation, Section 6.2 includes facility-wide emissions under both the Primary Operating Scenario and AOS1. Additionally, for clarity, the equipment associated with AOS1 is listed under the AOS1 section of the equipment list.

4.2 AOS3 – UPGRADES TO MILLING OPERATIONS

As part of MPR #76822, FMBI was authorized to replace the Secondary Crushers and increase the belt width of Belt Conveyors B. Because FMBI has not yet implemented the changes, AOS3 was established to account for operations following the changes. There are no differences in the process flow diagrams presented in Figures D.3 through D.5 due to AOS3.

Emissions from operation of AOS3 are equal to emissions from the Primary Operating Scenario and AOS1 on both an annual and hourly basis. Consequently, emissions from AOS3 are not included in FMBI's facility-wide emission totals (see Section 6.2). Additionally, the only changes under AOS3 that affect FMBI's equipment list are the replacement of the Secondary Crushers and the increase in the belt width of Belt Conveyors B. The new secondary crushers and belt widths (i.e., model) of Belt Conveyors B are listed under AOS3 in the equipment list.

4.3 AOS5 – EMERGENCY GRIZZLY SYSTEMS

The process flow diagram of AOS5 is presented in Figure D.34 of Appendix D. AOS5 involves operation of the Emergency Grizzly Systems to process ore when a primary crusher malfunctions or is otherwise inoperative. FMBI can avoid depletion of the Coarse Ore Stockpiles and potential shutdown or curtailment of the Milling Operations by using AOS5 when a primary crusher is down. A single line of the Emergency Grizzly Systems is authorized to operate for each primary crusher that is inoperative.

AOS5 operations begin with haul trucks unloading ore to grizzlies (EGS Bar Grizzlies 1 and 2) for size separation. The undersize ore is then conveyed via apron feeders (EGS Apron Feeders 1 and 2) and belt conveyors (EGS Belt Conveyors 1 and 2) to the Overland Conveying Operations. The oversize ore is transferred to the Temporary Oversize Stockpile where it is stored until the primary crusher resumes operation. At that point, the ore is reclaimed and transported by front-end loaders to the primary crushers.

Wet suppression is used to control emissions from unloading ore to the grizzlies and from transferring ore from the grizzlies to the Temporary Oversize Stockpile. Additionally, wet suppression is used when necessary to control emissions from the transfer from the Temporary Oversize Stockpile to Primary Crushers 1 and 2.

Equipment associated with the Emergency Grizzly Systems will be rented or brought in from another Freeport-McMoRan Copper & Gold facility, as necessary. Consequently, detailed information regarding the exact equipment to be used cannot be provided. Generic equipment details will be included in FMBI's equipment list under AOS5. Emissions from operations of the Emergency Grizzly Systems are less than emissions from operation of the primary crushers. Consequently, emissions from the Emergency Grizzly Systems are not included in FMBI's facility-wide emission totals (see Section 6.2).

5 IDENTIFICATION AND DESCRIPTION OF POLLUTION CONTROLS

5.1 IDENTIFICATION, DESCRIPTION, AND LOCATION

Identification and description of the pollution control equipment utilized at the FMBI 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.

Bin vents, Primary Venturi Scrubber CH-02, Secondary Venturi Scrubber CH-03, Lime Slaking Scrubber 1, and Lime Slaking Scrubber 2 are not considered pollution control devices because they are inherent 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.

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

FMBI utilizes a variety of compliance monitoring devices, including the following currently required by Class II Air Quality Permit #77414 for Scrubber C18 (Process #001-1), Venturi Scrubber or Venturi Scrubber (alternate) (Process #047-5), Primary Venturi Scrubber CH-02 and the Secondary Venturi Scrubber CH-03 (Process #042-4), and Packed Scrubber 1 and Packed Scrubber 2 (Process #047-5):

- 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 the tables of Section 8.

5.2 RATED AND OPERATING EFFICIENCIES

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

5.3 REFERENCE TO APPLICABLE TEST METHODS

The requirements applicable to each process and/or piece of equipment at the FMBI facility are identified in Table 3.1 and described in the tables of Section 8. The applicable test methods that can be used to determine compliance with the applicable emission standards include:

- Opacity Standard: EPA Reference Method 9, EPA Reference Method 22, or Visible Emission Surveys;

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- PM Emission Standard: EPA Reference Method 5 and (if necessary) EPA Reference Method 202;
- PM₁₀ 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 PM₁₀);
- CO Emission Standard: EPA Reference Method 10;
- NO_x Emission Standard: EPA Reference Method 7E;
- SO₂ Emission Standard: EPA Reference Method 6 or 6C; and
- VOC Emission Standard: EPA Reference Method 25A.

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
Mining Operations						
022-1	Unpaved Road Watering and/or Chemical Dust Suppression Use	Haul Truck Travel Inside the Pit	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
022-2		Haul Truck Travel Outside the Pit				
023-3		Other Vehicle Travel				
023-2		Road Grader Operation				
001-6 / 001-7	Water Spray/Wet Suppression	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
Primary Crushing and Overland Conveying Operations						
001-1	Scrubber C18	Primary Crusher 1	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	11,000 acfm	90 - 99%
		Primary Crusher 1 to PC1 Surge Bin				
001-5	Dust Collector C51	Primary Crusher 2	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	15,000 acfm	99.9%
		Primary Crusher 2 to PC2 Surge Bin				
		PC2 Surge Bin to PC2 Apron Feeder				
		PC2 Apron Feeder to Overland Conveyor 3A				
		PC2 Apron Feeder to PC2 Dribble Conveyor				
		PC2 Dribble Conveyor to Overland Conveyor 3A				
001-11	Water Spray/Wet Suppression	Overland Conveyor 2 to Overland Conveyor 3	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
001-9		Overland Conveyor 4 to Radial Stacker 5				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
001-4	Water Spray/Wet Suppression (cont'd)	Radial Stacker 5 to Coarse Ore Stockpiles ¼	PM, PM ₁₀ , PM _{2.5} , HAPs (cont'd)	None (cont'd)	-- (cont'd)	90% (cont'd)
001-10		Radial Stacker 5 to Free-Standing Stacker 6				
001-3		Free-Standing Stacker 6 to Coarse Ore Stockpile 5				
Milling Operations						
002-1	GL1 Dust Collector C1	GL1 Vibrating Feeders 2/5 to GL1 Belt Conveyor A (also includes emissions from Coarse Ore Stockpile 1 to GL1 Vibrating Feeders 2/5 that are contained within the enclosure)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	15,000 acfm	99.9%
		GL1 Secondary Crusher				
		GL1 Secondary Crusher to GL1 Belt Conveyor A				
		GL1 Belt Conveyor 5 to GL1 Belt Conveyor A (negligible emissions due to cleaned, washed ore being transferred)				
002-2	GL2 Dust Collector C2	GL2 Vibrating Feeders 2/5 to GL2 Belt Conveyor A (also includes emissions from Coarse Ore Stockpile 2 to GL2 Vibrating Feeders 2/5 that are contained within the enclosure)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	15,000 acfm	99.9%
		GL2 Secondary Crusher				
		GL2 Secondary Crusher to GL2 Belt Conveyor A				
		GL2 Belt Conveyor 5 to GL2 Belt Conveyor A (negligible emissions due to cleaned, washed ore being transferred)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
002-3	GL3 Dust Collector DC3	GL3 Vibrating Feeders 2/5 to GL3 Belt Conveyor A (also includes emissions from Coarse Ore Stockpile 3 to GL3 Vibrating Feeders 2/5 that are contained within the enclosure)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	15,000 acfm	99.9%
		GL3 Secondary Crusher				
		GL3 Secondary Crusher to GL3 Belt Conveyor A				
		GL3 Belt Conveyor 5 to GL3 Belt Conveyor A (negligible emissions due to cleaned, washed ore being transferred)				
002-4	GL4 Dust Collector DC4	GL4 Vibrating Feeders 2/5 to GL4 Belt Conveyor A (also includes emissions from Coarse Ore Stockpile 4 to GL4 Vibrating Feeders 2/5 that are contained within the enclosure)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	15,000 acfm	99.9%
		GL4 Secondary Crusher				
		GL4 Secondary Crusher to GL4 Belt Conveyor A				
		GL4 Belt Conveyor 5 to GL4 Belt Conveyor A (negligible emissions due to cleaned, washed ore being transferred)				
002-6	GL5 Dust Collector DC5	GL5 Vibrating Feeders 2/5 to GL5 Belt Conveyor A (also includes emissions from Coarse Ore Stockpile 5 to GL5 Vibrating Feeders 2/5 that are contained within the enclosure)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.004 gr/dscf PM ₁₀ ≤ 0.004 gr/dscf	15,000 acfm	99.9%
		GL5 Secondary Crusher				
		GL5 Secondary Crusher to GL5 Belt Conveyor A				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
002-6 (cont'd)	GL5 Dust Collector DC5 (cont'd)	GL5 Belt Conveyor 5 to GL5 Belt Conveyor A (negligible emissions due to cleaned, washed ore being transferred)	PM, PM ₁₀ , PM _{2.5} , HAPs (cont'd)	PM ≤ 0.004 gr/dscf PM ₁₀ ≤ 0.004 gr/dscf (cont'd)	15,000 acfm (cont'd)	99.9% (cont'd)
Copper Concentrate Processing and Loading Operations						
027-5	3-Sided Enclosure	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	75%
Tailings Operations						
027-3	Using 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 ^d
Concentrate Leach Plant						
042-11	Mist Eliminators	CLP Cooling Tower	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d
042-4	Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Pressure Leach Vessel	PM, PM ₁₀ , PM _{2.5} , HAPs, VOC, H ₂ SO ₄	PM ≤ 2.75 lb/hour PM ₁₀ ≤ 2.75 lb/hour	--	N/A ^d
047-13	Molybdenum Concentrate Dust Collector 2	Molybdenum Concentrate to Molybdenum Concentrate Feed Hopper 3	PM, PM ₁₀ , PM _{2.5} , HAPs	None	500 acfm	99%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
047-5	Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Deoiler	PM, PM ₁₀ , PM _{2.5} , HAPs, VOC ^c	VOC ≤ 1.36 lb/hr	--	N/A ^d
047-10	Molybdenum Concentrate Dust Collector 1	Molybdenum Concentrate to Molybdenum Concentrate Feed Hopper 4	PM, PM ₁₀ , PM _{2.5} , HAPs	None	900 acfm	99%
047-9	Soda Ash Storage Bin Bin Vent	Transfer of Soda Ash to the Soda Ash Storage Bin	PM, PM ₁₀ , PM _{2.5}	None	N/A	99.9%
047-8	Covers (100% covered)	Solution Extraction - Molybdenum Pressure Leaching	VOC, HAPs	None	--	N/A ^d
Solution Extraction/Electrowinning Operations						
029-1	Covers (100% covered)	Solution Extraction - Main Systems	VOC, HAPs	None	--	N/A ^d
011-1	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	Electrowinning - Main System	PM, PM ₁₀ , PM _{2.5} , H ₂ SO ₄ , HAPs	None	--	N/A ^d
029-3	Cover (100% covered)	Organic Tank TK-22	VOC, HAPs	None	--	N/A ^d
029-4	Cover (100% covered)	Organic Mix Tank TK-13	VOC, HAPs	None	--	N/A ^d
Lime Storage and Handling Operations						
007-3	Lime Storage Bin 1 Bin Vent	Transfer of Lime to Lime Storage Bin 1	PM, PM ₁₀ , PM _{2.5}	None	3,500 acfm	99.9%
007-8	Lime Slaking Scrubber 1	Lime Slaking Mill 1	PM, PM ₁₀ , PM _{2.5}	None	TBD	N/A ^d
007-9	Lime Slaking Scrubber 2	Lime Slaking Mill 2	PM, PM ₁₀ , PM _{2.5}	None	TBD	N/A ^d

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
Portable Aggregate System						
009-21	Water Spray/Wet Suppression	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
009-16		Cone Crusher to Cone Crusher Discharge Conveyor				
009-17		Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor				
009-18		Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles				
009-10	Water Spray/Wet Suppression/Inherent Moisture	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d
009-11		Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing				
009-13		Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening				
009-15		Cone Feed Conveyor to Cone Crusher and Cone Crushing				
Supplemental Portable Aggregate System						
009-24	Water Spray/Wet Suppression	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
009-25		Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
009-28	Water Spray/Wet Suppression (cont'd)	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	PM, PM ₁₀ , PM _{2.5} , HAPs (cont'd)	None (cont'd)	-- (cont'd)	90% (cont'd)
009-29		Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder				
009-30		Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60				
009-32		Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40				
009-34		Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box				
009-36		Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100				
009-23	Water Spray/Wet Suppression/Inherent Moisture	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d
009-26		Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen				
009-31		Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
AOS1: Two Concentrator Operations						
Mining Operations (AOS1)						
022-1 (AOS1)	Unpaved Road Watering and/or Chemical Dust Suppression Use	Haul Truck Travel Inside the Pit (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
022-2 (AOS1)		Haul Truck Travel Outside the Pit (AOS1)				
023-3 (AOS1)		Other Vehicle Travel (AOS1)				
023-2 (AOS1)		Road Grader Operation (AOS1)				
001-6 (AOS1)	Water Spray/Wet Suppression	Unloading Ore to Primary Crusher 1 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d (only used when necessary)
001-7 (AOS1)		Unloading Ore to Primary Crusher 2 (AOS1)				
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)						
001-5 (AOS1)	Dust Collector C51 (AOS1)	Primary Crusher 2 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	15,000 acfm	99.9%
		Primary Crusher 2 (AOS1) to PC2 Surge Bin (AOS1)				
		PC2 Surge Bin (AOS1) to PC2 Apron Feeder (AOS1)				
		PC2 Apron Feeder (AOS1) to Overland Conveyor 2 (AOS1)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
001-5 (AOS1) (cont'd)	Dust Collector C51 (AOS1) (cont'd)	PC2 Apron Feeder (AOS1) to PC2 Dribble Conveyor (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs (cont'd)	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf (cont'd)	15,000 acfm (cont'd)	99.9% (cont'd)
		PC2 Dribble Conveyor (AOS1) to Overland Conveyor 2 (AOS1)				
001-2 (AOS1)	Dry Fogging Suppression System	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
001-8 (AOS1)		Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)				
001-9 (AOS1)		Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)				
001-4 (AOS1)	Water Spray/Wet Suppression	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d (only used when necessary)
001-10 (AOS1)		Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)				
001-3 (AOS1)		Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)				
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)						
001-12 (AOS1)	PC1 Dust Collector 1 (AOS1)	Primary Crusher 1 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	14,500 acfm	99.9%
		Primary Crusher 1 (AOS1) to PC1 Surge Pocket (AOS1)				
		PC1 Surge Pocket (AOS1) to PC1 Discharge Apron Feeder (AOS1)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
001-12 (AOS1) (cont'd)	PC1 Dust Collector 1 (AOS1) (cont'd)	PC1 Discharge Apron Feeder (AOS1) to PC1 Discharge Conveyor (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs (cont'd)	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf (cont'd)	14,500 acfm (cont'd)	99.9% (cont'd)
001-13 (AOS1)	PC1 CCC1 Dust Collector 2 (AOS1)	PC1 Discharge Conveyor (AOS1) to PC1 Cross Country Conveyor 1 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	16,700 acfm	99.9%
001-14 (AOS1)	PC1 CCC2 Dust Collector 3 (AOS1)	PC1 Cross Country Conveyor 1 (AOS1) to PC1 Cross Country Conveyor 2 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	16,700 acfm	99.9%
001-15 (AOS1)	PC1 CCC3 Dust Collector 4 (AOS1)	PC1 Cross Country Conveyor 2 (AOS1) to PC1 Cross Country Conveyor 3 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	16,700 acfm	99.9%
001-20 (AOS1)	Water Spray/Wet Suppression	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	N/A ^d (only used when necessary)
<i>Second Concentrator Milling Operations (AOS1)</i>						
002-7 (AOS1)	Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Coarse Ore Reclaim Feeder 1 (AOS1) to Coarse Ore Reclaim Conveyor 1 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	22,000 acfm	99.9%
		Coarse Ore Reclaim Feeder 2 (AOS1) to Coarse Ore Reclaim Conveyor 1 (AOS1)				
		Coarse Ore Reclaim Feeder 3 (AOS1) to Coarse Ore Reclaim Conveyor 1 (AOS1)				
		HPGR Product Return Conveyor 1 (AOS1) to Coarse Ore Reclaim Conveyor 1 (AOS1)				

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
002-8 (AOS1)	Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Coarse Ore Reclaim Feeder 4 (AOS1) to Coarse Ore Reclaim Conveyor 2 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	22,000 acfm	99.9%
		Coarse Ore Reclaim Feeder 5 (AOS1) to Coarse Ore Reclaim Conveyor 2 (AOS1)				
		Coarse Ore Reclaim Feeder 6 (AOS1) to Coarse Ore Reclaim Conveyor 2 (AOS1)				
		HPGR Product Return Conveyor 2 (AOS1) to Coarse Ore Reclaim Conveyor 2 (AOS1)				
002-9 (AOS1)	HPGR Discharge Dust Collector 7 (AOS1)	HPGR Feed Conveyor (AOS1) to High Pressure Grinding Roll (AOS1) and Operation of the High Pressure Grinding Roll (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	23,000 acfm	99.9%
		High Pressure Grinding Roll (AOS1) to HPGR Discharge Conveyor 1 (AOS1)				
		HPGR Product Recycle Feeder (AOS1) to HPGR Feed Conveyor (AOS1)				
002-10 (AOS1)	HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	HPGR Discharge Conveyor 1 (AOS1) to HPGR Discharge Conveyor 2 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	27,000 acfm	99.9%
002-11 (AOS1)	HPGR Product Bin Dust Collector 9 (AOS1)	HPGR Discharge Conveyor 2 (AOS1) to HPGR Product Bin (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	25,000 acfm	99.9%
002-12 (AOS1)	HPGR Product Transfer Dust Collector 10 (AOS1)	HPGR Product Feeder 1 (AOS1) to HPGR Product Return Conveyor 1 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	10,000 acfm	99.9%
002-13 (AOS1)	HPGR Product Transfer Dust Collector 11 (AOS1)	HPGR Product Feeder 2 (AOS1) to HPGR Product Return Conveyor 2 (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	10,000 acfm	99.9%

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b
Second Concentrator Concentrate Handling Operations (AOS1)						
027-8 (AOS1)	3-Sided Enclosure	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	75%
052-2 (AOS1)	Molybdenum Dryer Wet Scrubber System (AOS1)	Molybdenum Concentrate Dryer (AOS1)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	337 acfm	N/A ^d
Second Concentrator Lime and Other Regent Operations (AOS1)						
007-6 (AOS1)	Second Concentrator Lime Silo Baghouse (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	PM, PM ₁₀ , PM _{2.5}	None	590 acfm	99%
007-7 (AOS1)	Second Concentrator Lime System Scrubber (AOS1)	Second Concentrator Lime Slaker (AOS1)	PM, PM ₁₀ , PM _{2.5}	None	4,400 acfm	N/A ^d
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	NaHS Storage Tank (AOS1)	H ₂ S	None	735 acfm	N/A ^d
		NaHS Distribution Tank (AOS1)				
AOS5: Emergency Grizzly Systems						
048-1 (AOS5)	Water Spray/Wet Suppression	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	PM, PM ₁₀ , PM _{2.5} , HAPs	None	--	90%
048-2 (AOS5)		Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)				
048-6 (AOS5)		Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)				

^a gr = grains, dscf = dry standard cubic foot, lb = pounds, dscfm = dry standard cubic foot per minute, acfm = actual cubic foot per minute

Table 5.1 Summary of Air Pollution Control Methods and Equipment

Process Number	Identification of Control Method or Equipment	Emission Unit(s) Controlled	Pollutants Controlled	Voluntary Emission Limitations ^a	Exhaust Flow Rate ^a	Rated/ Operating Efficiency ^b

^b The efficiency data for unpaved road watering and/or chemical dust suppression use is from Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16. 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 wet scrubbers is from AP-42 Table B.2-3 for hi-efficiency wet scrubbers. The efficiency data for the ore processing dust collectors is from FARR references. The efficiency data for the molybdenum concentrate dust collectors and the bin vent dust collector in AOS1 is from AP-42 Table B.2-3 for fabric filters. The efficiency data for the remaining bin vent dust collectors is from manufacturer information (scaled down to 99.9%). The efficiency data for the dry fogging suppression systems is from manufacturer information. The efficiency data for the 3-sided enclosure is from South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures.

^c The Venturi Scrubber is used to recover molybdenum concentrate and control PM, PM₁₀, and PM_{2.5} emissions. Packed Scrubbers 1 and 2 recover any oil in the exhaust stream. The Natural Gas Flare used to reduce VOC emissions to levels that will not contaminate the air intake to the Oxygen Plant.

^d Because the efficiency is incorporated into the emission factor when calculating potential emissions, the rated/operating efficiency is unnecessary.

6 EMISSIONS CALCULATIONS

6.1 EMISSIONS FROM EACH PROCESS

Detailed information about the individual emission units associated with operations at the FMBI 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 potential PM¹, PM₁₀², and PM_{2.5}³ emissions on an hourly (pounds per hour [lb/hr]) and annual (tons per year [tpy]) basis, Table 6.2 presents potential CO, NO_x, SO₂, and VOC emissions on an hourly and annual basis, Table 6.3 presents potential GHG⁴ (i.e., CO₂, CH₄, N₂O, and CO₂e) emissions on an hourly and annual basis, Table 6.4 presents potential H₂SO₄ and H₂S emissions on an hourly and annual basis, and Table 6.5 presents potential 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 9.

6.2 FACILITY-WIDE EMISSIONS AND PTE

The sum of potential emissions from the emission units at the FMBI facility is presented in Table 6.6. The PTE of the FMBI facility is presented in Table 6.7. The primary activity of the FMBI 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.

¹ PM is not considered a regulated air pollutant for purposes of Class I (Title V) permitting requirements (see EPA. Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V (Oct. 16, 1995)) but it is considered a “regulated air pollutant” under ADEQ’s definition at A.A.C. R18-2-101.122.c (because PM is regulated under NSPS). It is also considered a “regulated NSR pollutant” under ADEQ’s definition at A.A.C. R18-2-101.124.b.i (again, because it is regulated under NSPS), and is considered in determining applicability of Class II permitting requirements (see A.A.C. R18-2-101.131.b (providing a 25 tpy PM significant threshold for purposes of determining the applicability of R18-2-302.B.2) and R18-2-302.B.2.a (requiring a Class II permit for any source that emits, or has the maximum capacity to emit with any elective limits, any regulated NSR pollutant in an amount greater than or equal to the significant level). Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM does not include CPM.

² Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM₁₀ includes CPM.

³ Under the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)), the PTE of PM_{2.5} includes CPM.

⁴ 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 federal PSD program at 40 C.F.R. § 52.21(b)(50) (which ADEQ implements via a delegation agreement with EPA) and therefore included here for informational purposes.

As shown in Table 6.7, the PTE of facility-wide operations is greater than the Class II permitting thresholds, but less than the Class I (Title V) “major source” permitting thresholds, the Prevention of Significant Deterioration (PSD) “major source” thresholds for all regulated NSR air pollutants (for a non-categorical source in an attainment/unclassifiable area), and the HAP “major source” thresholds. Consequently, FMBI’s facility-wide operations are a “minor 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 and therefore FMBI’s operations require a Class II permit.

6.3 EMISSION FACTOR DOCUMENTATION

The methodology used to calculate potential emissions from the emission units addressed in Section 6.1 is 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, PM₁₀, 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}
Mining Operations										
026-3	Drilling	Fugitive	260.00	260.00	156.00	28.89	58.50	58.50	35.10	6.50
026-2	Blasting	Fugitive	1,252.20	1,252.20	651.14	37.57	119.12	119.12	61.94	3.57
022-1	Haul Truck Travel Inside the Pit	Fugitive	533.78	533.78	134.89	13.49	1,142.39	1,142.39	288.69	28.87
022-2	Haul Truck Travel Outside the Pit	Fugitive	177.93	177.93	44.96	4.50	380.80	380.80	96.23	9.62
023-3	Other Vehicle Travel	Fugitive	2,120.93	2,120.93	535.97	53.60	5,713.73	5,713.73	1,443.88	144.39
023-1	Dozer Operation	Fugitive	141.54	141.54	25.69	14.86	345.20	345.20	62.66	36.25
023-2	Road Grader Operation	Fugitive	10.58	10.58	3.30	0.33	20.91	20.91	6.53	0.65
021-1	Loading Mined Material into Haul Trucks	Fugitive	82.80	82.80	39.16	5.93	298.91	298.91	141.37	21.41
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Fugitive	34.91	34.91	16.51	2.50	89.14	89.14	42.16	6.38
045-3	Unloading Ore to Leaching Areas	Fugitive	9.32	9.32	4.41	0.67	40.80	40.80	19.30	2.92
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Fugitive	38.58	38.58	18.25	2.76	168.96	168.96	79.92	12.10

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
Primary Crushing and Overland Conveying Operations										
001-1	Processes Controlled by Scrubber C18	Non-Fugitive	1.27	1.27	1.27	1.27	5.58	5.58	5.58	5.58
001-5	Processes Controlled by Dust Collector C51	Non-Fugitive	1.74	1.74	1.74	1.74	7.60	7.60	7.60	7.60
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Non-Fugitive	2.21	2.21	1.04	0.16	9.54	9.54	4.51	0.68
001-8	Overland Conveyor 3 to Overland Conveyor 4	Non-Fugitive	2.21	2.21	1.04	0.16	9.54	9.54	4.51	0.68
001-9	Overland Conveyor 4 to Radial Stacker 5	Non-Fugitive	2.21	2.21	1.04	0.16	9.54	9.54	4.51	0.68
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Fugitive	--	--	--	--	71.31	71.31	33.73	5.11
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Fugitive	20.62	20.62	9.75	1.48	17.83	17.83	8.43	1.28
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Fugitive	20.62	20.62	9.75	1.48	17.83	17.83	8.43	1.28
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	Fugitive	2.07	2.07	1.03	0.15	9.05	9.05	4.52	0.68

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
Milling Operations										
002-1	Processes Controlled by GL1 Dust Collector C1	Non-Fugitive	1.59	1.59	1.59	1.59	6.98	6.98	6.98	6.98
002-2	Processes Controlled by GL2 Dust Collector C2	Non-Fugitive	1.59	1.59	1.59	1.59	6.98	6.98	6.98	6.98
002-3	Processes Controlled by GL3 Dust Collector DC3	Non-Fugitive	1.59	1.59	1.59	1.59	6.98	6.98	6.98	6.98
002-4	Processes Controlled by GL4 Dust Collector DC4	Non-Fugitive	1.59	1.59	1.59	1.59	6.98	6.98	6.98	6.98
002-6	Processes Controlled by GL5 Dust Collector DC5	Non-Fugitive	0.51	0.51	0.51	0.51	2.25	2.25	2.25	2.25
Copper Concentrate Processing and Loading Operations										
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	Non-Fugitive	0.01	0.01	0.006	0.0009	0.05	0.05	0.02	0.004
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	Non-Fugitive	0.01	0.01	0.006	0.0009	0.05	0.05	0.02	0.004
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	Fugitive	0.01	0.01	0.006	0.0009	0.05	0.05	0.02	0.004

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	Fugitive	0.01	0.01	0.006	0.0009	0.05	0.05	0.02	0.004
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	Fugitive	0.67	0.67	0.34	0.05	2.94	2.94	1.47	0.22
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	Fugitive	0.11	0.11	0.05	0.008	0.49	0.49	0.23	0.04
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	Fugitive	9.68	9.68	4.84	0.73	42.40	42.40	21.20	3.18
006-7	All Copper Concentrate Stockpiles to Trucks	Fugitive	0.11	0.11	0.05	0.008	0.49	0.49	0.23	0.04
Molybdenum Concentrate Processing and Bagging Operations										
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	Fugitive	0.0003	0.0003	0.0001	0.00002	0.001	0.001	0.0006	0.00009
Tailings Operations										
027-3	Wind Erosion of Tailings	Fugitive	98.82	98.82	49.41	7.41	432.83	432.83	216.42	32.46

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
Concentrate Leach Plant										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Non-Fugitive	0.19	0.05	0.19	0.19	0.82	0.20	0.82	0.82
042-11	CLP Cooling Tower	Fugitive	0.35	0.35	0.34	0.06	1.54	1.54	1.48	0.28
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Non-Fugitive	2.75	--	2.75	2.75	12.05	--	12.05	12.05
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	Non-Fugitive	0.0002	0.0002	0.0001	0.00002	0.001	0.001	0.0005	0.00007
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	Non-Fugitive	0.0002	0.0002	0.0001	0.00002	0.001	0.001	0.0005	0.00007
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	Non-Fugitive	0.11	0.11	0.05	0.008	0.48	0.48	0.23	0.03

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	Non-Fugitive	0.09	0.09	0.09	0.09	0.41	0.41	0.41	0.41
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Non-Fugitive	0.04	0.01	0.04	0.04	0.17	0.04	0.17	0.17
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Non-Fugitive	0.05	0.01	0.05	0.05	0.21	0.05	0.21	0.21
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Non-Fugitive	0.13	0.03	0.13	0.13	0.56	0.14	0.56	0.56
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	Non-Fugitive	0.17	0.17	0.17	0.17	0.74	0.74	0.74	0.74
047-11	MoO ₃ Inclined Screw Conveyor to MoO ₃ Bags	Fugitive	0.0004	0.0004	0.0002	0.00003	0.002	0.002	0.0009	0.0001
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	Non-Fugitive	0.13	0.13	0.05	0.007	0.02	0.02	0.005	0.0008
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	Fugitive	9.55	9.55	4.52	0.68	0.08	0.08	0.04	0.005

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	Fugitive	9.55	9.55	4.52	0.68	0.08	0.08	0.04	0.005
Solution Extraction/Electrowinning Operations										
011-1	Electrowinning - Main System	Fugitive	0.83	0.83	0.83	0.83	3.62	3.62	3.62	3.62
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Non-Fugitive	0.003	0.0007	0.003	0.003	0.01	0.003	0.01	0.01
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Non-Fugitive	0.003	0.0007	0.003	0.003	0.01	0.003	0.01	0.01
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Non-Fugitive	0.003	0.0006	0.003	0.003	0.01	0.003	0.01	0.01
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Non-Fugitive	0.05	0.01	0.05	0.05	0.22	0.06	0.22	0.22
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Non-Fugitive	0.05	0.02	0.05	0.05	0.24	0.11	0.24	0.24
Lime Storage and Handling Operations										
007-3	Transfer of Lime to Lime Storage Bin 1	Non-Fugitive	0.04	0.04	0.01	0.002	0.16	0.16	0.06	0.008
007-5	Lime Porta Batches	Non-Fugitive	0.07	0.07	0.04	0.008	0.32	0.32	0.18	0.03

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
007-8	Lime Slaking Mill 1	Non-Fugitive	0.03	0.02	0.03	0.03	0.12	0.10	0.12	0.12
007-9	Lime Slaking Mill 2	Non-Fugitive	0.03	0.02	0.03	0.03	0.12	0.10	0.12	0.12
Ammonium Nitrate Prill Delivery and Handling Operations										
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	Non-Fugitive	0.52	0.52	0.18	0.03	0.06	0.06	0.02	0.003
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	Non-Fugitive	0.52	0.52	0.18	0.03	0.06	0.06	0.02	0.003
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	Non-Fugitive	0.52	0.52	0.18	0.03	0.06	0.06	0.02	0.003
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	Non-Fugitive	0.52	0.52	0.18	0.03	0.06	0.06	0.02	0.003
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	Non-Fugitive	0.52	0.52	0.18	0.03	0.06	0.06	0.02	0.003
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	Non-Fugitive	5.10	5.10	1.79	0.27	0.31	0.31	0.11	0.02
Portable Aggregate System										
009-9	Aggregate to Hopper (via front-end loader)	Fugitive	0.63	0.63	0.30	0.04	0.92	0.92	0.44	0.07

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	Non-Fugitive	1.87	1.87	0.63	0.04	2.75	2.75	0.93	0.06
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	Non-Fugitive	1.02	1.02	0.46	0.09	1.50	1.50	0.68	0.13
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	Non-Fugitive	0.007	0.007	0.003	0.0005	0.01	0.01	0.005	0.0007
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	Non-Fugitive	0.07	0.07	0.03	0.005	0.10	0.10	0.05	0.007
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	Non-Fugitive	1.87	1.87	0.63	0.04	2.75	2.75	0.93	0.06
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	Non-Fugitive	0.07	0.07	0.03	0.005	0.10	0.10	0.05	0.007
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	Non-Fugitive	1.02	1.02	0.46	0.09	1.50	1.50	0.68	0.13

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	Non-Fugitive	0.007	0.007	0.003	0.0005	0.01	0.01	0.005	0.0007
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	Non-Fugitive	0.007	0.007	0.003	0.0005	0.01	0.01	0.005	0.0007
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	Fugitive	0.06	0.06	0.03	0.004	0.09	0.09	0.04	0.007
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	Fugitive	0.63	0.63	0.30	0.04	0.92	0.92	0.44	0.07
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	Fugitive	0.08	0.08	0.04	0.006	0.37	0.37	0.18	0.03
Supplemental Portable Aggregate System										
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	Non-Fugitive	1.19	1.19	0.40	0.03	4.84	4.84	1.63	0.11
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	Non-Fugitive	0.65	0.65	0.29	0.05	2.64	2.64	1.19	0.22
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	Non-Fugitive	0.008	0.008	0.004	0.0006	0.03	0.03	0.01	0.002
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	Non-Fugitive	2.18	2.18	0.73	0.05	7.04	7.04	2.37	0.16
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	Non-Fugitive	0.04	0.04	0.02	0.003	0.17	0.17	0.08	0.01
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	Non-Fugitive	0.54	0.54	0.24	0.05	2.64	2.64	1.19	0.22

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	Non-Fugitive	0.04	0.04	0.02	0.003	0.17	0.17	0.08	0.01
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	Non-Fugitive	0.04	0.04	0.02	0.003	0.17	0.17	0.08	0.01

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	Non-Fugitive	0.004	0.004	0.002	0.0003	0.02	0.02	0.008	0.001
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	Fugitive	0.40	0.40	0.19	0.03	1.62	1.62	0.77	0.12
009-38	SPAS Stockpiles to Trucks	Fugitive	0.40	0.40	0.19	0.03	1.62	1.62	0.77	0.12
009-39	Wind Erosion of the SPAS Stockpiles	Fugitive	1.20	1.20	0.60	0.09	5.27	5.27	2.64	0.40
Diesel Emergency ICE										
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Non-Fugitive	0.22	0.20	0.22	0.22	0.05	0.05	0.05	0.05
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Non-Fugitive	0.13	0.12	0.13	0.13	0.03	0.03	0.03	0.03
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Non-Fugitive	0.11	0.10	0.11	0.11	0.03	0.03	0.03	0.03

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Non-Fugitive	0.03	0.03	0.03	0.03	0.008	0.007	0.008	0.008
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Non-Fugitive	0.14	0.12	0.14	0.14	0.03	0.03	0.03	0.03
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Non-Fugitive	0.08	0.07	0.08	0.08	0.02	0.02	0.02	0.02
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Non-Fugitive	0.03	0.03	0.03	0.03	0.008	0.007	0.008	0.008
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Non-Fugitive	0.05	0.04	0.05	0.05	0.01	0.01	0.01	0.01
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Non-Fugitive	0.12	0.11	0.12	0.12	0.03	0.03	0.03	0.03
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Non-Fugitive	0.04	0.04	0.04	0.04	0.01	0.009	0.01	0.01
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Non-Fugitive	0.10	0.09	0.10	0.10	0.03	0.02	0.03	0.03
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Non-Fugitive	0.02	0.01	0.02	0.02	0.004	0.004	0.004	0.004

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Non-Fugitive	0.12	0.11	0.12	0.12	0.03	0.03	0.03	0.03
Propane Emergency ICE										
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Non-Fugitive	0.003	0.001	0.003	0.003	0.0006	0.0003	0.0006	0.0006
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Non-Fugitive	0.01	0.006	0.01	0.01	0.003	0.001	0.003	0.003
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Non-Fugitive	0.01	0.007	0.01	0.01	0.004	0.002	0.004	0.004
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Non-Fugitive	0.006	0.003	0.006	0.006	0.002	0.0008	0.002	0.002
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Non-Fugitive	0.005	0.002	0.005	0.005	0.001	0.0006	0.001	0.001
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Non-Fugitive	0.01	0.007	0.01	0.01	0.004	0.002	0.004	0.004
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Non-Fugitive	0.01	0.007	0.01	0.01	0.004	0.002	0.004	0.004

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Non-Fugitive	0.02	0.008	0.02	0.02	0.004	0.002	0.004	0.004
Natural Gas Emergency ICE										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Non-Fugitive	0.004	0.002	0.004	0.004	0.001	0.0005	0.001	0.001
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Non-Fugitive	0.03	0.01	0.03	0.03	0.007	0.003	0.007	0.007
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Non-Fugitive	0.04	0.02	0.04	0.04	0.009	0.004	0.009	0.009
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Non-Fugitive	0.005	0.003	0.005	0.005	0.001	0.0006	0.001	0.001
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Non-Fugitive	0.007	0.003	0.007	0.007	0.002	0.0008	0.002	0.002
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Non-Fugitive	0.007	0.003	0.007	0.007	0.002	0.0008	0.002	0.002

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
Diesel Non-Emergency ICE										
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Non-Fugitive	0.10	0.09	0.10	0.10	0.42	0.37	0.42	0.42
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Non-Fugitive	0.04	0.04	0.04	0.04	0.19	0.17	0.19	0.19
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Non-Fugitive	0.01	0.009	0.01	0.01	0.05	0.04	0.05	0.05
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Non-Fugitive	0.07	0.06	0.07	0.07	0.29	0.26	0.29	0.29
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Non-Fugitive	0.009	0.008	0.009	0.009	0.04	0.04	0.04	0.04
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Non-Fugitive	0.001	0.001	0.001	0.001	0.006	0.006	0.006	0.006
Propane Non-Emergency ICE										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Non-Fugitive	0.006	0.003	0.006	0.006	0.03	0.01	0.03	0.03

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Non-Fugitive	0.005	0.003	0.005	0.005	0.02	0.01	0.02	0.02
Miscellaneous Fuel Burning Equipment										
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Non-Fugitive	0.008	0.005	0.006	0.004	0.04	0.02	0.03	0.02
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Non-Fugitive	0.004	0.0009	0.004	0.004	0.02	0.004	0.02	0.02
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Non-Fugitive	0.004	0.0009	0.004	0.004	0.02	0.004	0.02	0.02
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Non-Fugitive	0.07	0.02	0.07	0.07	0.31	0.08	0.31	0.31
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Non-Fugitive	0.007	0.002	0.007	0.007	0.03	0.009	0.03	0.03
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Non-Fugitive	0.005	0.001	0.005	0.005	0.02	0.006	0.02	0.02
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Non-Fugitive	0.004	0.001	0.004	0.004	0.02	0.004	0.02	0.02

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
Copper Decant Solids Handling Operations										
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	Fugitive	0.83	0.83	0.42	0.06	0.93	0.93	0.46	0.07
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	Fugitive	3.31	3.31	1.57	0.24	0.005	0.005	0.002	0.0004
AOS1: Two Concentrator Operations										
Mining Operations (AOS1)										
026-3 (AOS1)	Drilling (AOS1)	Fugitive	637.31	637.31	382.39	70.81	69.04	69.04	41.43	7.67
026-2 (AOS1)	Blasting (AOS1)	Fugitive	4,919.42	4,919.42	2,558.10	147.58	486.50	486.50	252.98	14.60
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	Fugitive	3,517.68	3,517.68	888.93	88.89	4,193.11	4,193.11	1,059.61	105.96
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	Fugitive	1,172.56	1,172.56	296.31	29.63	1,397.70	1,397.70	353.20	35.32
023-3 (AOS1)	Other Vehicle Travel (AOS1)	Fugitive	3,364.91	3,364.91	850.32	85.03	8,310.20	8,310.20	2,100.01	210.00
023-1 (AOS1)	Dozer Operation (AOS1)	Fugitive	194.61	194.61	35.33	20.43	589.25	589.25	106.96	61.87

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
023-2 (AOS1)	Road Grader Operation (AOS1)	Fugitive	16.93	16.93	5.29	0.52	74.16	74.16	23.16	2.30
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Fugitive	106.78	106.78	50.50	7.65	345.74	345.74	163.53	24.76
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Fugitive	21.71	21.71	10.27	1.55	60.28	60.28	28.51	4.32
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Fugitive	18.99	18.99	8.98	1.36	44.27	44.27	20.94	3.17
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Fugitive	3.43	3.43	1.62	0.25	12.52	12.52	5.92	0.90
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Fugitive	62.65	62.65	29.63	4.49	228.66	228.66	108.15	16.38
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>										
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	Non-Fugitive	1.74	1.74	1.74	1.74	7.60	7.60	7.60	7.60
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Non-Fugitive	0.22	0.22	0.10	0.02	0.97	0.97	0.46	0.07
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Non-Fugitive	0.22	0.22	0.10	0.02	0.97	0.97	0.46	0.07

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Non-Fugitive	0.22	0.22	0.10	0.02	0.97	0.97	0.46	0.07
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Fugitive	20.62	20.62	9.75	1.48	72.26	72.26	34.18	5.18
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Fugitive	20.62	20.62	9.75	1.48	18.07	18.07	8.54	1.29
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Fugitive	20.62	20.62	9.75	1.48	18.07	18.07	8.54	1.29
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	Fugitive	1.38	1.38	0.69	0.10	6.07	6.07	3.03	0.45
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>										
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	Non-Fugitive	0.29	0.29	0.29	0.29	1.25	1.25	1.25	1.25
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	Non-Fugitive	0.33	0.33	0.33	0.33	1.44	1.44	1.44	1.44
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	Non-Fugitive	0.33	0.33	0.33	0.33	1.44	1.44	1.44	1.44

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	Non-Fugitive	0.33	0.33	0.33	0.33	1.44	1.44	1.44	1.44
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Fugitive	21.71	21.71	10.27	1.55	95.08	95.08	44.97	6.81
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	Fugitive	0.68	0.68	0.34	0.05	2.98	2.98	1.49	0.22
<i>Second Concentrator Milling Operations (AOS1)</i>										
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Non-Fugitive	0.43	0.43	0.43	0.43	1.90	1.90	1.90	1.90
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Non-Fugitive	0.43	0.43	0.43	0.43	1.90	1.90	1.90	1.90
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	Non-Fugitive	0.45	0.45	0.45	0.45	1.99	1.99	1.99	1.99
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	Non-Fugitive	0.53	0.53	0.53	0.53	2.33	2.33	2.33	2.33

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	Non-Fugitive	0.49	0.49	0.49	0.49	2.16	2.16	2.16	2.16
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	Non-Fugitive	0.20	0.20	0.20	0.20	0.86	0.86	0.86	0.86
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	Non-Fugitive	0.20	0.20	0.20	0.20	0.86	0.86	0.86	0.86
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>										
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	Fugitive	0.003	0.003	0.001	0.0002	0.01	0.01	0.006	0.0009
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	Fugitive	0.003	0.003	0.001	0.0002	0.01	0.01	0.006	0.0009
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	Fugitive	0.003	0.003	0.001	0.0002	0.01	0.01	0.006	0.0009

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	Fugitive	0.40	0.40	0.20	0.03	1.77	1.77	0.88	0.13
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	Non-Fugitive	0.06	0.01	0.06	0.06	0.28	0.06	0.28	0.28
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	Non-Fugitive	0.005	0.005	0.002	0.0003	0.02	0.02	0.009	0.001
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	Fugitive	0.005	0.005	0.002	0.0003	0.02	0.02	0.009	0.001
<i>Second Concentrator Lime and Other Regent Operations (AOS1)</i>										
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	Non-Fugitive	0.15	0.15	0.05	0.008	0.30	0.30	0.11	0.02
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	Non-Fugitive	0.01	0.01	0.01	0.01	0.06	0.05	0.06	0.06
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	Non-Fugitive	0.21	0.21	0.10	0.02	0.92	0.92	0.44	0.07

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	Non-Fugitive	0.01	0.01	0.007	0.001	0.06	0.06	0.03	0.004
<i>Second Concentrator Prill Handling Operations (AOS1)</i>										
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	Non-Fugitive	0.52	0.52	0.18	0.03	0.25	0.25	0.09	0.01
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	Non-Fugitive	1.00	1.00	0.35	0.05	0.25	0.25	0.09	0.01
<i>Second Concentrator Emergency ICE (AOS1)</i>										
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Non-Fugitive	0.20	0.18	0.20	0.20	0.05	0.04	0.05	0.05
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Non-Fugitive	0.25	0.22	0.25	0.25	0.06	0.06	0.06	0.06
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Non-Fugitive	0.02	0.008	0.02	0.02	0.004	0.002	0.004	0.004
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Non-Fugitive	0.02	0.008	0.02	0.02	0.004	0.002	0.004	0.004

Table 6.1 Identification and Description of Emission Unit and PM, PM₁₀, 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}
AOS5: Emergency Grizzly Systems										
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	Fugitive	11.00	11.00	3.70	0.25	48.18	48.18	16.21	1.10
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Fugitive	1.36	1.36	0.64	0.10	5.94	5.94	2.81	0.43
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	Fugitive	0.22	0.22	0.11	0.02	0.98	0.98	0.49	0.07
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Fugitive	13.57	13.57	6.42	0.97	59.42	59.42	28.11	4.26
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Non-Fugitive	1.45	1.45	0.69	0.10	6.36	6.36	3.01	0.46
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Non-Fugitive	1.45	1.45	0.69	0.10	6.36	6.36	3.01	0.46
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Non-Fugitive	1.45	1.45	0.69	0.10	6.36	6.36	3.01	0.46

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
Mining Operations										
026-2	Blasting	Fugitive	4,064.40	180.00	1.23	--	914.49	40.50	0.28	--
Bulk and Molybdenum Flotation Operations										
044-1	Bulk and Molybdenum Flotation Equipment	Fugitive	--	--	--	1.17	--	--	--	5.11
Concentrate Leach Plant										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Non-Fugitive	2.06	2.45	0.01	0.13	9.02	10.74	0.06	0.59
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Non-Fugitive	--	--	--	2.10	--	--	--	9.20
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Non-Fugitive	0.43	0.51	0.003	0.03	1.89	2.25	0.01	0.12
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Non-Fugitive	0.54	0.64	0.004	0.04	2.34	2.79	0.02	0.15

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Non-Fugitive	0.82	0.13	0.25	1.36	3.59	0.57	1.10	5.96
047-7	Settling Tank	Non-Fugitive	--	--	--	0.001	--	--	--	0.003
047-8	Solution Extraction - Molybdenum Pressure Leaching	Fugitive	--	--	--	0.09	--	--	--	0.38
Solution Extraction/Electrowinning Operations										
029-1	Solution Extraction - Main Systems	Fugitive	--	--	--	1.49	--	--	--	6.52
029-2	Raffinate Pond	Fugitive	--	--	--	2.04	--	--	--	8.92
029-3	Organic Tank TK-22	Non-Fugitive	--	--	--	0.04	--	--	--	0.19
029-4	Organic Mix Tank TK-13	Non-Fugitive	--	--	--	0.05	--	--	--	0.20
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Non-Fugitive	0.03	0.04	0.0002	0.002	0.14	0.17	0.001	0.009
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Non-Fugitive	0.03	0.04	0.0002	0.002	0.14	0.17	0.001	0.009

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Non-Fugitive	0.03	0.03	0.0002	0.002	0.12	0.15	0.001	0.008
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Non-Fugitive	0.11	0.25	0.004	0.04	0.49	1.09	0.02	0.16
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Non-Fugitive	0.75	0.65	0.003	0.20	3.29	2.86	0.01	0.88
Storage Tanks and Parts Cleaning										
033-3	Gasoline Storage Tank 150 (GDF1)	Non-Fugitive	--	--	--	0.59	--	--	--	2.60
033-2	Gasoline Storage Tank FT-3 (GDF2)	Non-Fugitive	--	--	--	0.59	--	--	--	2.60
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	Non-Fugitive	--	--	--	0.56	--	--	--	2.44
033-5	Gasoline Storage Tank Mine Operations (GDF4)	Non-Fugitive	--	--	--	0.56	--	--	--	2.44
030-6	Parts Cleaning Equipment	Fugitive	--	--	--	0.20	--	--	--	0.86
053-1	Xanthate Mixing and Storage Tanks	Non-Fugitive	--	--	--	2.98	--	--	--	7.60

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
Diesel Emergency ICE										
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Non-Fugitive	1.60	11.28	0.01	0.24	0.40	2.82	0.003	0.06
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Non-Fugitive	0.39	1.83	0.0006	0.15	0.10	0.46	0.0002	0.04
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Non-Fugitive	2.00	6.73	0.01	0.11	0.50	1.68	0.002	0.03
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Non-Fugitive	0.27	0.64	0.001	0.03	0.07	0.16	0.0002	0.009
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Non-Fugitive	1.73	12.32	0.009	0.04	0.43	3.08	0.002	0.01
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Non-Fugitive	1.32	0.99	0.002	0.07	0.33	0.25	0.0004	0.02
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Non-Fugitive	0.15	0.52	0.0008	0.05	0.04	0.13	0.0002	0.01
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Non-Fugitive	0.12	1.00	0.001	0.08	0.03	0.25	0.0003	0.02
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Non-Fugitive	2.60	2.70	0.005	0.21	0.65	0.67	0.001	0.05

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Non-Fugitive	0.14	0.57	0.0009	0.03	0.04	0.14	0.0002	0.007
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Non-Fugitive	1.77	2.36	0.004	0.13	0.44	0.59	0.001	0.03
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Non-Fugitive	0.30	0.37	0.0004	0.04	0.08	0.09	0.00009	0.01
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Non-Fugitive	2.60	2.70	0.005	0.21	0.65	0.67	0.001	0.05
Propane Emergency ICE										
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Non-Fugitive	13.04	0.15	0.001	0.02	3.26	0.04	0.0004	0.004
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Non-Fugitive	2.25	1.37	0.007	0.02	0.56	0.34	0.002	0.005
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Non-Fugitive	19.75	0.61	0.008	0.22	4.94	0.15	0.002	0.05
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Non-Fugitive	3.89	0.39	0.004	0.05	0.97	0.10	0.0009	0.01

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Non-Fugitive	1.57	0.36	0.003	0.06	0.39	0.09	0.0007	0.01
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Non-Fugitive	7.38	1.57	0.008	0.31	1.85	0.39	0.002	0.08
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Non-Fugitive	7.38	1.57	0.008	0.31	1.85	0.39	0.002	0.08
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Non-Fugitive	5.15	1.13	0.01	0.28	1.29	0.28	0.002	0.07
Natural Gas Emergency ICE										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Non-Fugitive	0.83	0.51	0.0001	0.01	0.21	0.13	0.00003	0.002
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Non-Fugitive	1.75	0.88	0.0008	0.44	0.44	0.22	0.0002	0.11
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Non-Fugitive	0.44	0.03	0.001	0.17	0.11	0.01	0.0003	0.04

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Non-Fugitive	2.15	0.50	0.0001	0.01	0.54	0.13	0.00004	0.003
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Non-Fugitive	7.11	0.15	0.0002	0.16	1.78	0.04	0.00005	0.04
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Non-Fugitive	5.34	0.28	0.0002	0.11	1.33	0.07	0.00005	0.03
Diesel Non-Emergency ICE										
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Non-Fugitive	0.33	1.48	0.001	0.13	1.45	6.50	0.006	0.58
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Non-Fugitive	0.38	0.74	0.001	0.05	1.68	3.23	0.006	0.23
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Non-Fugitive	0.06	0.21	0.0003	0.01	0.24	0.90	0.001	0.06
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Non-Fugitive	1.11	0.83	0.001	0.06	4.86	3.63	0.006	0.26

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Non-Fugitive	0.009	0.21	0.006	0.06	0.04	0.91	0.03	0.25
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Non-Fugitive	0.05	0.03	0.003	0.01	0.22	0.13	0.01	0.04
Propane Non-Emergency ICE										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Non-Fugitive	1.17	0.72	0.004	0.01	5.13	3.13	0.02	0.04
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Non-Fugitive	1.03	0.63	0.003	0.009	4.52	2.76	0.01	0.04
Miscellaneous Fuel Burning Equipment										
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Non-Fugitive	0.01	0.05	0.0005	0.0005	0.05	0.22	0.002	0.002
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Non-Fugitive	0.04	0.05	0.0003	0.003	0.18	0.21	0.001	0.01
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Non-Fugitive	0.04	0.05	0.0003	0.003	0.18	0.21	0.001	0.01

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Non-Fugitive	0.78	0.93	0.006	0.05	3.43	4.08	0.02	0.22
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Non-Fugitive	0.08	0.13	0.01	0.005	0.34	0.59	0.05	0.02
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Non-Fugitive	0.06	0.07	0.0004	0.004	0.26	0.31	0.002	0.02
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Non-Fugitive	0.04	0.05	0.0003	0.003	0.18	0.21	0.001	0.01
AOS1: Two Concentrator Operations										
<i>Mining Operations (AOS1)</i>										
026-2 (AOS1)	Blasting (AOS1)	Fugitive	15,319.65	678.46	4.64	--	1,659.63	73.50	0.50	--
<i>Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)</i>										
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	Fugitive	--	--	--	0.27	--	--	--	1.18

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
Second Concentrator Concentrate Handling Operations (AOS1)										
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	Non-Fugitive	--	--	--	1.83	--	--	--	8.02
Second Concentrator Lime and Other Regent Operations (AOS1)										
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	Non-Fugitive	--	--	--	0.49	--	--	--	1.31
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	Non-Fugitive	--	--	--	--	--	--	--	--
Second Concentrator Emergency ICE (AOS1)										
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Non-Fugitive	3.50	3.74	0.007	0.27	0.88	0.93	0.002	0.07
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Non-Fugitive	4.38	7.52	0.008	0.50	1.10	1.88	0.002	0.13
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Non-Fugitive	16.77	1.14	0.01	0.25	4.19	0.29	0.003	0.06

Table 6.2 Identification and Description of Emission Unit and CO, NO_x, SO₂, and VOC Potential Emissions

Process Number	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
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Non-Fugitive	16.77	1.14	0.01	0.25	4.19	0.29	0.003	0.06

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
Mining Operations										
026-2	Blasting	Fugitive	38,066.47	1.49	0.29	38,185.86	8,564.96	0.33	0.07	8,591.82
Concentrate Leach Plant										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Non-Fugitive	2,924.43	0.06	0.006	2,927.44	12,809.01	0.24	0.02	12,822.17
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Non-Fugitive	611.79	0.01	0.001	612.42	2,679.65	0.05	0.005	2,682.40
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Non-Fugitive	760.35	0.01	0.001	761.13	3,330.34	0.06	0.006	3,333.76
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Non-Fugitive	181.31	0.003	0.0003	181.50	794.16	0.01	0.001	794.97
Solution Extraction/Electrowinning Operations										
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Non-Fugitive	46.79	0.0009	0.00009	46.84	204.94	0.004	0.0004	205.15

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Non-Fugitive	46.79	0.0009	0.00009	46.84	204.94	0.004	0.0004	205.15
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Non-Fugitive	39.77	0.0007	0.00007	39.81	174.20	0.003	0.0003	174.38
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Non-Fugitive	800.36	0.02	0.002	801.18	3,505.57	0.07	0.007	3,509.17
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Non-Fugitive	636.36	0.01	0.001	637.01	2,787.24	0.05	0.005	2,790.10
Diesel Emergency ICE										
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Non-Fugitive	1,362.53	0.06	0.01	1,367.09	340.63	0.01	0.003	341.77
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Non-Fugitive	67.34	0.003	0.0005	67.56	16.84	0.0007	0.0001	16.89
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Non-Fugitive	841.44	0.04	0.007	844.30	210.36	0.009	0.002	211.07
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Non-Fugitive	122.42	0.004	0.0008	122.75	30.60	0.001	0.0002	30.69
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Non-Fugitive	940.31	0.04	0.008	943.40	235.08	0.01	0.002	235.85
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Non-Fugitive	183.76	0.007	0.001	184.37	45.94	0.002	0.0004	46.09

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Non-Fugitive	107.56	0.003	0.0007	107.84	26.89	0.0009	0.0002	26.96
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Non-Fugitive	114.14	0.005	0.0009	114.51	28.53	0.001	0.0002	28.63
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Non-Fugitive	573.44	0.02	0.004	575.24	143.36	0.006	0.001	143.81
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Non-Fugitive	115.73	0.004	0.0008	116.05	28.93	0.001	0.0002	29.01
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Non-Fugitive	473.98	0.02	0.004	475.47	118.49	0.005	0.0009	118.87
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Non-Fugitive	38.24	0.002	0.0003	38.36	9.56	0.0004	0.00008	9.59
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Non-Fugitive	575.65	0.02	0.004	577.45	143.91	0.006	0.001	144.36
Propane Emergency ICE										
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Non-Fugitive	18.02	0.0009	0.0002	18.09	4.51	0.0002	0.00004	4.52

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Non-Fugitive	83.83	0.004	0.0008	84.15	20.96	0.001	0.0002	21.04
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Non-Fugitive	102.41	0.005	0.001	102.81	25.60	0.001	0.0002	25.70
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Non-Fugitive	45.41	0.002	0.0004	45.58	11.35	0.0005	0.0001	11.40
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Non-Fugitive	32.83	0.002	0.0003	32.96	8.21	0.0004	0.00008	8.24
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Non-Fugitive	170.39	0.005	0.001	170.78	42.60	0.001	0.0002	42.70
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Non-Fugitive	170.39	0.005	0.001	170.78	42.60	0.001	0.0002	42.70
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Non-Fugitive	150.87	0.03	0.001	151.96	37.72	0.007	0.0003	37.99

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
Natural Gas Emergency ICE										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Non-Fugitive	26.25	0.0005	0.00005	26.28	6.56	0.0001	0.00001	6.57
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Non-Fugitive	167.04	0.003	0.0003	167.22	41.76	0.0008	0.00008	41.80
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Non-Fugitive	213.10	0.004	0.0004	213.32	53.27	0.001	0.0001	53.33
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Non-Fugitive	30.97	0.0006	0.00006	31.01	7.74	0.0001	0.00001	7.75
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Non-Fugitive	40.52	0.0008	0.00008	40.56	10.13	0.0002	0.00002	10.14
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Non-Fugitive	40.81	0.0008	0.00008	40.85	10.20	0.0002	0.00002	10.21
Diesel Non-Emergency ICE										
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Non-Fugitive	146.10	0.006	0.001	146.58	639.90	0.03	0.005	642.00

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Non-Fugitive	163.63	0.006	0.001	164.12	716.70	0.03	0.005	718.83
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Non-Fugitive	42.96	0.001	0.0003	43.06	188.15	0.006	0.001	188.61
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Non-Fugitive	154.09	0.006	0.001	154.59	674.90	0.03	0.005	677.11
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Non-Fugitive	663.06	0.11	0.005	667.66	2,904.19	0.50	0.02	2,924.35
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Non-Fugitive	342.41	0.01	0.003	343.54	1,499.77	0.06	0.01	1,504.70
Propane Non-Emergency ICE										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Non-Fugitive	43.66	0.002	0.0004	43.83	191.23	0.009	0.002	191.97
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Non-Fugitive	38.42	0.002	0.0004	38.57	168.28	0.008	0.002	168.94

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
Miscellaneous Fuel Burning Equipment										
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Non-Fugitive	55.91	0.002	0.0005	56.09	244.89	0.01	0.002	245.70
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Non-Fugitive	57.32	0.001	0.0001	57.38	251.06	0.005	0.0005	251.31
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Non-Fugitive	57.32	0.001	0.0001	57.38	251.06	0.005	0.0005	251.31
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Non-Fugitive	1,111.17	0.02	0.002	1,112.31	4,866.91	0.09	0.009	4,871.91
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Non-Fugitive	131.67	0.006	0.001	132.18	576.73	0.03	0.006	578.96
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Non-Fugitive	84.28	0.002	0.0002	84.36	369.13	0.007	0.0007	369.51
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Non-Fugitive	58.37	0.001	0.0001	58.43	255.67	0.005	0.0005	255.93

Table 6.3 Identification and Description of Emission Unit and CO₂, CH₄, N₂O, and CO₂e Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)				Annual Potential Emissions (tpy)			
			CO ₂	CH ₄	N ₂ O	CO ₂ e ^a	CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
AOS1: Two Concentrator Operations										
Mining Operations (AOS1)										
026-2 (AOS1)	Blasting (AOS1)	Fugitive	143,484.81	5.60	1.11	143,934.83	15,544.19	0.61	0.12	15,592.94
Second Concentrator Emergency ICE (AOS1)										
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Non-Fugitive	695.10	0.03	0.006	697.38	173.77	0.007	0.001	174.35
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Non-Fugitive	869.73	0.04	0.007	872.59	217.43	0.009	0.002	218.15
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Non-Fugitive	123.27	0.006	0.001	123.74	30.82	0.001	0.0003	30.94
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Non-Fugitive	123.27	0.006	0.001	123.74	30.82	0.001	0.0003	30.94

^a Potential CO₂e emissions are calculated by summing the individual potential greenhouse gas emissions multiplied by their Global Warming Potential (GWP). GWP of CO₂ = 1, GWP of CH₄ = 28, GWP of N₂O = 265.

Table 6.4 Identification and Description of Emission Unit and H₂SO₄ and H₂S Potential Emissions

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)		Annual Potential Emissions (tpy)	
			H ₂ SO ₄	H ₂ S	H ₂ SO ₄	H ₂ S
Bulk and Molybdenum Flotation Operations						
044-1	Bulk and Molybdenum Flotation Equipment	Fugitive	--	2.15	--	9.43
Concentrate Leach Plant						
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Non-Fugitive	0.68	--	2.98	--
Solution Extraction/Electrowinning Operations						
011-1	Electrowinning - Main System	Fugitive	0.83	--	3.62	--
AOS1: Two Concentrator Operations						
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)						
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	Fugitive	--	0.50	--	2.18
Second Concentrator Lime and Other Regent Operations (AOS1)						
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	Non-Fugitive	--	0.04	--	0.17

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
Mining Operations								
026-3	Drilling	Fugitive	--	3.61E-03	6.20E-02	--	8.13E-04	1.39E-02
026-2	Blasting	Fugitive	--	1.72E-02	3.81E-01	--	1.91E-03	5.21E-02
022-1	Haul Truck Travel Inside the Pit	Fugitive	--	3.13E-03	5.36E-02	--	6.69E-03	1.15E-01
022-2	Haul Truck Travel Outside the Pit	Fugitive	--	1.04E-03	1.79E-02	--	2.23E-03	3.82E-02
023-3	Other Vehicle Travel	Fugitive	--	1.24E-02	2.13E-01	--	3.35E-02	5.74E-01
023-1	Dozer Operation	Fugitive	--	5.95E-04	1.02E-02	--	1.45E-03	2.49E-02
023-2	Road Grader Operation	Fugitive	--	7.66E-05	1.31E-03	--	1.51E-04	2.60E-03
021-1	Loading Mined Material into Haul Trucks	Fugitive	--	9.07E-04	1.56E-02	--	3.28E-03	5.62E-02
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Fugitive	--	3.14E-04	8.09E-03	--	8.01E-04	2.07E-02
045-3	Unloading Ore to Leaching Areas	Fugitive	--	5.64E-05	9.69E-04	--	2.47E-04	4.24E-03
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Fugitive	--	5.09E-04	7.14E-03	--	2.23E-03	3.13E-02
Primary Crushing and Overland Conveying Operations								
001-1	Processes Controlled by Scrubber C18	Non-Fugitive	--	2.42E-05	6.24E-04	--	1.06E-04	2.73E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
001-5	Processes Controlled by Dust Collector C51	Non-Fugitive	--	3.30E-05	8.50E-04	--	1.44E-04	3.72E-03
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Non-Fugitive	--	1.98E-05	5.11E-04	--	8.57E-05	2.21E-03
001-8	Overland Conveyor 3 to Overland Conveyor 4	Non-Fugitive	--	1.98E-05	5.11E-04	--	8.57E-05	2.21E-03
001-9	Overland Conveyor 4 to Radial Stacker 5	Non-Fugitive	--	1.98E-05	5.11E-04	--	8.57E-05	2.21E-03
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Fugitive	--	--	--	--	6.41E-04	1.65E-02
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Fugitive	--	1.85E-04	4.78E-03	--	1.60E-04	4.13E-03
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Fugitive	--	1.85E-04	4.78E-03	--	1.60E-04	4.13E-03
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	Fugitive	--	1.96E-05	5.06E-04	--	8.60E-05	2.22E-03
Milling Operations								
002-1	Processes Controlled by GL1 Dust Collector C1	Non-Fugitive	--	3.03E-05	7.81E-04	--	1.33E-04	3.42E-03
002-2	Processes Controlled by GL2 Dust Collector C2	Non-Fugitive	--	3.03E-05	7.81E-04	--	1.33E-04	3.42E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
002-3	Processes Controlled by GL3 Dust Collector DC3	Non-Fugitive	--	3.03E-05	7.81E-04	--	1.33E-04	3.42E-03
002-4	Processes Controlled by GL4 Dust Collector DC4	Non-Fugitive	--	3.03E-05	7.81E-04	--	1.33E-04	3.42E-03
002-6	Processes Controlled by GL5 Dust Collector DC5	Non-Fugitive	--	9.77E-06	2.52E-04	--	4.28E-05	1.10E-03
Bulk and Molybdenum Flotation Operations								
044-1	Bulk and Molybdenum Flotation Equipment	Fugitive	--	--	1.03E-01	--	--	4.50E-01
Copper Concentrate Processing and Loading Operations								
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	Non-Fugitive	--	4.78E-06	3.89E-05	--	2.09E-05	1.71E-04
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	Non-Fugitive	--	4.78E-06	3.89E-05	--	2.09E-05	1.71E-04
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	Fugitive	--	4.78E-06	3.89E-05	--	2.09E-05	1.71E-04
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	Fugitive	--	4.78E-06	3.89E-05	--	2.09E-05	1.71E-04

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	Fugitive	--	2.83E-04	2.30E-03	--	1.24E-03	1.01E-02
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	Fugitive	--	4.47E-05	3.64E-04	--	1.96E-04	1.59E-03
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	Fugitive	--	4.07E-03	3.32E-02	--	1.78E-02	1.45E-01
006-7	All Copper Concentrate Stockpiles to Trucks	Fugitive	--	4.47E-05	3.64E-04	--	1.96E-04	1.59E-03
Molybdenum Concentrate Processing and Bagging Operations								
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	Fugitive	--	2.97E-08	6.73E-07	--	1.30E-07	2.95E-06
Tailings Operations								
027-3	Wind Erosion of Tailings	Fugitive	--	5.44E-04	2.31E-02	--	2.38E-03	1.01E-01
Concentrate Leach Plant								
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Non-Fugitive	--	1.23E-05	4.63E-02	--	5.37E-05	2.03E-01
042-11	CLP Cooling Tower	Fugitive	--	3.37E-09	1.72E-07	--	1.48E-08	7.52E-07

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Non-Fugitive	2.88E-02	6.27E-04	1.07E-01	1.26E-01	2.74E-03	4.70E-01
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	Non-Fugitive	--	2.38E-08	2.91E-06	--	1.04E-07	1.28E-05
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	Non-Fugitive	--	2.38E-08	2.91E-06	--	1.04E-07	1.28E-05
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	Non-Fugitive	--	1.17E-05	1.44E-03	--	5.14E-05	6.30E-03
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	Non-Fugitive	--	2.13E-05	2.62E-03	--	9.34E-05	1.15E-02
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Non-Fugitive	--	2.56E-06	9.68E-03	--	1.12E-05	4.24E-02
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Non-Fugitive	--	3.19E-06	1.20E-02	--	1.40E-05	5.27E-02

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Non-Fugitive	--	2.97E-05	6.42E-03	--	1.30E-04	2.81E-02
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	Non-Fugitive	--	3.84E-05	4.71E-03	--	1.68E-04	2.06E-02
047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	Fugitive	--	3.71E-08	4.92E-06	--	1.63E-07	2.16E-05
047-7	Settling Tank	Non-Fugitive	--	--	5.61E-05	--	--	2.46E-04
047-8	Solution Extraction - Molybdenum Pressure Leaching	Fugitive	--	--	1.91E-02	--	--	8.39E-02
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	Fugitive	--	1.03E-03	1.26E-01	--	8.23E-06	1.01E-03
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	Fugitive	--	1.03E-03	1.26E-01	--	8.23E-06	1.01E-03
Solution Extraction/Electrowinning Operations								
029-1	Solution Extraction - Main Systems	Fugitive	--	--	3.26E-01	--	--	1.43E+00
011-1	Electrowinning - Main System	Fugitive	--	--	1.24E-04	--	--	5.43E-04
029-2	Raffinate Pond	Fugitive	--	--	4.46E-01	--	--	1.95E+00

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
029-3	Organic Tank TK-22	Non-Fugitive	--	--	9.37E-03	--	--	4.10E-02
029-4	Organic Mix Tank TK-13	Non-Fugitive	--	--	1.02E-02	--	--	4.47E-02
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Non-Fugitive	--	1.96E-07	7.41E-04	--	8.59E-07	3.24E-03
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Non-Fugitive	--	1.96E-07	7.41E-04	--	8.59E-07	3.24E-03
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Non-Fugitive	--	1.67E-07	6.29E-04	--	7.30E-07	2.76E-03
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Non-Fugitive	--	3.35E-06	1.27E-02	--	1.47E-05	5.55E-02
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Non-Fugitive	--	2.67E-06	1.01E-02	--	1.17E-05	4.41E-02
Portable Aggregate System								
009-9	Aggregate to Hopper (via front-end loader)	Fugitive	--	8.27E-06	1.16E-04	--	1.22E-05	1.71E-04
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	Non-Fugitive	--	1.75E-05	2.46E-04	--	2.58E-05	3.62E-04
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	Non-Fugitive	--	1.28E-05	1.80E-04	--	1.88E-05	2.64E-04

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	Non-Fugitive	--	8.84E-08	1.24E-06	--	1.30E-07	1.83E-06
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	Non-Fugitive	--	8.84E-07	1.24E-05	--	1.30E-06	1.83E-05
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	Non-Fugitive	--	1.75E-05	2.46E-04	--	2.58E-05	3.62E-04
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsized), or Triple Deck Screen Discharge Conveyor (Undersize)	Non-Fugitive	--	8.84E-07	1.24E-05	--	1.30E-06	1.83E-05
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	Non-Fugitive	--	1.28E-05	1.80E-04	--	1.88E-05	2.64E-04
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	Non-Fugitive	--	8.84E-08	1.24E-06	--	1.30E-07	1.83E-06
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	Non-Fugitive	--	8.84E-08	1.24E-06	--	1.30E-07	1.83E-06
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	Fugitive	--	8.27E-07	1.16E-05	--	1.22E-06	1.71E-05

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	Fugitive	--	8.27E-06	1.16E-04	--	1.22E-05	1.71E-04
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	Fugitive	--	1.17E-06	1.64E-05	--	5.11E-06	7.18E-05
Supplemental Portable Aggregate System								
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	Non-Fugitive	--	1.11E-05	1.56E-04	--	4.54E-05	6.37E-04
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	Non-Fugitive	--	8.13E-06	1.14E-04	--	3.31E-05	4.65E-04
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	Non-Fugitive	--	5.62E-08	7.89E-07	--	2.29E-07	3.21E-06
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	Non-Fugitive	--	1.03E-07	1.45E-06	--	3.33E-07	4.67E-06
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	Non-Fugitive	--	2.04E-05	2.87E-04	--	6.60E-05	9.27E-04
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	Non-Fugitive	--	4.68E-07	6.57E-06	--	2.29E-06	3.21E-05

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	Non-Fugitive	--	4.68E-08	6.57E-07	--	2.29E-07	3.21E-06
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	Non-Fugitive	--	4.68E-08	6.57E-07	--	2.29E-07	3.21E-06
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	Non-Fugitive	--	4.68E-08	6.57E-07	--	2.29E-07	3.21E-06
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	Non-Fugitive	--	6.77E-06	9.51E-05	--	3.31E-05	4.65E-04
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	Non-Fugitive	--	4.68E-08	6.57E-07	--	2.29E-07	3.21E-06
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	Non-Fugitive	--	5.62E-07	7.89E-06	--	2.29E-06	3.21E-05
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	Non-Fugitive	--	5.62E-08	7.89E-07	--	2.29E-07	3.21E-06

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	Non-Fugitive	--	5.62E-07	7.89E-06	--	2.29E-06	3.21E-05
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	Non-Fugitive	--	5.62E-08	7.89E-07	--	2.29E-07	3.21E-06
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	Fugitive	--	5.25E-06	7.37E-05	--	2.14E-05	3.00E-04
009-38	SPAS Stockpiles to Trucks	Fugitive	--	5.25E-06	7.37E-05	--	2.14E-05	3.00E-04
009-39	Wind Erosion of the SPAS Stockpiles	Fugitive	--	1.68E-05	2.36E-04	--	7.35E-05	1.03E-03
Storage Tanks and Parts Cleaning								
033-3	Gasoline Storage Tank 150 (GDF1)	Non-Fugitive	--	--	1.80E-02	--	--	7.90E-02
033-2	Gasoline Storage Tank FT-3 (GDF2)	Non-Fugitive	--	--	1.80E-02	--	--	7.90E-02

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	Non-Fugitive	--	--	1.69E-02	--	--	7.39E-02
033-5	Gasoline Storage Tank Mine Operations (GDF4)	Non-Fugitive	--	--	1.69E-02	--	--	7.39E-02
053-1	Xanthate Mixing and Storage Tanks	Non-Fugitive	2.98E+00	--	2.98E+00	7.60E+00	--	7.60E+00
Diesel Emergency ICE								
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Non-Fugitive	--	--	1.34E-02	--	--	3.34E-03
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Non-Fugitive	--	--	1.60E-03	--	--	4.00E-04
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Non-Fugitive	--	--	8.39E-03	--	--	2.10E-03
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Non-Fugitive	--	--	2.44E-03	--	--	6.10E-04
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Non-Fugitive	--	--	9.07E-03	--	--	2.27E-03
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Non-Fugitive	--	--	4.37E-03	--	--	1.09E-03
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Non-Fugitive	--	--	2.03E-03	--	--	5.08E-04

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Non-Fugitive	--	--	2.71E-03	--	--	6.78E-04
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Non-Fugitive	--	--	1.30E-02	--	--	3.25E-03
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Non-Fugitive	--	--	2.33E-03	--	--	5.82E-04
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Non-Fugitive	--	--	1.08E-02	--	--	2.70E-03
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Non-Fugitive	--	--	9.08E-04	--	--	2.27E-04
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Non-Fugitive	--	--	1.30E-02	--	--	3.25E-03
Propane Emergency ICE								
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Non-Fugitive	--	--	4.22E-03	--	--	1.06E-03
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Non-Fugitive	--	--	1.96E-02	--	--	4.91E-03
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Non-Fugitive	--	--	2.40E-02	--	--	5.99E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Non-Fugitive	--	--	1.06E-02	--	--	2.66E-03
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Non-Fugitive	--	--	7.69E-03	--	--	1.92E-03
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Non-Fugitive	--	--	2.36E-02	--	--	5.89E-03
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Non-Fugitive	--	--	2.36E-02	--	--	5.89E-03
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Non-Fugitive	--	--	2.76E-02	--	--	6.89E-03
Natural Gas Emergency ICE								
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Non-Fugitive	--	--	7.28E-03	--	--	1.82E-03
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Non-Fugitive	--	--	4.63E-02	--	--	1.16E-02
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Non-Fugitive	--	--	5.91E-02	--	--	1.48E-02
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Non-Fugitive	--	--	8.59E-03	--	--	2.15E-03
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Non-Fugitive	--	--	1.12E-02	--	--	2.81E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Non-Fugitive	--	--	1.13E-02	--	--	2.83E-03
Diesel Non-Emergency ICE								
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Non-Fugitive	--	--	3.47E-03	--	--	1.52E-02
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Non-Fugitive	--	--	3.53E-03	--	--	1.54E-02
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Non-Fugitive	--	--	7.65E-04	--	--	3.35E-03
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Non-Fugitive	--	--	3.66E-03	--	--	1.60E-02
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Non-Fugitive	--	--	1.56E-02	--	--	6.85E-02
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Non-Fugitive	--	--	8.13E-03	--	--	3.56E-02
Propane Non-Emergency ICE								
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Non-Fugitive	--	--	1.02E-02	--	--	4.48E-02
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Non-Fugitive	--	--	9.00E-03	--	--	3.94E-02

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
Miscellaneous Fuel Burning Equipment								
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Non-Fugitive	--	3.09E-06	1.78E-04	--	1.35E-05	7.79E-04
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Non-Fugitive	--	2.40E-07	9.07E-04	--	1.05E-06	3.97E-03
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Non-Fugitive	--	2.40E-07	9.07E-04	--	1.05E-06	3.97E-03
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Non-Fugitive	--	4.66E-06	1.76E-02	--	2.04E-05	7.70E-02
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Non-Fugitive	--	4.66E-07	1.76E-03	--	2.04E-06	7.70E-03
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Non-Fugitive	--	3.53E-07	1.33E-03	--	1.55E-06	5.84E-03
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Non-Fugitive	--	2.45E-07	9.24E-04	--	1.07E-06	4.05E-03
Copper Decant Solids Handling Operations								
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	Fugitive	--	3.03E-04	4.99E-03	--	3.39E-04	5.57E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	Fugitive	--	1.14E-03	1.88E-02	--	1.71E-06	2.82E-05
AOS1: Two Concentrator Operations								
<i>Mining Operations (AOS1)</i>								
026-3 (AOS1)	Drilling (AOS1)	Fugitive	--	9.42E-03	1.59E-01	--	1.02E-03	1.72E-02
026-2 (AOS1)	Blasting (AOS1)	Fugitive	--	7.10E-02	1.52E+00	--	7.09E-03	1.55E-01
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	Fugitive	--	2.19E-02	3.69E-01	--	2.61E-02	4.40E-01
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	Fugitive	--	7.30E-03	1.23E-01	--	8.70E-03	1.47E-01
023-3 (AOS1)	Other Vehicle Travel (AOS1)	Fugitive	--	2.10E-02	3.53E-01	--	5.17E-02	8.71E-01
023-1 (AOS1)	Dozer Operation (AOS1)	Fugitive	--	8.70E-04	1.47E-02	--	2.64E-03	4.44E-02
023-2 (AOS1)	Road Grader Operation (AOS1)	Fugitive	--	1.30E-04	2.19E-03	--	5.71E-04	9.61E-03
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Fugitive	--	1.24E-03	2.10E-02	--	4.03E-03	6.79E-02

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Fugitive	--	1.95E-04	5.03E-03	--	5.42E-04	1.40E-02
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Fugitive	--	1.71E-04	4.40E-03	--	3.98E-04	1.03E-02
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Fugitive	--	2.08E-05	3.57E-04	--	7.58E-05	1.30E-03
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Fugitive	--	8.26E-04	1.16E-02	--	3.01E-03	4.23E-02
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>								
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	Non-Fugitive	--	3.30E-05	8.50E-04	--	1.44E-04	3.72E-03
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Non-Fugitive	--	1.98E-06	5.11E-05	--	8.68E-06	2.24E-04
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Non-Fugitive	--	1.98E-06	5.11E-05	--	8.68E-06	2.24E-04
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Non-Fugitive	--	1.98E-06	5.11E-05	--	8.68E-06	2.24E-04
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Fugitive	--	1.85E-04	4.78E-03	--	6.49E-04	1.67E-02
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Fugitive	--	1.85E-04	4.78E-03	--	1.62E-04	4.19E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Fugitive	--	1.85E-04	4.78E-03	--	1.62E-04	4.19E-03
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	Fugitive	--	1.32E-05	3.39E-04	--	5.76E-05	1.49E-03
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>								
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	Non-Fugitive	--	5.43E-06	1.40E-04	--	2.38E-05	6.13E-04
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	Non-Fugitive	--	6.26E-06	1.61E-04	--	2.74E-05	7.06E-04
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	Non-Fugitive	--	6.26E-06	1.61E-04	--	2.74E-05	7.06E-04
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	Non-Fugitive	--	6.26E-06	1.61E-04	--	2.74E-05	7.06E-04
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Fugitive	--	1.95E-04	5.03E-03	--	8.54E-04	2.20E-02
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	Fugitive	--	6.47E-06	1.67E-04	--	2.83E-05	7.31E-04
<i>Second Concentrator Milling Operations (AOS1)</i>								
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Non-Fugitive	--	8.24E-06	2.12E-04	--	3.61E-05	9.31E-04

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Non-Fugitive	--	8.24E-06	2.12E-04	--	3.61E-05	9.31E-04
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	Non-Fugitive	--	8.62E-06	2.22E-04	--	3.77E-05	9.73E-04
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	Non-Fugitive	--	1.01E-05	2.61E-04	--	4.43E-05	1.14E-03
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	Non-Fugitive	--	9.36E-06	2.41E-04	--	4.10E-05	1.06E-03
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	Non-Fugitive	--	3.75E-06	9.66E-05	--	1.64E-05	4.23E-04
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	Non-Fugitive	--	3.75E-06	9.66E-05	--	1.64E-05	4.23E-04
<i>Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)</i>								
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	Fugitive	--	--	2.38E-02	--	--	1.04E-01
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>								
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	Fugitive	--	1.13E-06	9.25E-06	--	4.97E-06	4.05E-05

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	Fugitive	--	1.13E-06	9.25E-06	--	4.97E-06	4.05E-05
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	Fugitive	--	1.13E-06	9.25E-06	--	4.97E-06	4.05E-05
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	Fugitive	--	1.70E-04	1.38E-03	--	7.43E-04	6.05E-03
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	Non-Fugitive	--	1.44E-05	1.62E-01	--	6.29E-05	7.08E-01
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	Non-Fugitive	--	4.93E-07	1.12E-05	--	2.16E-06	4.89E-05
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	Fugitive	--	4.93E-07	1.12E-05	--	2.16E-06	4.89E-05

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
Second Concentrator Lime and Other Regent Operations (AOS1)								
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	Non-Fugitive	4.94E-01	--	4.94E-01	1.31E+00	--	1.31E+00
Second Concentrator Emergency ICE (AOS1)								
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Non-Fugitive	--	--	6.71E-03	--	--	1.68E-03
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Non-Fugitive	--	--	8.39E-03	--	--	2.10E-03
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Non-Fugitive	--	--	2.89E-02	--	--	7.22E-03
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Non-Fugitive	--	--	2.89E-02	--	--	7.22E-03
AOS5: Emergency Grizzly Systems								
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	Fugitive	--	7.03E-05	1.81E-03	--	3.08E-04	7.94E-03

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

Process Number	Emission Unit Description	Non-Fugitive or Fugitive Classification	Hourly Potential Emissions (lb/hr)			Annual Potential Emissions (tpy)		
			Greatest Single HAP ^a	Lead	HAPs	Greatest Single HAP ^a	Lead	HAPs
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Fugitive	--	1.22E-05	3.14E-04	--	5.34E-05	1.38E-03
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	Fugitive	--	2.13E-06	5.49E-05	--	9.32E-06	2.40E-04
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Fugitive	--	1.22E-04	3.14E-03	--	5.34E-04	1.38E-02
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Non-Fugitive	--	1.30E-05	3.36E-04	--	5.71E-05	1.47E-03
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Non-Fugitive	--	1.30E-05	3.36E-04	--	5.71E-05	1.47E-03
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Non-Fugitive	--	1.30E-05	3.36E-04	--	5.71E-05	1.47E-03

^a Carbon disulfide has the greatest potential emissions of any single facility-wide HAP on both an annual and hourly basis.

Table 6.6 Summary of Facility-Wide Potential Emissions

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
Primary Operating Scenario						
PM (w/ CPM)	40.49	4,843.11	4,883.60	117.75	8,990.81	9,108.56
PM (w/o CPM)	37.04	4,843.11	4,880.14	103.50	8,990.81	9,094.32
PM ₁₀	25.15	1,719.35	1,744.50	85.13	2,583.40	2,668.53
PM _{2.5}	16.54	179.21	195.75	64.18	321.72	385.90
CO	103.04	4,064.40	4,167.44	67.05	914.49	981.54
NO _x	64.43	180.00	244.43	61.19	40.50	101.69
SO ₂	0.42	1.23	1.65	1.42	0.28	1.70
VOC	13.25	4.97	18.22	37.87	21.79	59.66
H ₂ SO ₄	0.68	0.83	1.51	2.98	3.62	6.60
H ₂ S	--	2.15	2.15	--	9.43	9.43
CO _{2e} ^b	16,045	38,186	54,231	42,066	8,592	50,658
Greatest Single HAP ^c	3.01	--	3.01	7.73	--	7.73
Lead	0.001	0.05	0.05	0.005	0.08	0.08
Total HAPs	3.74	2.01	5.75	9.40	5.15	14.55

Table 6.6 Summary of Facility-Wide Potential Emissions

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
Alternate Operating Scenario 1						
PM (w/ CPM)	39.74	14,260.30	14,300.03	106.31	16,522.12	16,628.44
PM (w/o CPM)	36.16	14,260.30	14,296.46	91.83	16,522.12	16,613.95
PM ₁₀	26.33	5,226.97	5,253.29	86.19	4,616.59	4,702.78
PM _{2.5}	19.52	475.39	494.91	74.92	543.35	618.27
CO	144.46	15,319.65	15,464.12	77.40	1,659.63	1,737.03
NO _x	77.97	678.46	756.43	64.58	73.50	138.08
SO ₂	0.46	4.64	5.10	1.43	0.50	1.93
VOC	16.84	5.24	22.09	47.52	22.97	70.49
H ₂ SO ₄	0.68	0.83	1.51	2.98	3.62	6.60
H ₂ S	0.04	2.65	2.69	0.17	11.61	11.78
CO _{2e} ^b	17,862	143,935	161,797	42,520	15,593	58,113
Greatest Single HAP ^c	3.50	--	3.50	9.04	--	9.04
Lead	0.001	0.14	0.14	0.005	0.13	0.14
Total HAPs	4.46	3.86	8.32	11.44	6.17	17.61

^a Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the facility-wide potential emissions totals.

^b Potential CO_{2e} emissions are calculated by summing the individual potential greenhouse gas emissions multiplied by their GWP. GWP of CO₂ = 1, GWP of CH₄ = 28, GWP of N₂O = 265.

^c Carbon disulfide has the greatest potential emissions of any single facility-wide HAP on both an annual and hourly basis.

Table 6.7 Potential to Emit and Threshold Comparison

Air Pollutant Emitted	PTE (tpy)		Thresholds (tpy)			
	Primary Operating Scenario	Alternate Operating Scenario 1	Class I Major Source Permitting	PSD Major Source ^a	HAP Major Source	Class II Permitting
PM (w/ CPM)	117.75	106.31	--	--	--	--
PM (w/o CPM)	103.50	91.83	--	250	--	25 ^b
PM ₁₀	85.13	86.19	100	250	--	15
PM _{2.5}	64.18	74.92	100	250	--	10
CO	67.05	77.40	100	250	--	100
NO _x	61.19	64.58	100	250	--	40
SO ₂	1.42	1.43	100	250	--	40
VOC	37.87	47.52	100	250	--	40
H ₂ SO ₄	2.98	2.98	100	250	--	7
H ₂ S	--	0.17	100	250	--	10
CO _{2e}	42,066.11	42,520.48	--	--	--	--
Greatest Single HAP	7.73	9.04	--	--	10	--
Lead	0.08	0.14	--	250	10	0.6
Total HAPs	14.55	17.61	--	--	25	--

^a Non-categorical sources in attainment/unclassifiable areas

^b The 25 tpy PM significant threshold provided in A.A.C. R18-2-101.131.b for purposes of determining the applicability of A.A.C. R18-2-302.B.2.a is assumed to not include CPM, consistent with the definition of PM in the major NSR rules (see 77 Fed. Reg. 65,107 (Oct. 25, 2012)).

7 PROPOSED VOLUNTARY LIMITATIONS

The previously accepted voluntary limitations in Class II Air Quality Permit #77414 that FMBI proposes to retain in its renewal permit are presented in Table 7.1. Revisions to previously accepted voluntary limitations in Class II Air Quality Permit #77414 are presented in Table 7.2. 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 Tables 7.1 and 7.2.

Table 7.1 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
Primary Crushing and Overland Conveying Operations					
001-1	Processes Controlled by Scrubber C18	Emissions Limitations	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-5	Processes Controlled by Dust Collector C51	Emissions Limitations	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
Milling Operations					
002-1	Processes Controlled by GL1 Dust Collector C1	Emissions Limitations	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-2	Processes Controlled by GL2 Dust Collector C2	Emissions Limitations	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-3	Processes Controlled by GL3 Dust Collector DC3	Emissions Limitations	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-4	Processes Controlled by GL4 Dust Collector DC4	Emissions Limitations	PM ≤ 0.0124 gr/dscf PM ₁₀ ≤ 0.0124 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-6	Processes Controlled by GL5 Dust Collector DC5	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
Concentrate Leach Plant					
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Emissions Limitations	PM ≤ 2.75 lb/hour PM ₁₀ ≤ 2.75 lb/hour	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 7.1 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
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Emissions Limitations	VOC ≤ 1.36 lb/hr	Three Method 25A Test Runs	Complete performance testing
Portable Aggregate System					
009-9 through 009-21	Portable Aggregate System	Production Limitation	Annual Production ≤ 2,500,000 tpy	12-Month Rolling Total	Monitor and record the total production of aggregate material (coarse and fines) during each calendar month. At the end of each month, compute and record the 12-month rolling total of aggregate material (in units of tons).
AOS1: Two Concentrator Operations					
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>					
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	Emissions Limitations	PM ≤ 0.0135 gr/dscf PM ₁₀ ≤ 0.0135 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Air Pollution Prevention and Control Requirement	Install, maintain, and operate wet suppression on the transfer point from Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	--	Perform periodic opacity monitoring
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Air Pollution Prevention and Control Requirement	Install, maintain, and operate wet suppression on the transfer point from Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	--	Perform periodic opacity monitoring

Table 7.1 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
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Air Pollution Prevention and Control Requirement	Install, maintain, and operate wet suppression on the transfer point from Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	--	Perform periodic opacity monitoring
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>					
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
<i>Second Concentrator Milling Operations (AOS1)</i>					
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Emissions Limitations	PM ≤ 0.0023 gr/dscf PM ₁₀ ≤ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing

Table 7.1 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
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	Emissions Limitations	PM $\leq$ 0.0023 gr/dscf PM ₁₀ $\leq$ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	Emissions Limitations	PM $\leq$ 0.0023 gr/dscf PM ₁₀ $\leq$ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	Emissions Limitations	PM $\leq$ 0.0023 gr/dscf PM ₁₀ $\leq$ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	Emissions Limitations	PM $\leq$ 0.0023 gr/dscf PM ₁₀ $\leq$ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	Emissions Limitations	PM $\leq$ 0.0023 gr/dscf PM ₁₀ $\leq$ 0.0023 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
AOS5: Emergency Grizzly Systems					
048-1/7 (AOS5)	Apron Feeder (EGAF1/2) and Belt Conveyor (EGBC1/2)	Operational Limitation	Only one Apron Feeder (EGAF1 or EGAF2) and one Belt Conveyor (EGBC1 or EGBC2) of the Emergency Grizzly System can be operated for each primary crusher that is inoperative.	--	Records of operation
	Bar Grizzly (EG1/2)	Operational Limitation	Only one Bar Grizzly (EG1 or EG2) of the Emergency Grizzly System can be operated for each primary crusher that is inoperative.	--	Records of operation

Table 7.1 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
Placeholder Limitations					
TBD	TBD	Emissions Limitations	PM ≤ 0.0085 gr/dscf PM ₁₀ ≤ 0.0085 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
TBD	TBD	Emissions Limitations	PM ≤ 0.003 gr/dscf PM ₁₀ ≤ 0.003 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
TBD	TBD	Emissions Limitations	PM ≤ 0.002 gr/dscf PM ₁₀ ≤ 0.002 gr/dscf	Three Method 5 Test Runs	Perform periodic opacity monitoring and complete performance testing
TBD	TBD	Emissions Limitations	PM ≤ 0.001 gr/dscf PM ₁₀ ≤ 0.001 gr/dscf	Three Method 5 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 7.2 Proposed Revisions to Voluntary Limitations

Process Number	Process/Emission Unit Description ^a	Description of Voluntary Limitation	Description of the Proposed Change	Existing Numeric Limit	Proposed Numeric Limit	Averaging Period	Proposed Monitoring, Recordkeeping, and Reporting Requirements
Supplemental Portable Aggregate System							
009-22 through 009-39	Supplemental Portable Aggregate System	Production Limitation	Increase the production limitation	Annual Production ≤ 2,200,000 tpy	Annual Production ≤ 4,400,000 tpy	12-Month Rolling Total	Monitor and record the total production of aggregate material (gravel, midsize, and stemming) during each calendar month. At the end of each month, compute and record the 12-month rolling total of aggregate material (in units of tons).
		Quantity of Equipment	Remove the limitation	Grizzly Feeders = 1 Crushers = 2 Screens = 1 Conveyors = 10 Stackers = 2	N/A	N/A	N/A

8 APPLICABLE REQUIREMENTS AND PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE REQUIREMENTS

8.1 APPLICABLE REQUIREMENTS

Identification of the specific regulatory requirements applicable to each process and/or piece of equipment at the FMBI facility is presented in Table 3.1. Detailed descriptions of the regulatory requirements identified in Table 3.1 are presented in Tables 8.2 through 8.20. General facility-wide requirements are presented in Table 8.1. The methods used by FMBI to determine compliance with the applicable regulatory requirements are also presented in Tables 8.1 through 8.20¹.

The requirements of 40 CFR 98 (Mandatory Greenhouse Gas Reporting) are not included in Table 8.1 because they are not considered an “applicable requirement” (see EPA, PSD and Title V Permitting Guidance for Greenhouse Gases, EPA-457/B-11-001 (March 2011) and 89 Fed. Reg. 1150, 1156 (Jan. 9, 2024)) or a “federal applicable requirement” under ADEQ’s definition at A.A.C. R18-2-101.51. Additionally, FMBI does not meet the applicability requirements of 40 CFR 98.2(a)(3)(iii). If combined actual emissions from all stationary fuel combustion sources at the FMBI facility ever equals or exceeds 25,000 metric tons of CO₂e in a given year, FMBI will comply with the reporting requirements of 40 CFR 98.

8.2 PROPOSED EXEMPTION FROM OTHERWISE APPLICABLE REQUIREMENTS

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

¹ While identification of the specific regulatory requirements and the methods used to determine compliance is not required by Section 3.2, Standard Class II Permit Application Components of ADEQ’s Application Packet for Class II Permit, it is included as part of the application for purposes of clarification and completeness.

Table 8.1 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 the Environmental Office Conference Room; 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.
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.

Table 8.1 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. R18-2-602	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.
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.	Fugitive dust plan; facility procedures; records of activities and associated control measures.
A.A.C. R18-2-614	For all nonpoint sources as defined in A.A.C. R18-2-101.94: • Opacity $\leq$ 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.	Fugitive dust plan; facility procedures; records of monthly opacity observations.
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.

Table 8.1 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.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, and amount of paint consumed.
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; product review process and SDS submission.
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%.	N/A; 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.	N/A; explanatory statement of law.

Table 8.1 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 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).	Management of change procedures; records of asbestos NESHAP notification for renovation and demolition activities and all supporting documents.
40 CFR 82	Comply with all applicable requirements including monitoring, recordkeeping, and reporting requirements of 40 CFR 82 (Protection of Stratospheric Ozone).	Standard operating procedures; records review; management of change procedures.

Table 8.2 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 7.1.	Records of performance tests; Operation & Maintenance (O&M) plans; facility procedures; O&M records.
A.A.C. R18-2-306.01	Comply with the air pollution prevention and control requirements in Table 7.1.	Facility procedure; design and configuration of operations.
A.A.C. R18-2-306.01	Comply with the operational limitations in Table 7.1.	O&M plan; facility procedures; maintenance and operation records.

Table 8.3 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 $\leq$ 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.	Records of visual surveys; facility procedure.

Table 8.4 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.	Equipment design; records of inspection; operation and maintenance records.
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.	Equipment design; records of inspection; operation and maintenance records.
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 8.5 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 $\leq 40\%$ 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 procedures; records of monthly opacity observations.
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 8.6 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	$PM \leq 4.10 P^{0.67}$, 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 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 8.7 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	$PM \leq 4.10 P^{0.67}$, when $P \leq 30$ tph $PM \leq 55.0 P^{0.11} - 40$, when $P > 30$ tph (where PM = maximum allowable PM emission rate 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 8.1).	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 $\pm 5\%$ 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 8.8 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	$PM \leq 1.02 Q^{0.769}$, 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. R18-2-724.E	$SO_2 \leq 1.0$ 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 $\leq 15\%$ Report all six-minute periods in which the opacity of any plume or effluent exceeds 15%.	Facility procedure; records of visual surveys; O&M plans; O&M records; record of reporting to ADEQ (if necessary).

Table 8.9 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	$SO_2 \leq 600$ parts per million (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; operations and maintenance records.
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.	Facility procedures; installation of abatement equipment or alteration of a stack, vent, or other outlet (if required).

Table 8.9 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	$\text{H}_2\text{S} \leq 0.03$ parts per million by volume (ppm_v) for any averaging period of 30 minutes or more at any occupied place beyond the premises of FMBI.	Facility procedures; O&M plans; O&M records; H_2S monitoring system; facility configuration.

Table 8.10 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 8.10 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 30 th 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.
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 8.10 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 8.11 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 8.12 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 grams (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 monthly 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 monthly 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 8.12 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 8.12 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 degrees Fahrenheit (°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: ○ No more than three emission points are read concurrently; ○ 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 ○ 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 8.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.71 and 40 CFR 60 Subpart OOO and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.672(b) 40 CFR 60.672(d) A.A.C. R18-2-901.71	For affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008, meet the following emission limits and compliance requirements within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup: • Opacity $\leq$ 7% from any screening operation, transfer point on belt conveyors, or any other affected facility (except crushers); and • Opacity $\leq$ 12% from any crusher at which a capture system is not used. Conduct an initial performance test according to 40 CFR 60.11 and 40 CFR 60.675. Conduct periodic inspections of water sprays according to 40 CFR 60.674(b) and 40 CFR 60.676(b). Conduct a repeat performance test according to 40 CFR 60.11 and 40 CFR 60.675 within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in 40 CFR 60.674(b) and 40 CFR 60.676(b) are exempt from this 5-year repeat testing requirement. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the above requirements.	O&M plans; facility procedures; records of visible emission surveys; monthly inspections; operation and maintenance records, performance test records.
40 CFR 60.674(b) A.A.C. R18-2-901.71	For an affected facility in which construction, modification, or reconstruction commenced on or after April 22, 2008 and where wet suppression is used to control emissions from the affected facility, perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. Initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if it is found that water is not flowing properly during an inspection of the water spray nozzles. Record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b).	Facility procedures; records of monthly inspections and any corrective actions taken; records review.

Table 8.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.71 and 40 CFR 60 Subpart OOO and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.674(b)(1) A.A.C. R18-2-901.71	If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 provided that the affected facility meets the following criteria: • Periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility are conducted according to 40 CFR 60.674(b) and 40 CFR 60.676(b), and • The upstream water spray(s) that will be periodically inspected is designated at the time of the initial performance test required under 40 CFR 60.11 and 40 CFR 60.675.	Facility procedure; records of inspections.
40 CFR 60.674(b)(2) A.A.C. R18-2-901.71	If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays.	Facility procedures; records of monthly inspections and any alternate control mechanisms; records review.
40 CFR 60.675(a) A.A.C. R18-2-901.71	In conducting the performance tests required in §60.8, use as reference methods and procedures the test methods in 40 CFR 60 Appendices A-1 through A-7 or other methods and procedures as specified in 40 CFR 60 Subpart OOO, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.675l.	Facility procedure; records of performance test results and reports.

Table 8.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.71 and 40 CFR 60 Subpart OOO and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.675(c)(1) A.A.C. R18-2-901.71	In determining compliance with the particulate matter standards in 40 CFR 60.672(b), use Method 9 of 40 CFR 60 Appendix A-4 and the procedures in 40 CFR 60.11, with the following additions: • The minimum distance between the observer and the emission source must be 15 feet. • The observer must, when possible, select a position that minimizes interference from other fugitive emission sources. The required observer position relative to the sun must be followed. • For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.	Facility procedure; records of performance test results and reports.
40 CFR 60.675(c)(3) A.A.C. R18-2-901.71	When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b), the duration of the EPA Reference Method 9 observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emissions standards must be based on the average of the five 6-minute averages.	Facility procedure; records of performance test results and reports.

Table 8.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.71 and 40 CFR 60 Subpart OOO and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.675(e)(1) A.A.C. R18-2-901.71	For the method and procedure of 40 CFR 60.675(c), if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used: • Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream; or • Separate the emissions so that the opacity of emissions from each affected facility can be read.	Facility procedure; records of performance test results and reports.
40 CFR 60.675(e)(2) A.A.C. R18-2-901.71	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 if the following conditions are met: • No more than three emission points may be read concurrently. • All three emission points must be within a 70-degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points. • If an opacity reading for any one of the three emission points equals or exceeds the applicable 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 results and reports.
40 CFR 60.675(g) A.A.C. R18-2-901.71	For performance tests involving only EPA Reference Method 9 testing, the 30-day advance notification of performance test may be reduced to a 7-day advance notification.	N/A; explanatory statement of law.

Table 8.13 Applicable Regulatory Requirements of A.A.C. R18-2-901.71 and 40 CFR 60 Subpart OOO and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 60.676(b)(1) A.A.C. R18-2-901.71	For affected facilities in which construction, modification, or reconstruction commenced on or after April 22, 2008, record each periodic inspection required under 40 CFR 60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). Keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.	Facility procedures; records of monthly inspections and any corrective actions taken; records review.
40 CFR 60.676(f) A.A.C. R18-2-901.71	Submit written reports of the results of all performance tests conducted to demonstrate compliance with 40 CFR 60.672, including reports of opacity observations made using EPA Reference Method 9 to demonstrate compliance with 40 CFR 60.672(b).	Facility procedure; records of performance test results and reports.
40 CFR 60.676(h) A.A.C. R18-2-901.71	The 40 CFR 60.7(a)(1) requirement for notification of the date construction or reconstruction commenced is waived for 40 CFR 60 Subpart OOO affected facilities.	N/A; explanatory statement of law.
40 CFR 60.676(i) A.A.C. R18-2-901.71	Submit a notification of the actual date of initial startup of each affected facility to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.	Facility procedure; records of notifications.
40 CFR 60.676(k) A.A.C. R18-2-901.71	Notifications and reports required under 40 CFR 60 Subpart OOO and under 40 CFR 60, Subpart A need only to be sent to the EPA Region or the State which has been delegated authority according to 40 CFR 60.4(b).	Facility procedure; records of notifications and reports.

Table 8.14 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 8.14 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 60.4204 or 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 $\leq$ 15 ppm; and • Cetane index $\geq$ 40 or aromatic content $\leq$ 35% by volume.	Facility procedure; records of fuel specifications from fuel supplier.

Table 8.14 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 8.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart III (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 8.14 Applicable Regulatory Requirements of A.A.C. R18-2-901.84 and 40 CFR 60 Subpart III (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 8.14 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 operates 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).	Review of the engine horsepower and reasons for operation, 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 8.15 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 60.4233(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(d) A.A.C. R18-2-901.85	For stationary SI ICE with a maximum engine power greater than 19 kW (25 hp) and less than 75 kW (100 hp) (except gasoline and rich burn engines that use LPG), comply with the emission standards in Table 1 of 40 CFR 60 Subpart JJJJ.	Records of manufacturers' certifications; O&M plans; manufacturers' 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.

Table 8.15 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 60.4237(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.
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 8.15 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 8.15 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(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 8.15 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); facility procedure to work with the testing company to ensure test reports are submitted within 60 days.
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).	Review of the engine horsepower and reasons for operation, 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 8.16 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(c)(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 8.16 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 8.16 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 8.17 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (New 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 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 applicable requirements for engines subject to NSPS Subparts IIII and JJJJ.

Table 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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	For CI emergency engines, 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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 5) A.A.C. R18-2-1101.B.81	For SI emergency engines, perform the following required management practice requirements: • Change oil and filter every 500 hours of operation or annually, whichever comes first; • Inspect spark plugs 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(j). 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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 $\leq$ 15 ppm; and • Cetane index $\geq$ 40 or aromatic content $\leq$ 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) 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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	For CI non-emergency engines, 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6625(j) A.A.C. R18-2-1101.B.81	For SI non-emergency engines, 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 Acid Number; • Viscosity; and • Percent water content. The condemning limits for these parameters are as follows: • Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid 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 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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.	N/A; explanatory statement of law.

Table 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI 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).	Review of the engine horsepower and reasons for operation, submittal of annual reports (if necessary); maintenance of records.
40 CFR 63.6655(e) 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.
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.

Table 8.18 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Emergency CI and SI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
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 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI 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 1) A.A.C. R18-2-1101.B.81	For CI non-emergency engines, perform the following required management practice requirements: • Change oil and filter every 1,000 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).	Records of engine operating hours; O&M plans; facility procedures; O&M records.
40 CFR 63.6603(a) (Table 2d, Entry 10) A.A.C. R18-2-1101.B.81	For SI non-emergency engines, perform the following required management practice requirements: • Change oil and filter every 1,440 hours of operation or annually, whichever comes first; • Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; • Inspect all hoses and belts every 1,440 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(j).	Records of engine operating hours; O&M plans; facility procedures; O&M records.
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.

Table 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
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) 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.
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 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI 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	For CI non-emergency engines, 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 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
40 CFR 63.6625(j) A.A.C. R18-2-1101.B.81	For SI non-emergency engines, 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 Acid Number; • Viscosity; and • Percent water content. The condemning limits for these parameters are as follows: • Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid 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 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI 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 63.6645(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 RICE that is less than 100 hp or not subject to any numerical emission standards.	N/A; explanatory statement of law.
40 CFR 63.6655(e) 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 63.6660(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.
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.

Table 8.19 Applicable Regulatory Requirements of A.A.C. R18-2-1101.B.81 and 40 CFR 63 Subpart ZZZZ (Existing Non-Emergency CI and SI Engines) and Methods for Demonstrating Compliance

Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
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 8.20 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 GDF that has a monthly throughput of less than 10,000 gallons of gasoline, comply with the requirements in 40 CFR 63.11116.	Management of change procedure; records of monthly throughput; and records of compliance with the requirements in 40 CFR 63.11116.
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.	Management of change procedure; records of monthly throughput; and records of compliance with the requirements in 40 CFR 63.11117.
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.	N/A; 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.	N/A; 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.	N/A; explanatory statement of law.

Table 8.20 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 8.20 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).	N/A; 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 8.20 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.	Records of tank capacity; records of monthly throughput of the associated GDF; and records of compliance with the requirements in 40 CFR 63.11116.
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 8.20 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 8.20 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.

9 INSIGNIFICANT AND TRIVIAL ACTIVITY INFORMATION

9.1 INSIGNIFICANT ACTIVITIES

The proposed insignificant activities associated with the FMBI facility are presented in Table 9.1. 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 9.1 are not considered in this application.

9.2 TRIVIAL ACTIVITIES

The proposed trivial activities associated with the FMBI facility are presented in Table 9.2. Although trivial activities can be omitted from permit applications, FMBI is identifying them in this application for ADEQ's concurrence and future reference purposes. Table 9.2 is not intended to be an exhaustive list of all the equipment and activities at the FMBI facility that meet the trivial activities classification.

Table 9.1 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 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 9.1 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 9.2 Proposed 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
Process Water Filtration Systems and Demineralizers	A.A.C. R18-2-101.146.b.xv

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
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 FMBI 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
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

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
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
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

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
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
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

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
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
Discharge of Dust Collectors to Conveyors	A.A.C. R18-2-101.146
Material Handling and Processing of Clean, Washed Ore	A.A.C. R18-2-101.146
Material Handling and Processing of Wet, Saturated Ore	A.A.C. R18-2-101.146
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
The Collection, Transmission, Liquid Treatment and Solids Treatment Process, and Domestic Type Wastewater and Sewage Treatment Works, 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

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
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 Clogged Chutes	A.A.C. R18-2-101.146
Manual Cleanup Around Conveyor Belts, Chutes, and Stockpiles	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
Surface Impoundments Such as Ash Ponds, Cooling Ponds, Evaporation Ponds (no spray system), Settling Ponds and Storm Water Ponds	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
General Vehicle Maintenance and Servicing Activities	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
Solid Chemical Reagent Systems Where the Material is Delivered in Bags	A.A.C. R18-2-101.146
Liquid Chemical Reagent Systems	A.A.C. R18-2-101.146

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Milling Operations	
Hydroclone Sets	A.A.C. R18-2-101.146
Ball Mill Media Processing Operations	A.A.C. R18-2-101.146
Brick Transfers and Processing	A.A.C. R18-2-101.146
Bulk and Molybdenum Flotation Operations	
Electric Pumps, Sumps, and Process Tanks	A.A.C. R18-2-101.146
Cyclone Cluster	A.A.C. R18-2-101.146
Tailings Thickeners	A.A.C. R18-2-101.146
Copper/Molybdenum Concentrate Thickeners	A.A.C. R18-2-101.146
Molybdenum Plant Feed Tank	A.A.C. R18-2-101.146
Molybdenum High Shear Conditioning Tank 1	A.A.C. R18-2-101.146
Molybdenum High Shear Conditioning Tank 2	A.A.C. R18-2-101.146
Copper Concentrate Thickeners	A.A.C. R18-2-101.146
Regrind Media Processing Operations	A.A.C. R18-2-101.146
Copper Concentrate Processing and Loading Operations	
Filter Feed Tank	A.A.C. R18-2-101.146
Copper Concentrate Filter 1	A.A.C. R18-2-101.146

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Copper Concentrate Filter 2	A.A.C. R18-2-101.146
Molybdenum Concentrate Processing and Bagging Operations	
Larox Filter	A.A.C. R18-2-101.146
Concentrate Leach Plant	
Additive Bulk Bag Unloader System	A.A.C. R18-2-101.146
Additive Mix Tank	A.A.C. R18-2-101.146
Additive Storage Tank	A.A.C. R18-2-101.146
Cyclone	A.A.C. R18-2-101.146
Molybdenum Concentrate Repulp Tank 1	A.A.C. R18-2-101.146
Molybdenum Concentrate Repulp Tank 2	A.A.C. R18-2-101.146
Molybdenum Concentrate Storage Tank	A.A.C. R18-2-101.146
Molybdenum Concentrate Feed Tank	A.A.C. R18-2-101.146
Oxygen Plant	A.A.C. R18-2-101.146
CCD Wash Tanks	A.A.C. R18-2-101.146
Tailings Neutralization Tanks	A.A.C. R18-2-101.146
CCD Thickeners	A.A.C. R18-2-101.146
HB Feed Tank	A.A.C. R18-2-101.146

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Filter Cake Repulp Tank 1	A.A.C. R18-2-101.146
Filter Cake Repulp Tank 2	A.A.C. R18-2-101.146
Pressure Filter	A.A.C. R18-2-101.146
Rhenium/IX Processing	A.A.C. R18-2-101.146
Soda Ash Slurry Tank	A.A.C. R18-2-101.146
CLP Cleanup Sump	A.A.C. R18-2-101.146
Pallet and Bag Shredders	A.A.C. R18-2-101.146
Solution Extraction/Electrowinning Operations	
Electrolyte Tanks	A.A.C. R18-2-101.146
H ₂ SO ₄ Tanks	A.A.C. R18-2-101.146
PLS Tanks	A.A.C. R18-2-101.146
Raffinate Tanks	A.A.C. R18-2-101.146
Addition of a Dry Reagent to a Liquid Tank	A.A.C. R18-2-101.146
Copper Leaching Stockpiles (minimal fugitive dust due to large rock size, low silt content, and wetting with an acid solution)	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

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Metal Recovery Tanks and Activated Carbon Pellet Handling	A.A.C. R18-2-101.146
Lime Storage and Handling Operations	
Milk of Lime Discharge Sump 1	A.A.C. R18-2-101.146
Milk of Lime Tank 1	A.A.C. R18-2-101.146
Milk of Lime Tank 2	A.A.C. R18-2-101.146
Lime Separating Tank 1	A.A.C. R18-2-101.146
Lime Separating Tank 2	A.A.C. R18-2-101.146
Milk of Lime/Slaked Lime Tanks	A.A.C. R18-2-101.146
Ammonium Nitrate Prill Delivery and Handling Operations	
Ammonium Nitrate Emulsion Bins	A.A.C. R18-2-101.146
Storage Tanks and Parts Cleaning	
Storage Tanks Storing Liquid Substances That Will Not Emit any VOC or HAP	A.A.C. R18-2-101.146
Copper Decant Solids Handling Operations	
Copper Decant Pond	A.A.C. R18-2-101.146
AOS1: Two Concentrator Operations	
Electric Pumps, Sumps, and Process Tanks	A.A.C. R18-2-101.146
Ball Mill Cyclone Feed Sump	A.A.C. R18-2-101.146

Table 9.2 Proposed Trivial Activities

Proposed Trivial Activity	Trivial Activity Reference
Primary Cyclone Cluster	A.A.C. R18-2-101.146
Regrind Mill Cyclone Cluster	A.A.C. R18-2-101.146
Tailings Thickeners	A.A.C. R18-2-101.146

10 COMPLIANCE SCHEDULE

At the time of this application's submittal, FMBI is in compliance with all applicable requirements. Consequently, a compliance schedule is not required.

11 MINOR NEW SOURCE REVIEW (NSR) APPLICABILITY DETERMINATION

11.1 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.

11.2 APPLICABILITY DETERMINATION

As described in Sections 2.3.2 and 2.3.11, FMBI proposes to update the design of the Supplemental Portable Aggregate System and add the Kimberly Diesel Non-Emergency Pump Engine. The increases in PTE due to the updated design of the Supplemental Portable Aggregate System and the addition of the Kimberly Diesel Non-Emergency Pump Engine are presented in Table 11.1. As shown in Table 11.1, the total increases in PTE of regulated minor NSR pollutants are below the permitting exemption thresholds. Consequently, the facility changes will not be subject to minor NSR as a minor NSR modification for any regulated minor NSR pollutant.

11.3 CALCULATION METHODOLOGY

The methodology used to calculate the increases in PTE as shown in Table 11.1 is presented in Appendix E (equivalent to the calculations presented in Section 5.1). The Excel spreadsheets used to make the calculations are reproduced in Appendix F. An electronic copy of the emission calculations will be provided via email with the application.

Table 11.1 Change in PTE and Comparison to the Permitting Exemption Thresholds

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Change in PTE (tpy)						
			PM ₁₀	PM _{2.5}	CO	NO _x	SO ₂	VOC	Pb
Supplemental Portable Aggregate System									
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	Non-Fugitive	1.63	0.11	--	--	--	--	4.54E-05
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	Non-Fugitive	1.19	0.22	--	--	--	--	3.31E-05
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	Non-Fugitive	0.01	0.002	--	--	--	--	3.33E-07
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	Non-Fugitive	2.37	0.16	--	--	--	--	6.60E-05
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	Non-Fugitive	0.08	0.01	--	--	--	--	2.29E-06
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	Non-Fugitive	1.19	0.22	--	--	--	--	3.31E-05
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	Non-Fugitive	0.08	0.01	--	--	--	--	2.29E-06

Table 11.1 Change in PTE and Comparison to the Permitting Exemption Thresholds

Process Number	Process/Emission Unit Description	Non-Fugitive or Fugitive Classification	Change in PTE (tpy)						
			PM ₁₀	PM _{2.5}	CO	NO _x	SO ₂	VOC	Pb
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	Non-Fugitive	0.08	0.01	--	--	--	--	2.29E-06
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	Non-Fugitive	0.008	0.001	--	--	--	--	2.29E-07
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	Fugitive	--	--	--	--	--	--	2.14E-05
009-38	SPAS Stockpiles to Trucks	Fugitive	--	--	--	--	--	--	2.14E-05
009-39	Wind Erosion of the SPAS Stockpiles	Fugitive	--	--	--	--	--	--	7.35E-05
Diesel Non-Emergency ICE									
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Non-Fugitive	0.006	0.006	0.22	0.13	0.01	0.04	--
Total Change in PTE (tpy)			6.69	0.76	0.22	0.13	0.01	0.04	3.03E-04
Permitting Exemption Thresholds for Minor NSR Modification Applicability Purposes			7.5	5	50	20	20	20	0.30

12 IDENTIFICATION OF CONFIDENTIAL INFORMATION

FMBI 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 FMBI as defined by Arizona Revised Statutes (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 FMBI 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 FMBI's competitive position.

FMBI 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 II PERMIT APPLICATION FORM

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD CLASS II 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 Bagdad Inc.
2. Mailing Address: P.O. Box 245
City: Bagdad State: Arizona ZIP: 86321
3. Name (or names) of Responsible Official: Jeff Monteith
Phone: 928-633-3446 Fax: N/A Email: jmonteith@fmi.com
4. Facility Manager/Contact Person and Title: Marcus Middleton, Manager Environmental Affairs
Phone: 928-633-3263 Fax: N/A Email: mmiddlet@fmi.com
5. Facility Name: Freeport-McMoRan Bagdad Inc.
Facility Location/Address (Current/Proposed): Terminus of Highway 96
City: Bagdad County: Yavapai ZIP: 86321
Indian Reservation (if applicable, which one): N/A
Latitude/Longitude, Elevation: 34° 35' 23" N. Latitude/113° 14' 10" W. Longitude, 3,800 feet
6. General Nature of Business: Mining and processing of copper ore.
7. Type of Organization:
☒ Corporation ☐ Individual Owner ☐ Partnership ☐ Government Entity ☐ LLC
☐ Other _____
8. Permit Application Basis: ☐ New Source ☐ Revision ☒ Renewal of Existing Permit
For renewal or modification, include existing permit number (and exp. date): #77414, 11/18/2024
Date of Commencement of Construction or Modification: N/A
Primary Standard Industrial Classification Code: 1021 (Copper Mining/Processing)
9. 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: 
Printed Name of Signer/Official Title: Jeff Monteith, General Manager, Freeport-McMoRan Bagdad Inc.
Date: 10/30/25 Telephone Number: 928-633-3446

APPENDIX B EQUIPMENT LIST

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Primary Crushing and Overland Conveying Operations						
Primary Crusher 1	5,865 tph	Allis-Chalmers	NA	NA	1975 (reconstruction date TBD)	PC1
Scrubber C18	11,000 acfm	Rotoclone	Type N Model B Design 4 Size 12	NA	2001	C18
PC1 Surge Bin	600 tons	NA	NA	NA	1975 (reconstruction date TBD)	PC1SB
PC1 Apron Feeder	5,865 tph	NA	NA	NA	1975 (reconstruction date TBD)	PC1AF
Overland Conveyor 1	5,865 tph	NA	NA	NA	1975	OC1
Overland Conveyor 2	5,865 tph	NA	NA	NA	1975	OC2
Rock Breaker	N/A	NA	NA	NA	NA	RB
Primary Crusher 2	7,000 tph	Metso	60x89, MK-III	TBD	2019	PC2
Dust Collector C51	15,000 acfm	FARR	GS 36/30	NA	2025	C51
PC2 Surge Bin	640 tons	Designed by M3	NA	NA	2005	PC2SB
PC2 Apron Feeder	6,700 tph	Metso	84"	NA	2005	PC2AF
PC2 Dribble Conveyor	N/A	Turner Engineering	60"	NA	2005	PC2DC
Overland Conveyor 3A	7,600 tph	NA	60"	NA	2005	OC3A
Overland Conveyor 3	7,600 tph	NA	54"	NA	1975	OC3
Overland Conveyor 4	7,600 tph	NA	54"	NA	1975	OC4

Equipment List
October 2025

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Radial Stacker 5	7,600 tph	NA	60"	NA	1975	RST5
Free-Standing Stacker 6	7,600 tph	NA	60"	NA	1990	FSS6
Milling Operations						
<i>Grinding Line 1</i>						
GL1 Vibrating Feeder 2	797 tph	Syntron	NA	NA	1976	GL1-VF2
GL1 Vibrating Feeder 3	797 tph	Syntron	NA	NA	1976	GL1-VF3
GL1 Vibrating Feeder 4	797 tph	Syntron	NA	NA	1976	GL1-VF4
GL1 Vibrating Feeder 5	797 tph	Syntron	NA	NA	1976	GL1-VF5
GL1 Belt Conveyor A	2,380 tph	NA	48"	NA	1976	GL1-BCA
GL1 Primary Grinding Mill	2,280 tph	Koppers	NA	NA	1976	GL1-GM1
GL1 Vibrating Screen	2,280 tph	FLSmidth	8' x 20'	NA	2017	GL1-VS1
GL1 Belt Conveyor 2	1,300 tph	NA	36"	NA	Pre-1982	GL1-BC2
GL1 Belt Conveyor 3	1,300 tph	NA	36"	NA	Pre-1982	GL1-BC3
GL1 Diverter Gate	N/A	NA	NA	NA	NA	GL1-DG
GL1 Belt Conveyor B	1,300 tph	NA	40"	NA	1976	GL1-BCB
GL1 Secondary Crusher	650 tph	Metso	MP800	NA	2008	GL1-SC1
GL1 Dust Collector C1	15,000 acfm	FARR	GS 36/30	NA	2013	C1

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
GL1 Belt Conveyor 5	1,300 tph	NA	36"	NA	Pre-1982	GL1-BC5
GL1 Secondary Grinding Mill	2,563 tph	Metso	15.5' x 20'	NA	1976	GL1-GM2
<i>Grinding Line 2</i>						
GL2 Vibrating Feeder 2	797 tph	Syntron	NA	NA	1976	GL2-VF2
GL2 Vibrating Feeder 3	797 tph	Syntron	NA	NA	1976	GL2-VF3
GL2 Vibrating Feeder 4	797 tph	Syntron	NA	NA	1976	GL2-VF4
GL2 Vibrating Feeder 5	797 tph	Syntron	NA	NA	1976	GL2-VF5
GL2 Belt Conveyor A	2,380 tph	NA	48"	NA	1976	GL2-BCA
GL2 Primary Grinding Mill	2,280 tph	Koppers	NA	NA	1976	GL2-GM1
GL2 Vibrating Screen	2,280 tph	FLSmidth	8' x 20'	NA	2017	GL2-VS1
GL2 Belt Conveyor 2	1,300 tph	NA	36"	NA	Pre-1982	GL2-BC2
GL2 Belt Conveyor 3	1,300 tph	NA	36"	NA	Pre-1982	GL2-BC3
GL2 Diverter Gate	N/A	NA	NA	NA	NA	GL2-DG
GL2 Belt Conveyor B	1,300 tph	NA	40"	NA	1976	GL2-BCB
GL2 Secondary Crusher	650 tph	Metso	MP800	NA	2008	GL2-SC2
GL2 Dust Collector C2	15,000 acfm	FARR	GS 36/30	NA	2012	C2
GL2 Belt Conveyor 5	1,300 tph	NA	36"	NA	Pre-1982	GL2-BC5

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
GL2 Secondary Grinding Mill	2,563 tph	Metso	15.5' x 20'	NA	1976	GL2-GM2
<i>Grinding Line 3</i>						
GL3 Vibrating Feeder 2	797 tph	Syntron	NA	NA	1976	GL3-VF2
GL3 Vibrating Feeder 3	797 tph	Syntron	NA	NA	1976	GL3-VF3
GL3 Vibrating Feeder 4	797 tph	Syntron	NA	NA	1976	GL3-VF4
GL3 Vibrating Feeder 5	797 tph	Syntron	NA	NA	1976	GL3-VF5
GL3 Belt Conveyor A	2,380 tph	NA	48"	NA	1976	GL3-BCA
GL3 Primary Grinding Mill	2,280 tph	Koppers	NA	NA	1976	GL3-GM1
GL3 Vibrating Screen	2,280 tph	FLSmidth	8' x 20'	NA	2017	GL3-VS1
GL3 Belt Conveyor 2	1,300 tph	NA	36"	NA	Pre-1982	GL3-BC2
GL3 Belt Conveyor 3	1,300 tph	NA	36"	NA	Pre-1982	GL3-BC3
GL3 Diverter Gate	N/A	NA	NA	NA	NA	GL3-DG
GL3 Belt Conveyor B	1,300 tph	NA	40"	NA	1976	GL3-BCB
GL3 Secondary Crusher	650 tph	Metso	MP800	NA	1999	GL3-SC3
GL3 Dust Collector DC3	15,000 acfm	FARR	GS 36/30	NA	2015	DC3
GL3 Belt Conveyor 5	1,300 tph	NA	36"	NA	Pre-1982	GL3-BC5
GL3 Secondary Grinding Mill	2,563 tph	Metso	15.5' x 20'	NA	1976	GL3-GM2

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>Grinding Line 4</i>						
GL4 Vibrating Feeder 2	1,231 tph	Syntron	NA	NA	1981	GL4-VF2
GL4 Vibrating Feeder 3	1,231 tph	Syntron	NA	NA	1981	GL4-VF3
GL4 Vibrating Feeder 4	1,231 tph	Syntron	NA	NA	1981	GL4-VF4
GL4 Vibrating Feeder 5	1,231 tph	Syntron	NA	NA	1981	GL4-VF5
GL4 Belt Conveyor A	2,380 tph	NA	48"	NA	1981	GL4-BCA
GL4 Primary Grinding Mill	2,280 tph	Koppers	NA	NA	1981	GL4-GM1
GL4 Vibrating Screen	2,280 tph	FLSmidth	8' x 20'	NA	2016	GL4-VS1
GL4 Belt Conveyor 2	1,300 tph	NA	36"	NA	Pre-1982	GL4-BC2
GL4 Belt Conveyor 3	1,300 tph	NA	36"	NA	Pre-1982	GL4-BC3
GL4 Diverter Gate	N/A	NA	NA	NA	NA	GL4-DG
GL4 Belt Conveyor B	1,300 tph	NA	40"	NA	1981	GL4-BCB
GL4 Secondary Crusher	650 tph	Metso	MP800	NA	2008	GL4-SC4
GL4 Dust Collector DC4	15,000 acfm	FARR	GS 40/32	NA	2015	DC4
GL4 Belt Conveyor 5	1,300 tph	NA	36"	NA	Pre-1982	GL4-BC5
GL4 Secondary Grinding Mill	2,563 tph	Metso	15.5' x 20'	C.684	1981	GL4-GM2

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>Grinding Line 5</i>						
GL5 Vibrating Feeder 2	1,231 tph	Syntron	NA	NA	1989	GL5-VF2
GL5 Vibrating Feeder 3	1,231 tph	Syntron	NA	NA	1989	GL5-VF3
GL5 Vibrating Feeder 4	1,231 tph	Syntron	NA	NA	1989	GL5-VF4
GL5 Vibrating Feeder 5	1,231 tph	Syntron	NA	NA	1989	GL5-VF5
GL5 Belt Conveyor A	2,380 tph	NA	48"	NA	1989	GL5-BCA
GL5 Primary Grinding Mill	2,280 tph	Koppers	NA	NA	1989	GL5-GM1
GL5 Vibrating Screen	2,280 tph	FLSmidth	8' x 20'	NA	2018	GL5-VS1
GL5 Belt Conveyor 2	1,300 tph	NA	36"	NA	Post-1982	GL5-BC2
GL5 Belt Conveyor 3	1,300 tph	NA	36"	NA	Post-1982	GL5-BC3
GL5 Diverter Gate	N/A	NA	NA	NA	NA	GL5-DG
GL5 Belt Conveyor B	1,300 tph	NA	40"	NA	1988	GL5-BCB
GL5 Secondary Crusher	650 tph	Metso	MP800	NA	2008	GL5-SC5
GL5 Dust Collector DC5	15,000 acfm	FARR	GS 36/30	NA	2022	DC5
GL5 Belt Conveyor 5	1,300 tph	NA	36"	NA	Post-1982	GL5-BC5
GL5 Secondary Grinding Mill	2,563 tph	Bolden Allis	NA	NA	1989	GL5-GM2

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>Grinding Line Spare Equipment</i>						
GL Spare Vibrating Screen 1	2,280 tph	FLSmith	8' x 20'	NA	Post-1982	GL-Spare1
GL Spare Vibrating Screen 2	2,280 tph	FLSmith	8' x 20'	NA	Post-1982	GL-Spare2
Bulk and Molybdenum Flotation Operations						
Bulk Flotation Equipment	N/A	NA	NA	NA	varies	CMF-B1
Tramp Reject Screen 1	N/A	Allis-Chalmers	10' x 24'	NA	1975	TRS1
Tramp Reject Screen 2	N/A	Allis-Chalmers	10' x 24'	NA	1981	TRS2
Tower Mill 1	385.25 tph	Metso	VTM-1000-WB	NA	2018	TM1
Tower Mill 2	385.25 tph	Metso	VTM-1000-WB	NA	2018	TM2
Molybdenum Flotation Equipment	N/A	NA	NA	NA	varies	CMF-M
Copper Concentrate Processing and Loading Operations						
Concentrate Filter Conveyor 1	120 tph	Superior Industries	NA	NA	2015	CuBC3a
Concentrate Filter Conveyor 2	120 tph	Superior Industries	NA	NA	2015	CuBC3b
Filtered Concentrate Transfer Conveyor	240 tph	Superior Industries	NA	NA	2015	CuBC4

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Enclosed Copper Concentrate Storage Building	N/A	NA	NA	NA	2015	CuStB
Molybdenum Concentrate Processing and Bagging Operations						
Molybdenum Concentrate Screw Conveyor	5.0 tph	KWS	NA	NA	2008	MPSC1
Molybdenum Concentrate Surge Bin	5.0 tph	NA	NA	NA	2008	MPSB
Molybdenum Concentrate Bagger	5.0 tph	Flexicon	Swing-Down Filler BFS	NA	2008	MPBGR
Concentrate Leach Plant						
<i>Pressure Leach Vessel and Support Equipment</i>						
Pressure Leach Vessel	10.5 tph	NA	NA	NA	2002	G2
Primary Venturi Scrubber CH-02	19,950 acfm	NA	NA	NA	2002	CH-02
Secondary Venturi Scrubber CH-03	23,990 acfm	NA	NA	NA	2002	CH-03
Natural Gas Backup Package Boiler G1	25 MMBtu/hr	NA	NA	NA	2002	G1
Natural Gas Primary Package Boiler G3	25 MMBtu/hr	Clayton	EG604-7-FMB	26418	2025	G3
CLP Cooling Tower	4,000 gpm (total)	SPX Cooling Technologies, Inc.	NC8409UAN	NC-10144664-A1	2017	G7

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>Molybdenum Concentrate Handling</i>						
Molybdenum Concentrate Feed Hopper 1	4.0 tph	NA	NA	NA	2008	M-CFH
Molybdenum Concentrate Belt Feeder	4.0 tph	NA	NA	NA	2008	M-BFd
Molybdenum Concentrate Feed Hopper 3	180 ft3	NA	NA	NA	2021	M-CFH3
Molybdenum Concentrate Dust Collector 2	500 scfm	NA	NA	NA	2021	M-DC2
Molybdenum Concentrate Metering Screw Conveyor with Chute	5.0 tph	NA	6" D x 5' L	NA	2022	M-MSC
Molybdenum Concentrate Screw Conveyor 3	5.0 tph	NA	9" D x 53' L	NA	2022	M-SC3
Molybdenum Concentrate Screw Conveyor 1	4.0 tph	NA	NA	NA	2008	M-SC1
Deoiler	4.0 tph	NA	NA	NA	2008	M-SD
Natural Gas Steam Generator	5.23 MMBtu/hr	NA	NA	NA	2008	M-SG

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Natural Gas Deoiler Heater	6.5 MMBtu/hr	NA	NA	NA	2008	M-DH
Venturi Scrubber	50 acfm	NA	NA	NA	2008	M-VS
Venturi Scrubber (alternate)	50 acfm	Mikropul	NA	NA	2021	M-VSa
Packed Scrubber 1	50 acfm	NA	NA	NA	2008	M-PS1
Packed Scrubber 2	50 acfm	NA	NA	NA	2008	M-PS2
Natural Gas Flare	1.55 MMBtu/hr	Epcon	E-DF-500-V-T	703-1046	2008	M-F
Settling Tank	3,293.88 gal	NA	6'H x 16'D	NA	2011	M-ST
Molybdenum Concentrate Feed Hopper 4	90 ft3	NA	NA	NA	2021	M-CFH4
Molybdenum Concentrate Dust Collector 1	900 acfm	Envirosystems	NA	NA	2008	M-DC1
Molybdenum Concentrate Tubular Drag Conveyor 1	8.0 tph	NA	NA	NA	2008	M-TDC1
Molybdenum Concentrate Fine Grinding Mill 1	NA	NA	NA	NA	2011	M-FGM1
Molybdenum Concentrate Fine Grinding Mill 2	NA	NA	NA	NA	TBD	M-FGM2
Molybdenum Concentrate Re-Bagger	37.5 tph	NA	NA	NA	2025	M-RB

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>MoO₃ and Rhenium Processing</i>						
MoO ₃ HBF Feed Vibrating Screen	4.0 tph	SWECO	MX48Y88SDTL	088177-a01/15	2015	HBF Screen 1
MoO ₃ Belt Filter	4.0 tph	NA	NA	NA	2008	M-BFIt
MoO ₃ Horizontal Belt Filter	4.0 tph	FLSmidth	3100M55.8	CSP0001080-01A	2015	M-BFIt2
MoO ₃ Product Screen	7.0 tph	Sweco	TBD	TBD	2022	M-PrS
MoO ₃ Screw Feeder	7.0 tph	NA	9" D x 21'-6" L	NA	2022	M-SF
MoO ₃ Inclined Screw Conveyor	7.0 tph	NA	9" D x 25' L	NA	2022	M-ISC
Mixer Extraction Settler 1	283.33 ft2	NA	NA	NA	2011	M-MXS1
Mixer Extraction Settler 2	283.33 ft2	NA	NA	NA	2011	M-MXS2
Mixer Washer Settler	283.33 ft2	NA	NA	NA	2011	M-MWS
Mixer Stripper Settler 1	283.33 ft2	NA	NA	NA	2011	M-MSS1
Mixer Stripper Settler 2	283.33 ft2	NA	NA	NA	2011	M-MSS2
Soda Ash Storage Bin	40 tons	NA	NA	NA	2003	SASB-G4
Soda Ash Storage Bin Bin Vent	N/A	FARR	GS6 BV	NA	2013	G4
Soda Ash Screw Conveyor	1.2 tph	NA	NA	NA	2022	SASC

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Solution Extraction/Electrowinning Operations						
SX Mixers (28)	50.27 ft2 each	NA	NA	NA	1969	--
SX Settlers (28)	812 ft2 each	NA	NA	NA	1969	--
Organic Tank TK-22	40,215 gal	NA	21'W x 33'L x 7.758'H	NA	NA	TK-22
Organic Mix Tank TK-13	67,753 gal	NA	31'D x 12'H	NA	NA	TK-13
Electrowinning Cells (108)	5,265 ft² total	NA	NA	NA	1969 (48 cells) 1993 (8 cells) 2003 (52 cells)	C23
Natural Gas Hot Water Pressure Washer 3	0.40 MMBtu/hr	HydroBlaster	5/3000EHGY	NA	1992	IA03c-NG
Natural Gas Hot Water Pressure Washer 4	0.40 MMBtu/hr	HydroBlaster	5/3000EHGY	NA	1992	IA03d-NG
Natural Gas SX Pressure Washer	0.34 MMBtu/hr	Sioux	H4N2750	1801018	TBD	IA39-NG
Natural Gas Hot Water Heater	6.842 MMBtu/hr	QuikWater	8000-2M/900	NA	1996	C23b
Natural Gas Electrolyte Heater	5.44 MMBtu/hr	NA	NA	NA	2003	G5
Lime Storage and Handling Operations						
Lime Storage Bin 1	500 tons	NA	NA	NA	1976	LHS-LSB1
Lime Storage Bin 1 Bin Vent	3,500 cfm	FARR	GS4	NA	NA	BV01

Equipment List
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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Lime Weigh Feeder 1	13 tph	NA	NA	NA	1976	LHS-LWF1
Lime Grinding Mill 1	13 tph	Denver	NA	NA	1976	LHS-GM1
Lime Slaker Conveyor 1	22 tph	TBD	TBD	TBD	TBD	355-CV-001
Lime Slaking Mill 1	22 tph	TBD	TBD	TBD	TBD	355-ML-001
Lime Slaking Scrubber 1	TBD	TBD	TBD	TBD	TBD	355-DC-001
Lime Slaker Conveyor 2	22 tph	TBD	TBD	TBD	TBD	355-CV-002
Lime Slaking Mill 2	22 tph	TBD	TBD	TBD	TBD	355-ML-002
Lime Slaking Scrubber 2	TBD	TBD	TBD	TBD	TBD	355-DC-002
Lime Porta Batches	9.60 tph total	Lhoist	NA	varies	varies	PoB1
Ammonium Nitrate Prill Delivery and Handling Operations						
Prill Bin 1	93.5 tons	NA	NA	NA	1990	PB1
Prill Bin 2	93.5 tons	NA	NA	NA	1990	PB2
Prill Bin 3	93.5 tons	NA	NA	NA	TBD	PB3
Prill Bin 4	100 tons	NA	NA	NA	TBD	PB4
Prill Bin 5	100 tons	NA	NA	NA	TBD	PB5
Portable Aggregate System						
Hopper with Vibrating Grizzly Feeder	850 tph	Deister	NA	NA	2015	PASHG

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Jaw Crusher	850 tph	Sandvik	CJ412	NA	2015	PASJC
Jaw Crusher Discharge Conveyor	850 tph	SPEC	12347	NA	2015	PASBC3
Screen Feed Conveyor	850 tph	Superior Industries, Inc.	48X70TFC	1387020	November 2018	PASBC1
Triple Deck Screen with Discharge Conveyor	850 tph	Deister	NA	NA	2015	PASSC
Cone Feed Conveyor	850 tph	Superior Industries, Inc.	NA	NA	2015	PASBC2
Cone Crusher with Discharge Conveyor	850 tph	Sandvik	CH440	NA	2015	PASCC
Coarse Stacking Conveyor	850 tph	Superior Industries, Inc.	NA	NA	2015	PASST1
Fines Stacking Conveyor	850 tph	Superior Industries, Inc.	NA	NA	2015	PASST2
Supplemental Portable Aggregate System						
Item 1 SPAS Vibrating Grizzly Feeder	540 tph	Astec	50"W x 24'L	TBD	TBD	SPAS_VGF1
Item 1 SPAS Jaw Crusher	540 tph	Astec	VS4450	TBD	TBD	SPAS_C1
Item 1 SPAS Conveyor 54x42	540 tph	Astec	54"W x 42'L	TBD	TBD	SPAS_CV1
Item 2 SPAS Conveyor 48x80	990 tph	Goodfellow	48"W x 80'L	TBD	TBD	SPAS_CV2
Item 3 SPAS Vibrating Screen	990 tph	Astec	8203	TBD	TBD	SPAS_S3

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Item 3 SPAS Conveyor 48x22	450 tph	Goodfellow	48"W x 22'L	TBD	TBD	SPAS_CV3
Item 4 SPAS Conveyor 42x30	450 tph	Goodfellow	42"W x 30'L	TBD	TBD	SPAS_CV4
Item 5 SPAS Conveyor 42x60	450 tph	Goodfellow	42"W x 60'L	TBD	TBD	SPAS_CV5
Item 6 SPAS Surge Bin with Belt Feeder	450 tph	Goodfellow	SBF1116-42	TBD	TBD	SPAS_SBF6
Item 7 SPAS Conveyor 42x60	450 tph	Goodfellow	42"W x 60'L	TBD	TBD	SPAS_CV7
Item 8 SPAS Cone Crusher	450 tph	Astec	K400+	TBD	TBD	SPAS_C8
Item 9 SPAS Conveyor 42x40	450 tph	Astec	42"W x 40'L	TBD	TBD	SPAS_CV9
Item 10 SPAS Conveyor 36x30	150 tph	Goodfellow	36"W x 30'L	TBD	TBD	SPAS_CV10
Item 11 SPAS Conveyor 36x300	150 tph	Goodfellow	36"W x 300'L	TBD	TBD	SPAS_CV11
Item 12 SPAS Radial Stacker 36x100	150 tph	Goodfellow	36"W x 100'L	TBD	TBD	SPAS_CV12
Item 13 SPAS Conveyor 36x60	350 tph	Goodfellow	36"W x 60'L	TBD	TBD	SPAS_CV13
Item 14 SPAS Splitter Box	350 tph	Goodfellow	SP54	TBD	TBD	SPAS_SB14

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Item 15 SPAS Conveyor 36x100	100 tph	Goodfellow	36"W x 100'L	TBD	TBD	SPAS_CV15
Item 16 SPAS Radial Stacker 36x100	100 tph	Goodfellow	36"W x 100'L	TBD	TBD	SPAS_CV16
Item 17 SPAS Conveyor 36x60	450 tph	Goodfellow	36"W x 60'L	TBD	TBD	SPAS_CV17
Item 18 SPAS Conveyor 36x100	450 tph	Goodfellow	36"W x 100'L	TBD	TBD	SPAS_CV18
Item 19 SPAS Radial Stacker 36x100	450 tph	Goodfellow	36"W x 100'L	TBD	TBD	SPAS_CV19
Storage Tanks and Parts Cleaning						
Gasoline Storage Tank 150 (GDF1)	12,000 gal	NA	8'D x 32'L	NA	1996	150
Gasoline Storage Tank FT-3 (GDF2)	12,000 gal	NA	8'D x 32'L	NA	2008	FT-3
Gasoline Storage Tank Sycamore TSF (GDF3)	12,000 gal	FlowTech Fueling	10'D x 20.5'L	NA	2023	GST-FF
Gasoline Storage Tank Mine Operations (GDF4)	12,000 gal	FlowTech Fueling	10'D x 20.5'L	NA	2025	GST-MO
Parts Cleaning Equipment	571 gal	NA	5'H x 5'D	NA	NA	PrtC
Xanthate Mixing and Storage Tanks	TBD	NA	NA	NA	NA	T-XMS

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Diesel Emergency ICE						
Mammoth Seepage Pond Diesel Emergency Generator	1,214 hp engine	Caterpillar	C27	TBD	2018	C41-D
Diesel Emergency Generator IA04-D	59 hp engine	Dayton	4W121	837532	1990	IA04-D
Diesel Emergency Generator IA24-D	762 hp engine	Caterpillar	D80-C15	C5E03893	2012	IA24-D
Diesel Emergency Generator IA25-D	90 hp engine	Caterpillar	D60-6 C4.4	E5A02346	2013	IA25-D
Diesel Emergency Generator IA28-D	900 hp engine	Caterpillar	C18	FST01186	2015	IA28-D
Diesel Emergency Generator IA36-D	161 hp engine	Caterpillar	D100-8 C4.4 DITA	TBD	2017 or 2018	IA36-D
Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03	75 hp engine	John Deere	4045TF290A	15006010	2012	IA42-D
Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04	100 hp engine	Perkins	1104C-44T	RG51208U165140L	2004	IA43-D
Copper Cleaner Flotation Diesel Emergency Generator IA44-D	480 hp engine	Caterpillar	C9	TBD	2020	IA44-D

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
CLP Diesel Emergency Generator IA47-D	85.8 hp engine	Caterpillar	C4.4	E3165768	2022	IA47-D
Mulholland Seepage Pond Diesel Emergency Generator IA48-D	398 hp engine	Caterpillar	C9	TBD	2021	IA48-D
Security Gate Diesel Emergency Generator IA49-D	33.5 hp engine	Generac Power Systems	RD02025ADAE	3013603396	2023	IA49-D
Command Center Diesel Emergency Generator IA54-D	480 hp engine	Caterpillar	D300 GC/C9	RE300501/S9P03521	2023	IA54-D
Propane Emergency ICE						
Propane Emergency Generator IA16-P	13 hp engine	Generac Power Systems	0062450	8375562	2014	IA16-P
Propane Emergency Generator IA19-P	60 hp engine	Generac Power Systems	54210	5036335	6/16/2008	IA19-P
Propane Emergency Generator IA21-P	80 hp engine	Generac Power Systems	SD050AG035	8596712	2014	IA21-P
Propane Emergency Generator IA31-P	30.52 hp engine	Generac Power Systems	64591	9613173	2015	IA31-P
Propane Emergency Generator IA32-P	32 hp engine	Generac Power Systems	005885-0	6216057	2011	IA32-P
Propane Emergency Generator IA37-P	113.18 hp engine	Caterpillar (PSI)	DG50-2 (PSI-GM 5.7L Turbo engine)	TBD	2019	IA37-P
Propane Emergency Generator IA38-P	113.18 hp engine	Caterpillar (PSI)	DG50-2 (PSI-GM 5.7L Turbo engine)	TBD	2019	IA38-P

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Sycamore Communication Tower Propane Emergency Generator IA55-P	103 hp engine	Kohler	KG50/KG6208	TBD	2022	IA55-P
Natural Gas Emergency ICE						
Natural Gas Emergency Generator IA13-NG	17 hp engine	Generac Power Systems	0052420	4479209	2005	IA13-NG
Natural Gas Emergency Generator IA22-NG	199 hp engine	Detroit Brand MTU DD	130-GC6NL	MX-121236-0708	2011	IA22-NG
Natural Gas Emergency Generator IA23-NG	192 hp engine	Generac Power Systems	QT1306KNAC	6346402	2011	IA23-NG
Natural Gas Emergency Generator IA30-NG	40 hp engine	Cummins	C20N6	F150834056	2015	IA30-NG
Natural Gas Emergency Generator IA33-NG	31.83 hp engine	Generac Power Systems	QT0224JNAX	6661542	2011	IA33-NG
Natural Gas Emergency Generator IA34-NG	32 hp engine	Generac Power Systems	RG02224ANAX	3000378055	2016	IA34-NG
Diesel Non-Emergency ICE						
Diesel Non-Emergency Generator IA14-DN	128 hp engine	Generac Power Systems	5161580200	2082580	2005	IA14-DN
Diesel Non-Emergency Generator IA15-DN	130 hp engine	Caterpillar	D80-6	D4B01969	2010	IA15-DN
Copper Creek Flood Basin Diesel Non-Emergency Pump Engine	28.2 hp engine	Perkins	CP4	NA	2012	IA45-DN

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Lime Porta Batch Diesel Non-Emergency Engine	135 hp engine	NA	NA	NA	2010	IA46-DN
Mill Compressor Diesel Non-Emergency Engine IA53-DN	577 hp engine	Caterpillar	C13B / XAS 1800 CD PACE	UVC400405	2024	IA53-DN
Kimberly Diesel Non-Emergency Pump Engine	300 hp engine	John Deere	6068	116704	2019	IA56-DN
Propane Non-Emergency ICE						
Propane Non-Emergency Generator IA10-PN	27 hp engine	Generac Power Systems	0053360	4636845	2006	IA10-PN
Propane Non-Emergency Generator IA18-PN	20 hp engine	Generac Power Systems	SG0047220	3702076	2003	IA18-PN
Miscellaneous Fuel Burning Equipment						
Diesel Pressure Washer IA35-D	0.3429 MMBtu/hr	Hotsy	1410SS	156517	12/2006	IA35-D
Natural Gas Mine Shop Pressure Washer 1	0.49 MMBtu/hr	EST	5231AEUL	NA	TBD	IA40-NG
Natural Gas Mine Shop Pressure Washer 2	0.49 MMBtu/hr	EST	5231AEUL	NA	TBD	IA41-NG
Natural Gas Small Space Heaters, Furnaces, and Boilers	9.499 MMBtu/hr (total)	varies	varies	varies	varies	IA26-NG

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Propane Small Space Heaters, Furnaces, and Boilers	0.95 MMBtu/hr (total)	varies	varies	varies	varies	IA27-P
Natural Gas Mill Wash Rack Pressure Washer IA51-NG	0.72045 MMBtu/hr	Hotsy	5735SS	TBD	2023	IA51-NG
Natural Gas Shower Facility Hot Water Heater IA52-NG	0.499 MMBtu/hr	CAMUS Hydronics	VTNW 0499 MSI HL	091928733	2023	IA52-NG
AOS1: Two Concentrator Operations						
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>						
Rock Breaker (AOS1)	N/A	NA	NA	NA	NA	RB
Primary Crusher 2 (AOS1)	7,000 tph	Metso	60x89, MK-III	TBD	2019	PC2
Dust Collector C51 (AOS1)	15,000 acfm	FARR	GS 36/30	NA	2025	C51
PC2 Surge Bin (AOS1)	640 tons	Designed by M3	NA	NA	2005	PC2SB
PC2 Apron Feeder (AOS1)	6,700 tph	Metso	84"	NA	2005	PC2AF
PC2 Dribble Conveyor (AOS1)	N/A	Turner Engineering	60"	NA	2005	PC2DC
Overland Conveyor 3A (AOS1)	7,600 tph	NA	60"	NA	2005	OC3A
Overland Conveyor 3 (AOS1)	7,600 tph	NA	54"	NA	1975	OC3

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Overland Conveyor 4 (AOS1)	7,600 tph	NA	54"	NA	1975	OC4
Radial Stacker 5 (AOS1)	7,600 tph	NA	60"	NA	1975	RST5
Free-Standing Stacker 6 (AOS1)	7,600 tph	NA	60"	NA	1990	FSS6
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>						
PC1 Rock Breaker (AOS1)	N/A	TBD	TBD	TBD	TBD	2110-RKB-0021
Primary Crusher 1 (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2110-CRG-0021
PC1 Dust Collector 1 (AOS1)	14,500 acfm	FARR	TBD	TBD	TBD	2140-DCD-0021
PC1 Surge Pocket (AOS1)	900 tons	TBD	TBD	TBD	TBD	2110-BIN-0021
PC1 Discharge Apron Feeder (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2110-FDA-0021
PC1 Discharge Conveyor (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2140-CVB-0021
PC1 Cross Country Conveyor 1 (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2140-CVB-0022
PC1 CCC1 Dust Collector 2 (AOS1)	16,700 acfm	FARR	TBD	TBD	TBD	2140-DCD-0022
PC1 Cross Country Conveyor 2 (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2140-CVB-0023

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
PC1 CCC2 Dust Collector 3 (AOS1)	16,700 acfm	FARR	TBD	TBD	TBD	2140-DCD-0023
PC1 Cross Country Conveyor 3 (AOS1)	8,000 tph	TBD	TBD	TBD	TBD	2140-CVB-0024
PC1 CCC3 Dust Collector 4 (AOS1)	16,700 acfm	FARR	TBD	TBD	TBD	2140-DCD-0024
<i>Second Concentrator Milling Operations (AOS1)</i>						
Coarse Ore Reclaim Feeder 1 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0101
Coarse Ore Reclaim Feeder 2 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0102
Coarse Ore Reclaim Feeder 3 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0103
Coarse Ore Reclaim Conveyor 1 (AOS1)	4,954 tph	TBD	TBD	TBD	TBD	2210-CVB-0101
Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	22,000 acfm	FARR	TBD	TBD	TBD	2210-DCD-0101
Coarse Ore Reclaim Feeder 4 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0201
Coarse Ore Reclaim Feeder 5 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0202
Coarse Ore Reclaim Feeder 6 (AOS1)	2,185 tph	TBD	TBD	TBD	TBD	2210-FDA-0203

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Coarse Ore Reclaim Conveyor 2 (AOS1)	4,954 tph	TBD	TBD	TBD	TBD	2210-CVB-0201
Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	22,000 acfm	FARR	TBD	TBD	TBD	2210-DCD-0201
AG Mill 1 (AOS1)	4,954 tph	TBD	TBD	TBD	TBD	2310-MLA-0101
AG Mill 1 Discharge Screen 1 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0101
AG Mill 1 Discharge Screen 2 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0102
AG Mill Rotatable Discharge Screen 1 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0103
Ball Mill 1 (AOS1)	4,376 tph	TBD	TBD	TBD	TBD	2340-MLB-0111
AG Mill 2 (AOS1)	4,954 tph	TBD	TBD	TBD	TBD	2310-MLA-0201
AG Mill 2 Discharge Screen 1 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0201
AG Mill 2 Discharge Screen 2 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0202
AG Mill Rotatable Discharge Screen 2 (AOS1)	2,477 tph	TBD	TBD	TBD	TBD	2310-SCN-0203
Ball Mill 2 (AOS1)	4,376 tph	TBD	TBD	TBD	TBD	2340-MLB-0211
Pebble Conveyor (AOS1)	4,080 tph	TBD	TBD	TBD	TBD	2330-CVB-0121

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
HPGR Feed Bin Feed Conveyor (AOS1)	4,080 tph	TBD	TBD	TBD	TBD	2330-CVB-0122
HPGR Feed Diverter (AOS1)	N/A	TBD	TBD	TBD	TBD	2330-DVT-0123
HPGR Feed Bin (AOS1)	11,400 ft3	TBD	TBD	TBD	TBD	2330-BIN-0130
HPGR Belt Feeder (AOS1)	4,080 tph	TBD	TBD	TBD	TBD	2330-FDB-0132
HPGR Feed Conveyor (AOS1)	5,626 tph	TBD	TBD	TBD	TBD	2330-CVB-0134
High Pressure Grinding Roll (AOS1)	5,626 tph	TBD	TBD	TBD	TBD	2330-CRH-0140
HPGR Discharge Dust Collector 7 (AOS1)	23,000 acfm	FARR	TBD	TBD	TBD	2330-DCD-0141
HPGR Discharge Conveyor 1 (AOS1)	5,626 tph	TBD	TBD	TBD	TBD	2330-CVB-0141
HPGR Discharge Conveyor 2 (AOS1)	5,626 tph	TBD	TBD	TBD	TBD	2330-CVB-0142
HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	27,000 acfm	FARR	TBD	TBD	TBD	2330-DCD-0142
HPGR Product Bin (AOS1)	20,700 ft3	TBD	TBD	TBD	TBD	2330-BIN-0150
HPGR Product Bin Dust Collector 9 (AOS1)	25,000 acfm	FARR	TBD	TBD	TBD	2330-DCD-0150

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HPGR Product Recycle Feeder (AOS1)	1,546 tph	TBD	TBD	TBD	TBD	2330-FDB-0152
HPGR Product Feeder 1 (AOS1)	2,040 tph	TBD	TBD	TBD	TBD	2330-FDB-0163
HPGR Product Feeder 2 (AOS1)	2,040 tph	TBD	TBD	TBD	TBD	2330-FDB-0263
HPGR Product Return Conveyor 1 (AOS1)	2,040 tph	TBD	TBD	TBD	TBD	2330-CVB-0163
HPGR Product Transfer Dust Collector 10 (AOS1)	10,000 acfm	FARR	TBD	TBD	TBD	2330-DCD-0163
HPGR Product Return Conveyor 2 (AOS1)	2,040 tph	TBD	TBD	TBD	TBD	2330-CVB-0263
HPGR Product Transfer Dust Collector 11 (AOS1)	10,000 acfm	FARR	TBD	TBD	TBD	2330-DCD-0263
<i>Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)</i>						
Second Concentrator Bulk Flotation Equipment (AOS1)	59.1 tph total conc.	TBD	TBD	TBD	TBD	S-FLO-B
Second Concentrator Regrind Mill 1 (AOS1)	250 tph	TBD	TBD	TBD	TBD	2420-MLV-0303
Second Concentrator Regrind Mill 2 (AOS1)	250 tph	TBD	TBD	TBD	TBD	2420-MLV-0304

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Second Concentrator Molybdenum Flotation Equipment (AOS1)	59.1 tph total conc.	NA	NA	NA	varies	S-FLO-M
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>						
Copper Filter Feed Tank Trash Screen (AOS1)	57 tph	TBD	TBD	TBD	TBD	2630-SCN-0410
Molybdenum Thickener Trash Screen (AOS1)	N/A	TBD	TBD	TBD	TBD	2520-SCN-0517
Molybdenum Concentrate Filter Discharge Hopper 1 (AOS1)	N/A	TBD	TBD	TBD	TBD	2520-HPR-0576
Molybdenum Concentrate Filter Discharge Hopper 2 (AOS1)	N/A	TBD	TBD	TBD	TBD	2520-HPR-0577
Molybdenum Concentrate Dryer Screw Feeder (AOS1)	2.1 tph	TBD	TBD	TBD	TBD	2520-CVS-0576
Molybdenum Concentrate Dryer (AOS1)	2.1 tph	Holoflite	TBD	TBD	TBD	2520-DRY-0576
Molybdenum Dryer Wet Scrubber System (AOS1)	337 acfm	TBD	TBD	TBD	TBD	2520-SCU-0576
Dried Molybdenum Concentrate Storage Bin (AOS1)	2.6 tons	TBD	TBD	TBD	TBD	2520-BIN-0576

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Molybdenum Concentrate Bagging System (AOS1)	2.1 tph	TBD	TBD	TBD	TBD	2520-SYS-0576
<i>Second Concentrator Lime and Other Regent Operations (AOS1)</i>						
Second Concentrator Lime Silo (AOS1)	617 tons	TBD	TBD	TBD	TBD	2360-SLO-0140
Second Concentrator Lime Silo Baghouse (AOS1)	590 ft3	TBD	TBD	TBD	TBD	2360-BGH-0141
Second Concentrator Lime Screw Feeder (AOS1)	19.5 tph	TBD	TBD	TBD	TBD	2360-FDR-0140
Second Concentrator Lime Slaker (AOS1)	11.36 tph	TBD	TBD	TBD	TBD	2360-MLV-0140
Second Concentrator Lime System Scrubber (AOS1)	4,400 scfm	TBD	TBD	TBD	TBD	2360-SCU-0140
Tailings Flocculant Bag Breaker Bin (AOS1)	2.0 tons	TBD	TBD	TBD	TBD	2720-BIN-0720
Tailings Flocculant Screw Feeder (AOS1)	0.83 tph	TBD	TBD	TBD	TBD	2720-FDR-0720
Concentrate Flocculant Bag Breaker Bin (AOS1)	1.0 tons	TBD	TBD	TBD	TBD	2510-BIN-0580
Concentrate Flocculant Screw Feeder (AOS1)	0.06 tph	TBD	TBD	TBD	TBD	2510-FDR-0580

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Xanthate Mix Tank (AOS1)	1,575 ft3	TBD	TBD	TBD	TBD	2440-TNK-0150
Xanthate Holding Tank (AOS1)	2,040 ft3	TBD	TBD	TBD	TBD	2440-TNK-0152
Test Reagent Mix Tank (AOS1)	1,575 ft3	TBD	TBD	TBD	TBD	2440-TNK-0160
Test Reagent Holding Tank (AOS1)	2,040 ft3	TBD	TBD	TBD	TBD	2440-TNK-0162
NaHS Storage Tank (AOS1)	7,540 ft3	TBD	TBD	TBD	TBD	2520-TNK-0591
NaHS Distribution Tank (AOS1)	700 ft3	TBD	TBD	TBD	TBD	2520-TNK-0592
Second Concentrator NaHS System Scrubber (AOS1)	735 acfm	TBD	TBD	TBD	TBD	2520-SCU-0591
<i>Second Concentrator Prill Handling Operations (AOS1)</i>						
Prill Bin 6 (AOS1)	100 tons	NA	NA	NA	TBD	PB6
<i>Second Concentrator Emergency ICE (AOS1)</i>						
Second Concentrator Diesel Emergency Generator 1 (AOS1)	609 hp engine	Caterpillar	C13	TBD	TBD	2440-GEN-0101
Second Concentrator Diesel Emergency Generator 2 (AOS1)	762 hp engine	Caterpillar	C15	TBD	TBD	2500-GEN-0501

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Second Concentrator Propane Emergency Generator 1 (AOS1)	84.70 hp engine	Cummins	QSJ5.9G-G1	TBD	2023	3650-GEN-0801
Second Concentrator Propane Emergency Generator 2 (AOS1)	84.70 hp engine	Cummins	QSJ5.9G-G1	TBD	2023	3650-GEN-0802
AOS3: Upgrades to Milling Operations						
<i>Grinding Line 1</i>						
GL1 Belt Conveyor B (AOS3)	1,300 tph	NA	48"	NA	1976	GL1-BCB
GL1 Secondary Crusher (AOS3)	1,450 tph	Metso	MP1250	TBD	TBD	GL1-SC1
<i>Grinding Line 2</i>						
GL2 Belt Conveyor B (AOS3)	1,300 tph	NA	48"	NA	1976	GL2-BCB
GL2 Secondary Crusher (AOS3)	1,450 tph	Metso	MP1250	TBD	TBD	GL2-SC2
<i>Grinding Line 3</i>						
GL3 Belt Conveyor B (AOS3)	1,300 tph	NA	48"	NA	1976	GL3-BCB
GL3 Secondary Crusher (AOS3)	1,450 tph	Metso	MP1250	TBD	TBD	GL3-SC3

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Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
<i>Grinding Line 4</i>						
GL4 Belt Conveyor B (AOS3)	1,300 tph	NA	48"	NA	1981	GL4-BCB
GL4 Secondary Crusher (AOS3)	1,450 tph	Metso	MP1250	TBD	TBD	GL4-SC4
<i>Grinding Line 5</i>						
GL5 Belt Conveyor B (AOS3)	1,300 tph	NA	48"	NA	1988	GL5-BCB
GL5 Secondary Crusher (AOS3)	1,450 tph	Metso	MP1250	TBD	TBD	GL5-SC5
AOS5: Emergency Grizzly Systems						
EGS Bar Grizzly 1 (AOS5)	5,000 tph	TBD	TBD	TBD	TBD	EG1
EGS Bar Grizzly 2 (AOS5)		TBD	TBD	TBD	TBD	EG2
EGS Apron Feeder 1 (AOS5)	5,000 tph	TBD	TBD	TBD	TBD	EGAF1
EGS Apron Feeder 2 (AOS5)		TBD	TBD	TBD	TBD	EGAF2
EGS Belt Conveyor 1 (AOS5)	5,000 tph	TBD	TBD	TBD	TBD	EGBC1
EGS Belt Conveyor 2 (AOS5)		TBD	TBD	TBD	TBD	EGBC2

* Only includes equipment subject to permitting.

APPENDIX C **EMISSION SOURCE FORM**

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
Mining Operations							
026-3	Drilling	PM (w/ CPM)	260.00	58.50	--	--	--
		PM (w/o CPM)	260.00	58.50	--	--	--
		PM ₁₀	156.00	35.10	--	--	--
		PM _{2.5}	28.89	6.50	--	--	--
		Lead	3.61E-03	8.13E-04	--	--	--
		Total HAPs ^c	6.20E-02	1.39E-02	--	--	--
026-2	Blasting	PM (w/ CPM)	1,252.20	119.12	--	--	--
		PM (w/o CPM)	1,252.20	119.12	--	--	--
		PM ₁₀	651.14	61.94	--	--	--
		PM _{2.5}	37.57	3.57	--	--	--
		CO	4,064.40	914.49	--	--	--
		NO _x	180.00	40.50	--	--	--
		SO ₂	1.23	0.28	--	--	--
		CO ₂	38,066.47	8,564.96	--	--	--
		CH ₄	1.49	0.33	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
026-2 (cont'd)	Blasting (cont'd)	N ₂ O	0.29	0.07	--	--	--
		CO _{2e} ^a	38,185.86	8,591.82	--	--	--
		Lead	1.72E-02	1.91E-03	--	--	--
		Total HAPs ^c	3.81E-01	5.21E-02	--	--	--
022-1	Haul Truck Travel Inside the Pit	PM (w/ CPM)	533.78	1,142.39	--	--	--
		PM (w/o CPM)	533.78	1,142.39	--	--	--
		PM ₁₀	134.89	288.69	--	--	--
		PM _{2.5}	13.49	28.87	--	--	--
		Lead	3.13E-03	6.69E-03	--	--	--
		Total HAPs ^c	5.36E-02	1.15E-01	--	--	--
022-2	Haul Truck Travel Outside the Pit	PM (w/ CPM)	177.93	380.80	--	--	--
		PM (w/o CPM)	177.93	380.80	--	--	--
		PM ₁₀	44.96	96.23	--	--	--
		PM _{2.5}	4.50	9.62	--	--	--
		Lead	1.04E-03	2.23E-03	--	--	--
		Total HAPs ^c	1.79E-02	3.82E-02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
023-3	Other Vehicle Travel	PM (w/ CPM)	2,120.93	5,713.73	--	--	--
		PM (w/o CPM)	2,120.93	5,713.73	--	--	--
		PM ₁₀	535.97	1,443.88	--	--	--
		PM _{2.5}	53.60	144.39	--	--	--
		Lead	1.24E-02	3.35E-02	--	--	--
		Total HAPs ^c	2.13E-01	5.74E-01	--	--	--
023-1	Dozer Operation	PM (w/ CPM)	141.54	345.20	--	--	--
		PM (w/o CPM)	141.54	345.20	--	--	--
		PM ₁₀	25.69	62.66	--	--	--
		PM _{2.5}	14.86	36.25	--	--	--
		Lead	5.95E-04	1.45E-03	--	--	--
		Total HAPs ^c	1.02E-02	2.49E-02	--	--	--
023-2	Road Grader Operation	PM (w/ CPM)	10.58	20.91	--	--	--
		PM (w/o CPM)	10.58	20.91	--	--	--
		PM ₁₀	3.30	6.53	--	--	--
		PM _{2.5}	0.33	0.65	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
023-2 (cont'd)	Road Grader Operation (cont'd)	Lead	7.66E-05	1.51E-04	--	--	--
		Total HAPs ^c	1.31E-03	2.60E-03	--	--	--
021-1	Loading Mined Material into Haul Trucks	PM (w/ CPM)	82.80	298.91	--	--	--
		PM (w/o CPM)	82.80	298.91	--	--	--
		PM ₁₀	39.16	141.37	--	--	--
		PM _{2.5}	5.93	21.41	--	--	--
		Lead	9.07E-04	3.28E-03	--	--	--
		Total HAPs ^c	1.56E-02	5.62E-02	--	--	--
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	PM (w/ CPM)	34.91	89.14	--	--	--
		PM (w/o CPM)	34.91	89.14	--	--	--
		PM ₁₀	16.51	42.16	--	--	--
		PM _{2.5}	2.50	6.38	--	--	--
		Lead	3.14E-04	8.01E-04	--	--	--
		Total HAPs ^c	8.09E-03	2.07E-02	--	--	--
045-3	Unloading Ore to Leaching Areas	PM (w/ CPM)	9.32	40.80	--	--	--
		PM (w/o CPM)	9.32	40.80	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
045-3 (cont'd)	Unloading Ore to Leaching Areas (cont'd)	PM ₁₀	4.41	19.30	--	--	--
		PM _{2.5}	0.67	2.92	--	--	--
		Lead	5.64E-05	2.47E-04	--	--	--
		Total HAPs ^c	9.69E-04	4.24E-03	--	--	--
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	PM (w/ CPM)	38.58	168.96	--	--	--
		PM (w/o CPM)	38.58	168.96	--	--	--
		PM ₁₀	18.25	79.92	--	--	--
		PM _{2.5}	2.76	12.10	--	--	--
		Lead	5.09E-04	2.23E-03	--	--	--
		Total HAPs ^c	7.14E-03	3.13E-02	--	--	--
Primary Crushing and Overland Conveying Operations							
001-1	Processes Controlled by Scrubber C18	PM (w/ CPM)	1.27	5.58	--	--	--
		PM (w/o CPM)	1.27	5.58	--	--	--
		PM ₁₀	1.27	5.58	--	--	--
		PM _{2.5}	1.27	5.58	--	--	--
		Lead	2.42E-05	1.06E-04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-1 (cont'd)	Processes Controlled by Scrubber C18 (cont'd)	Total HAPs °	6.24E-04	2.73E-03	--	--	--
001-5	Processes Controlled by Dust Collector C51	PM (w/ CPM)	1.74	7.60	--	--	--
		PM (w/o CPM)	1.74	7.60	--	--	--
		PM ₁₀	1.74	7.60	--	--	--
		PM _{2.5}	1.74	7.60	--	--	--
		Lead	3.30E-05	1.44E-04	--	--	--
		Total HAPs °	8.50E-04	3.72E-03	--	--	--
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	PM (w/ CPM)	2.21	9.54	--	--	--
		PM (w/o CPM)	2.21	9.54	--	--	--
		PM ₁₀	1.04	4.51	--	--	--
		PM _{2.5}	0.16	0.68	--	--	--
		Lead	1.98E-05	8.57E-05	--	--	--
		Total HAPs °	5.11E-04	2.21E-03	--	--	--
001-8	Overland Conveyor 3 to Overland Conveyor 4	PM (w/ CPM)	2.21	9.54	--	--	--
		PM (w/o CPM)	2.21	9.54	--	--	--
		PM ₁₀	1.04	4.51	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-8 (cont'd)	Overland Conveyor 3 to Overland Conveyor 4 (cont'd)	PM _{2.5}	0.16	0.68	--	--	--
		Lead	1.98E-05	8.57E-05	--	--	--
		Total HAPs ^c	5.11E-04	2.21E-03	--	--	--
001-9	Overland Conveyor 4 to Radial Stacker 5	PM (w/ CPM)	2.21	9.54	--	--	--
		PM (w/o CPM)	2.21	9.54	--	--	--
		PM ₁₀	1.04	4.51	--	--	--
		PM _{2.5}	0.16	0.68	--	--	--
		Lead	1.98E-05	8.57E-05	--	--	--
		Total HAPs ^c	5.11E-04	2.21E-03	--	--	--
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	PM (w/ CPM)	--	71.31	--	--	--
		PM (w/o CPM)	--	71.31	--	--	--
		PM ₁₀	--	33.73	--	--	--
		PM _{2.5}	--	5.11	--	--	--
		Lead	--	6.41E-04	--	--	--
		Total HAPs ^c	--	1.65E-02	--	--	--
001-10	Radial Stacker 5 to Free-Standing Stacker 6	PM (w/ CPM)	20.62	17.83	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-10 (cont'd)	Radial Stacker 5 to Free-Standing Stacker 6 (cont'd)	PM (w/o CPM)	20.62	17.83	--	--	--
		PM ₁₀	9.75	8.43	--	--	--
		PM _{2.5}	1.48	1.28	--	--	--
		Lead	1.85E-04	1.60E-04	--	--	--
		Total HAPs ^c	4.78E-03	4.13E-03	--	--	--
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	PM (w/ CPM)	20.62	17.83	--	--	--
		PM (w/o CPM)	20.62	17.83	--	--	--
		PM ₁₀	9.75	8.43	--	--	--
		PM _{2.5}	1.48	1.28	--	--	--
		Lead	1.85E-04	1.60E-04	--	--	--
		Total HAPs ^c	4.78E-03	4.13E-03	--	--	--
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	PM (w/ CPM)	2.07	9.05	--	--	--
		PM (w/o CPM)	2.07	9.05	--	--	--
		PM ₁₀	1.03	4.52	--	--	--
		PM _{2.5}	0.15	0.68	--	--	--
		Lead	1.96E-05	8.60E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-1 (cont'd)	Wind Erosion of Coarse Ore Stockpiles 1/5 (cont'd)	Total HAPs ^c	5.06E-04	2.22E-03	--	--	--
Milling Operations							
002-1	Processes Controlled by GL1 Dust Collector C1	PM (w/ CPM)	1.59	6.98	--	--	--
		PM (w/o CPM)	1.59	6.98	--	--	--
		PM ₁₀	1.59	6.98	--	--	--
		PM _{2.5}	1.59	6.98	--	--	--
		Lead	3.03E-05	1.33E-04	--	--	--
		Total HAPs ^c	7.81E-04	3.42E-03	--	--	--
002-2	Processes Controlled by GL2 Dust Collector C2	PM (w/ CPM)	1.59	6.98	--	--	--
		PM (w/o CPM)	1.59	6.98	--	--	--
		PM ₁₀	1.59	6.98	--	--	--
		PM _{2.5}	1.59	6.98	--	--	--
		Lead	3.03E-05	1.33E-04	--	--	--
		Total HAPs ^c	7.81E-04	3.42E-03	--	--	--
002-3	Processes Controlled by GL3 Dust Collector DC3	PM (w/ CPM)	1.59	6.98	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
002-3 (cont'd)	Processes Controlled by GL3 Dust Collector DC3 (cont'd)	PM (w/o CPM)	1.59	6.98	--	--	--
		PM ₁₀	1.59	6.98	--	--	--
		PM _{2.5}	1.59	6.98	--	--	--
		Lead	3.03E-05	1.33E-04	--	--	--
		Total HAPs ^c	7.81E-04	3.42E-03	--	--	--
002-4	Processes Controlled by GL4 Dust Collector DC4	PM (w/ CPM)	1.59	6.98	--	--	--
		PM (w/o CPM)	1.59	6.98	--	--	--
		PM ₁₀	1.59	6.98	--	--	--
		PM _{2.5}	1.59	6.98	--	--	--
		Lead	3.03E-05	1.33E-04	--	--	--
		Total HAPs ^c	7.81E-04	3.42E-03	--	--	--
002-6	Processes Controlled by GL5 Dust Collector DC5	PM (w/ CPM)	0.51	2.25	--	--	--
		PM (w/o CPM)	0.51	2.25	--	--	--
		PM ₁₀	0.51	2.25	--	--	--
		PM _{2.5}	0.51	2.25	--	--	--
		Lead	9.77E-06	4.28E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
002-6 (cont'd)	Processes Controlled by GL5 Dust Collector DC5 (cont'd)	Total HAPs ^c	2.52E-04	1.10E-03	--	--	--
Bulk and Molybdenum Flotation Operations							
044-1	Bulk and Molybdenum Flotation Equipment	H ₂ S	2.15	9.43	--	--	--
		VOC	1.17	5.11	--	--	--
		Total HAPs ^c	1.03E-01	4.50E-01	--	--	--
Copper Concentrate Processing and Loading Operations							
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	PM (w/ CPM)	0.01	0.05	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.006	0.02	--	--	--
		PM _{2.5}	0.0009	0.004	--	--	--
		Lead	4.78E-06	2.09E-05	--	--	--
		Total HAPs ^c	3.89E-05	1.71E-04	--	--	--
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	PM (w/ CPM)	0.01	0.05	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.006	0.02	--	--	--
		PM _{2.5}	0.0009	0.004	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
006-5 (cont'd)	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor (cont'd)	Lead	4.78E-06	2.09E-05	--	--	--
		Total HAPs ^c	3.89E-05	1.71E-04	--	--	--
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	PM (w/ CPM)	0.01	0.05	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.006	0.02	--	--	--
		PM _{2.5}	0.0009	0.004	--	--	--
		Lead	4.78E-06	2.09E-05	--	--	--
		Total HAPs ^c	3.89E-05	1.71E-04	--	--	--
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	PM (w/ CPM)	0.01	0.05	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.006	0.02	--	--	--
		PM _{2.5}	0.0009	0.004	--	--	--
		Lead	4.78E-06	2.09E-05	--	--	--
		Total HAPs ^c	3.89E-05	1.71E-04	--	--	--
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	PM (w/ CPM)	0.67	2.94	--	--	--
		PM (w/o CPM)	0.67	2.94	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-5 (cont'd)	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (cont'd)	PM ₁₀	0.34	1.47	--	--	--
		PM _{2.5}	0.05	0.22	--	--	--
		Lead	2.83E-04	1.24E-03	--	--	--
		Total HAPs ^c	2.30E-03	1.01E-02	--	--	--
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	PM (w/ CPM)	0.11	0.49	--	--	--
		PM (w/o CPM)	0.11	0.49	--	--	--
		PM ₁₀	0.05	0.23	--	--	--
		PM _{2.5}	0.01	0.04	--	--	--
		Lead	4.47E-05	1.96E-04	--	--	--
		Total HAPs ^c	3.64E-04	1.59E-03	--	--	--
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	PM (w/ CPM)	9.68	42.40	--	--	--
		PM (w/o CPM)	9.68	42.40	--	--	--
		PM ₁₀	4.84	21.20	--	--	--
		PM _{2.5}	0.73	3.18	--	--	--
		Lead	4.07E-03	1.78E-02	--	--	--
		Total HAPs ^c	3.32E-02	1.45E-01	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
006-7	All Copper Concentrate Stockpiles to Trucks	PM (w/ CPM)	0.11	0.49	--	--	--
		PM (w/o CPM)	0.11	0.49	--	--	--
		PM ₁₀	0.05	0.23	--	--	--
		PM _{2.5}	0.01	0.04	--	--	--
		Lead	4.47E-05	1.96E-04	--	--	--
		Total HAPs ^c	3.64E-04	1.59E-03	--	--	--
Molybdenum Concentrate Processing and Bagging Operations							
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	PM (w/ CPM)	0.0003	0.001	--	--	--
		PM (w/o CPM)	0.0003	0.001	--	--	--
		PM ₁₀	0.0001	0.0006	--	--	--
		PM _{2.5}	0.00002	0.00009	--	--	--
		Lead	2.97E-08	1.30E-07	--	--	--
		Total HAPs ^c	6.73E-07	2.95E-06	--	--	--
Tailings Operations							
027-3	Wind Erosion of Tailings	PM (w/ CPM)	98.82	432.83	--	--	--
		PM (w/o CPM)	98.82	432.83	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-3 (cont'd)	Wind Erosion of Tailings (cont'd)	PM ₁₀	49.41	216.42	--	--	--
		PM _{2.5}	7.41	32.46	--	--	--
		Lead	5.44E-04	2.38E-03	--	--	--
		Total HAPs ^c	2.31E-02	1.01E-01	--	--	--
Concentrate Leach Plant							
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	PM (w/ CPM)	0.19	0.82	--	--	--
		PM (w/o CPM)	0.05	0.20	--	--	--
		PM ₁₀	0.19	0.82	--	--	--
		PM _{2.5}	0.19	0.82	--	--	--
		CO	2.06	9.02	--	--	--
		NO _x	2.45	10.74	--	--	--
		SO ₂	0.01	0.06	--	--	--
		VOC	0.13	0.59	--	--	--
		CO ₂	2,924.43	12,809.01	--	--	--
		CH ₄	0.06	0.24	--	--	--
		N ₂ O	0.006	0.02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
042-10 (cont'd)	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr) (cont'd)	CO _{2e} ^a	2,927.44	12,822.17	--	--	--
		Lead	1.23E-05	5.37E-05	--	--	--
		Total HAPs ^c	4.63E-02	2.03E-01	--	--	--
042-11	CLP Cooling Tower	PM (w/ CPM)	0.35	1.54	--	--	--
		PM (w/o CPM)	0.35	1.54	--	--	--
		PM ₁₀	0.34	1.48	--	--	--
		PM _{2.5}	0.06	0.28	--	--	--
		Lead	3.37E-09	1.48E-08	--	--	--
		Total HAPs ^c	1.72E-07	7.52E-07	--	--	--
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	PM (w/ CPM)	2.75	12.05	--	--	--
		PM (w/o CPM)	--	--	--	--	--
		PM ₁₀	2.75	12.05	--	--	--
		PM _{2.5}	2.75	12.05	--	--	--
		VOC	2.10	9.20	--	--	--
		H ₂ SO ₄	0.68	2.98	--	--	--
		Greatest Single HAP ^b	2.88E-02	1.26E-01	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
042-4 (cont'd)	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03 (cont'd)	Lead	6.27E-04	2.74E-03	--	--	--
		Total HAPs ^c	1.07E-01	4.70E-01	--	--	--
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	PM (w/ CPM)	0.0002	0.001	--	--	--
		PM (w/o CPM)	0.0002	0.001	--	--	--
		PM ₁₀	0.0001	0.0005	--	--	--
		PM _{2.5}	0.00002	0.00007	--	--	--
		Lead	2.38E-08	1.04E-07	--	--	--
		Total HAPs ^c	2.91E-06	1.28E-05	--	--	--
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	PM (w/ CPM)	0.0002	0.001	--	--	--
		PM (w/o CPM)	0.0002	0.001	--	--	--
		PM ₁₀	0.0001	0.0005	--	--	--
		PM _{2.5}	0.00002	0.00007	--	--	--
		Lead	2.38E-08	1.04E-07	--	--	--
		Total HAPs ^c	2.91E-06	1.28E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	PM (w/ CPM)	0.11	0.48	--	--	--
		PM (w/o CPM)	0.11	0.48	--	--	--
		PM ₁₀	0.05	0.23	--	--	--
		PM _{2.5}	0.01	0.03	--	--	--
		Lead	1.17E-05	5.14E-05	--	--	--
		Total HAPs ^c	1.44E-03	6.30E-03	--	--	--
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	PM (w/ CPM)	0.09	0.41	--	--	--
		PM (w/o CPM)	0.09	0.41	--	--	--
		PM ₁₀	0.09	0.41	--	--	--
		PM _{2.5}	0.09	0.41	--	--	--
		Lead	2.13E-05	9.34E-05	--	--	--
		Total HAPs ^c	2.62E-03	1.15E-02	--	--	--
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	PM (w/ CPM)	0.04	0.17	--	--	--
		PM (w/o CPM)	0.01	0.04	--	--	--
		PM ₁₀	0.04	0.17	--	--	--
		PM _{2.5}	0.04	0.17	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-3 (cont'd)	Natural Gas Steam Generator (5.23 MMBtu/hr) (cont'd)	CO	0.43	1.89	--	--	--
		NO _x	0.51	2.25	--	--	--
		SO ₂	0.003	0.01	--	--	--
		VOC	0.03	0.12	--	--	--
		CO ₂	611.79	2,679.65	--	--	--
		CH ₄	0.01	0.05	--	--	--
		N ₂ O	0.001	0.005	--	--	--
		CO ₂ e ^a	612.42	2,682.40	--	--	--
		Lead	2.56E-06	1.12E-05	--	--	--
		Total HAPs ^c	9.68E-03	4.24E-02	--	--	--
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	PM (w/ CPM)	0.05	0.21	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.05	0.21	--	--	--
		PM _{2.5}	0.05	0.21	--	--	--
		CO	0.54	2.34	--	--	--
		NO _x	0.64	2.79	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-4 (cont'd)	Natural Gas Deoiler Heater (6.5 MMBtu/hr) (cont'd)	SO ₂	0.004	0.02	--	--	--
		VOC	0.04	0.15	--	--	--
		CO ₂	760.35	3,330.34	--	--	--
		CH ₄	0.01	0.06	--	--	--
		N ₂ O	0.001	0.006	--	--	--
		CO ₂ e ^a	761.13	3,333.76	--	--	--
		Lead	3.19E-06	1.40E-05	--	--	--
		Total HAPs ^c	1.20E-02	5.27E-02	--	--	--
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	PM (w/ CPM)	0.13	0.56	--	--	--
		PM (w/o CPM)	0.03	0.14	--	--	--
		PM ₁₀	0.13	0.56	--	--	--
		PM _{2.5}	0.13	0.56	--	--	--
		CO	0.82	3.59	--	--	--
		NO _x	0.13	0.57	--	--	--
		SO ₂	0.25	1.10	--	--	--
		VOC	1.36	5.96	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-5 (cont'd)	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare (cont'd)	CO ₂	181.31	794.16	--	--	--
		CH ₄	0.003	0.01	--	--	--
		N ₂ O	0.0003	0.001	--	--	--
		CO ₂ e ^a	181.50	794.97	--	--	--
		Lead	2.97E-05	1.30E-04	--	--	--
		Total HAPs ^c	6.42E-03	2.81E-02	--	--	--
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	PM (w/ CPM)	0.17	0.74	--	--	--
		PM (w/o CPM)	0.17	0.74	--	--	--
		PM ₁₀	0.17	0.74	--	--	--
		PM _{2.5}	0.17	0.74	--	--	--
		Lead	3.84E-05	1.68E-04	--	--	--
		Total HAPs ^c	4.71E-03	2.06E-02	--	--	--
047-11	MoO ₃ Inclined Screw Conveyor to MoO ₃ Bags	PM (w/ CPM)	0.0004	0.002	--	--	--
		PM (w/o CPM)	0.0004	0.002	--	--	--
		PM ₁₀	0.0002	0.0009	--	--	--
		PM _{2.5}	0.00003	0.0001	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-11 (cont'd)	MoO3 Inclined Screw Conveyor to MoO3 Bags (cont'd)	Lead	3.71E-08	1.63E-07	--	--	--
		Total HAPs ^c	4.92E-06	2.16E-05	--	--	--
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	PM (w/ CPM)	0.13	0.02	--	--	--
		PM (w/o CPM)	0.13	0.02	--	--	--
		PM ₁₀	0.05	0.005	--	--	--
		PM _{2.5}	0.007	0.0008	--	--	--
047-7	Settling Tank	VOC	0.0006	0.003	--	--	--
		Total HAPs ^c	5.61E-05	2.46E-04	--	--	--
047-8	Solution Extraction - Molybdenum Pressure Leaching	VOC	0.09	0.38	--	--	--
		Total HAPs ^c	1.91E-02	8.39E-02	--	--	--
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	PM (w/ CPM)	9.55	0.08	--	--	--
		PM (w/o CPM)	9.55	0.08	--	--	--
		PM ₁₀	4.52	0.04	--	--	--
		PM _{2.5}	0.68	0.005	--	--	--
		Lead	1.03E-03	8.23E-06	--	--	--
		Total HAPs ^c	1.26E-01	1.01E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	PM (w/ CPM)	9.55	0.08	--	--	--
		PM (w/o CPM)	9.55	0.08	--	--	--
		PM ₁₀	4.52	0.04	--	--	--
		PM _{2.5}	0.68	0.005	--	--	--
		Lead	1.03E-03	8.23E-06	--	--	--
		Total HAPs ^c	1.26E-01	1.01E-03	--	--	--
Solution Extraction/Electrowinning Operations							
029-1	Solution Extraction - Main Systems	VOC	1.49	6.52	--	--	--
		Total HAPs ^c	3.26E-01	1.43E+00	--	--	--
011-1	Electrowinning - Main System	PM (w/ CPM)	0.83	3.62	--	--	--
		PM (w/o CPM)	0.83	3.62	--	--	--
		PM ₁₀	0.83	3.62	--	--	--
		PM _{2.5}	0.83	3.62	--	--	--
		H ₂ SO ₄	0.83	3.62	--	--	--
		Total HAPs ^c	1.24E-04	5.43E-04	--	--	--
029-2	Raffinate Pond	VOC	2.04	8.92	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
029-2 (cont'd)	Raffinate Pond (cont'd)	Total HAPs ^c	4.46E-01	1.95E+00	--	--	--
029-3	Organic Tank TK-22	VOC	0.04	0.19	--	--	--
		Total HAPs ^c	9.37E-03	4.10E-02	--	--	--
029-4	Organic Mix Tank TK-13	VOC	0.05	0.20	--	--	--
		Total HAPs ^c	1.02E-02	4.47E-02	--	--	--
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	PM (w/ CPM)	0.0030	0.01	--	--	--
		PM (w/o CPM)	0.0007	0.003	--	--	--
		PM ₁₀	0.003	0.01	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		CO	0.03	0.14	--	--	--
		NO _x	0.04	0.17	--	--	--
		SO ₂	0.0002	0.001	--	--	--
		VOC	0.002	0.009	--	--	--
		CO ₂	46.79	204.94	--	--	--
		CH ₄	0.0009	0.004	--	--	--
		N ₂ O	0.00009	0.0004	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-49 (cont'd)	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr) (cont'd)	CO _{2e} ^a	46.84	205.15	--	--	--
		Lead	1.96E-07	8.59E-07	--	--	--
		Total HAPs ^c	7.41E-04	3.24E-03	--	--	--
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	PM (w/ CPM)	0.003	0.01	--	--	--
		PM (w/o CPM)	0.0007	0.003	--	--	--
		PM ₁₀	0.003	0.01	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		CO	0.03	0.14	--	--	--
		NO _x	0.04	0.17	--	--	--
		SO ₂	0.0002	0.001	--	--	--
		VOC	0.002	0.009	--	--	--
		CO ₂	46.79	204.94	--	--	--
		CH ₄	0.0009	0.004	--	--	--
		N ₂ O	0.00009	0.0004	--	--	--
		CO _{2e} ^a	46.84	205.15	--	--	--
		Lead	1.96E-07	8.59E-07	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-50 (cont'd)	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr) (cont'd)	Total HAPs ^c	7.41E-04	3.24E-03	--	--	--
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	PM (w/ CPM)	0.003	0.01	--	--	--
		PM (w/o CPM)	0.0006	0.003	--	--	--
		PM ₁₀	0.003	0.01	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		CO	0.03	0.12	--	--	--
		NO _x	0.03	0.15	--	--	--
		SO ₂	0.0002	0.0009	--	--	--
		VOC	0.002	0.008	--	--	--
		CO ₂	39.77	174.20	--	--	--
		CH ₄	0.0007	0.003	--	--	--
		N ₂ O	0.00007	0.0003	--	--	--
		CO ₂ e ^a	39.81	174.38	--	--	--
		Lead	1.67E-07	7.30E-07	--	--	--
		Total HAPs ^c	6.29E-04	2.76E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	PM (w/ CPM)	0.05	0.22	--	--	--
		PM (w/o CPM)	0.01	0.06	--	--	--
		PM ₁₀	0.05	0.22	--	--	--
		PM _{2.5}	0.05	0.22	--	--	--
		CO	0.11	0.49	--	--	--
		NO _x	0.25	1.09	--	--	--
		SO ₂	0.004	0.02	--	--	--
		VOC	0.04	0.16	--	--	--
		CO ₂	800.36	3,505.57	--	--	--
		CH ₄	0.02	0.07	--	--	--
		N ₂ O	0.002	0.007	--	--	--
		CO ₂ e ^a	801.18	3,509.17	--	--	--
		Lead	3.35E-06	1.47E-05	--	--	--
		Total HAPs ^c	1.27E-02	5.55E-02	--	--	--
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	PM (w/ CPM)	0.05	0.24	--	--	--
		PM (w/o CPM)	0.02	0.11	--	--	--
		PM ₁₀	0.05	0.24	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
042-7 (cont'd)	Natural Gas Electrolyte Heater (5.44 MMBtu/hr) (cont'd)	PM _{2.5}	0.05	0.24	--	--	--
		CO	0.75	3.29	--	--	--
		NO _x	0.65	2.86	--	--	--
		SO ₂	0.003	0.01	--	--	--
		VOC	0.20	0.88	--	--	--
		CO ₂	636.36	2,787.24	--	--	--
		CH ₄	0.01	0.05	--	--	--
		N ₂ O	0.001	0.005	--	--	--
		CO ₂ e ^a	637.01	2,790.10	--	--	--
		Lead	2.67E-06	1.17E-05	--	--	--
		Total HAPs ^c	1.01E-02	4.41E-02	--	--	--
Lime Storage and Handling Operations							
007-3	Transfer of Lime to Lime Storage Bin 1	PM (w/ CPM)	0.04	0.16	--	--	--
		PM (w/o CPM)	0.04	0.16	--	--	--
		PM ₁₀	0.01	0.06	--	--	--
		PM _{2.5}	0.002	0.008	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
007-5	Lime Porta Batches	PM (w/ CPM)	0.07	0.32	--	--	--
		PM (w/o CPM)	0.07	0.32	--	--	--
		PM ₁₀	0.04	0.18	--	--	--
		PM _{2.5}	0.008	0.03	--	--	--
007-8	Lime Slaking Mill 1	PM (w/ CPM)	0.03	0.12	--	--	--
		PM (w/o CPM)	0.02	0.10	--	--	--
		PM ₁₀	0.03	0.12	--	--	--
		PM _{2.5}	0.03	0.12	--	--	--
007-9	Lime Slaking Mill 2	PM (w/ CPM)	0.03	0.12	--	--	--
		PM (w/o CPM)	0.02	0.10	--	--	--
		PM ₁₀	0.03	0.12	--	--	--
		PM _{2.5}	0.03	0.12	--	--	--
Ammonium Nitrate Prill Delivery and Handling Operations							
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	PM (w/ CPM)	0.52	0.06	--	--	--
		PM (w/o CPM)	0.52	0.06	--	--	--
		PM ₁₀	0.18	0.02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
050-1 (cont'd)	Delivery of Ammonium Nitrate Prill to Prill Bin 1 (cont'd)	PM _{2.5}	0.03	0.003	--	--	--
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	PM (w/ CPM)	0.52	0.06	--	--	--
		PM (w/o CPM)	0.52	0.06	--	--	--
		PM ₁₀	0.18	0.02	--	--	--
		PM _{2.5}	0.03	0.003	--	--	--
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	PM (w/ CPM)	0.52	0.06	--	--	--
		PM (w/o CPM)	0.52	0.06	--	--	--
		PM ₁₀	0.18	0.02	--	--	--
		PM _{2.5}	0.03	0.003	--	--	--
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	PM (w/ CPM)	0.52	0.06	--	--	--
		PM (w/o CPM)	0.52	0.06	--	--	--
		PM ₁₀	0.18	0.02	--	--	--
		PM _{2.5}	0.03	0.003	--	--	--
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	PM (w/ CPM)	0.52	0.06	--	--	--
		PM (w/o CPM)	0.52	0.06	--	--	--
		PM ₁₀	0.18	0.02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
050-6 (cont'd)	Delivery of Ammonium Nitrate Prill to Prill Bin 5 (cont'd)	PM _{2.5}	0.03	0.003	--	--	--
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	PM (w/ CPM)	5.10	0.31	--	--	--
		PM (w/o CPM)	5.10	0.31	--	--	--
		PM ₁₀	1.79	0.11	--	--	--
		PM _{2.5}	0.27	0.02	--	--	--
Portable Aggregate System							
009-9	Aggregate to Hopper (via front-end loader)	PM (w/ CPM)	0.63	0.92	--	--	--
		PM (w/o CPM)	0.63	0.92	--	--	--
		PM ₁₀	0.30	0.44	--	--	--
		PM _{2.5}	0.04	0.07	--	--	--
		Lead	8.27E-06	1.22E-05	--	--	--
		Total HAPs ^c	1.16E-04	1.71E-04	--	--	--
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	PM (w/ CPM)	1.87	2.75	--	--	--
		PM (w/o CPM)	1.87	2.75	--	--	--
		PM ₁₀	0.63	0.93	--	--	--
		PM _{2.5}	0.04	0.06	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-10 (cont'd)	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening (cont'd)	Lead	1.75E-05	2.58E-05	--	--	--
		Total HAPs ^c	2.46E-04	3.62E-04	--	--	--
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	PM (w/ CPM)	1.02	1.50	--	--	--
		PM (w/o CPM)	1.02	1.50	--	--	--
		PM ₁₀	0.46	0.68	--	--	--
		PM _{2.5}	0.09	0.13	--	--	--
		Lead	1.28E-05	1.88E-05	--	--	--
		Total HAPs ^c	1.80E-04	2.64E-04	--	--	--
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	PM (w/ CPM)	0.007	0.01	--	--	--
		PM (w/o CPM)	0.007	0.01	--	--	--
		PM ₁₀	0.003	0.005	--	--	--
		PM _{2.5}	0.0005	0.0007	--	--	--
		Lead	8.84E-08	1.30E-07	--	--	--
		Total HAPs ^c	1.24E-06	1.83E-06	--	--	--
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	PM (w/ CPM)	0.07	0.10	--	--	--
		PM (w/o CPM)	0.07	0.10	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-12 (cont'd)	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor (cont'd)	PM ₁₀	0.03	0.05	--	--	--
		PM _{2.5}	0.005	0.007	--	--	--
		Lead	8.84E-07	1.30E-06	--	--	--
		Total HAPs ^c	1.24E-05	1.83E-05	--	--	--
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	PM (w/ CPM)	1.87	2.75	--	--	--
		PM (w/o CPM)	1.87	2.75	--	--	--
		PM ₁₀	0.63	0.93	--	--	--
		PM _{2.5}	0.04	0.06	--	--	--
		Lead	1.75E-05	2.58E-05	--	--	--
		Total HAPs ^c	2.46E-04	3.62E-04	--	--	--
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsized), or Triple Deck Screen Discharge Conveyor (Undersize)	PM (w/ CPM)	0.07	0.10	--	--	--
		PM (w/o CPM)	0.07	0.10	--	--	--
		PM ₁₀	0.03	0.05	--	--	--
		PM _{2.5}	0.005	0.007	--	--	--
		Lead	8.84E-07	1.30E-06	--	--	--
		Total HAPs ^c	1.24E-05	1.83E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	PM (w/ CPM)	1.02	1.50	--	--	--
		PM (w/o CPM)	1.02	1.50	--	--	--
		PM ₁₀	0.46	0.68	--	--	--
		PM _{2.5}	0.09	0.13	--	--	--
		Lead	1.28E-05	1.88E-05	--	--	--
		Total HAPs ^c	1.80E-04	2.64E-04	--	--	--
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	PM (w/ CPM)	0.007	0.01	--	--	--
		PM (w/o CPM)	0.007	0.01	--	--	--
		PM ₁₀	0.003	0.005	--	--	--
		PM _{2.5}	0.0005	0.0007	--	--	--
		Lead	8.84E-08	1.30E-07	--	--	--
		Total HAPs ^c	1.24E-06	1.83E-06	--	--	--
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	PM (w/ CPM)	0.007	0.01	--	--	--
		PM (w/o CPM)	0.007	0.01	--	--	--
		PM ₁₀	0.003	0.005	--	--	--
		PM _{2.5}	0.0005	0.0007	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-17 (cont'd)	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor (cont'd)	Lead	8.84E-08	1.30E-07	--	--	--
		Total HAPs ^c	1.24E-06	1.83E-06	--	--	--
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	PM (w/ CPM)	0.06	0.09	--	--	--
		PM (w/o CPM)	0.06	0.09	--	--	--
		PM ₁₀	0.03	0.04	--	--	--
		PM _{2.5}	0.004	0.007	--	--	--
		Lead	8.27E-07	1.22E-06	--	--	--
		Total HAPs ^c	1.16E-05	1.71E-05	--	--	--
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	PM (w/ CPM)	0.63	0.92	--	--	--
		PM (w/o CPM)	0.63	0.92	--	--	--
		PM ₁₀	0.30	0.44	--	--	--
		PM _{2.5}	0.04	0.07	--	--	--
		Lead	8.27E-06	1.22E-05	--	--	--
		Total HAPs ^c	1.16E-04	1.71E-04	--	--	--
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	PM (w/ CPM)	0.08	0.37	--	--	--
		PM (w/o CPM)	0.08	0.37	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-20 (cont'd)	Wind Erosion of Coarse and Fine Aggregate Stockpiles (cont'd)	PM ₁₀	0.04	0.18	--	--	--
		PM _{2.5}	0.006	0.03	--	--	--
		Lead	1.17E-06	5.11E-06	--	--	--
		Total HAPs ^c	1.64E-05	7.18E-05	--	--	--
Supplemental Portable Aggregate System							
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	PM (w/ CPM)	1.19	4.84	--	--	--
		PM (w/o CPM)	1.19	4.84	--	--	--
		PM ₁₀	0.40	1.63	--	--	--
		PM _{2.5}	0.03	0.11	--	--	--
		Lead	1.11E-05	4.54E-05	--	--	--
		Total HAPs ^c	1.56E-04	6.37E-04	--	--	--
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	PM (w/ CPM)	0.65	2.64	--	--	--
		PM (w/o CPM)	0.65	2.64	--	--	--
		PM ₁₀	0.29	1.19	--	--	--
		PM _{2.5}	0.05	0.22	--	--	--
		Lead	8.13E-06	3.31E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-23 (cont'd)	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher (cont'd)	Total HAPs ^c	1.14E-04	4.65E-04	--	--	--
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	5.62E-08	2.29E-07	--	--	--
		Total HAPs ^c	7.89E-07	3.21E-06	--	--	--
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	PM (w/ CPM)	0.008	0.03	--	--	--
		PM (w/o CPM)	0.008	0.03	--	--	--
		PM ₁₀	0.004	0.01	--	--	--
		PM _{2.5}	0.0006	0.002	--	--	--
		Lead	1.03E-07	3.33E-07	--	--	--
		Total HAPs ^c	1.45E-06	4.67E-06	--	--	--
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	PM (w/ CPM)	2.18	7.04	--	--	--
		PM (w/o CPM)	2.18	7.04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-26 (cont'd)	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen (cont'd)	PM ₁₀	0.73	2.37	--	--	--
		PM _{2.5}	0.05	0.16	--	--	--
		Lead	2.04E-05	6.60E-05	--	--	--
		Total HAPs ^c	2.87E-04	9.27E-04	--	--	--
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	PM (w/ CPM)	0.04	0.17	--	--	--
		PM (w/o CPM)	0.04	0.17	--	--	--
		PM ₁₀	0.02	0.08	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		Lead	4.68E-07	2.29E-06	--	--	--
		Total HAPs ^c	6.57E-06	3.21E-05	--	--	--
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	4.68E-08	2.29E-07	--	--	--
		Total HAPs ^c	6.57E-07	3.21E-06	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	4.68E-08	2.29E-07	--	--	--
		Total HAPs ^c	6.57E-07	3.21E-06	--	--	--
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	4.68E-08	2.29E-07	--	--	--
		Total HAPs ^c	6.57E-07	3.21E-06	--	--	--
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	PM (w/ CPM)	0.54	2.64	--	--	--
		PM (w/o CPM)	0.54	2.64	--	--	--
		PM ₁₀	0.24	1.19	--	--	--
		PM _{2.5}	0.05	0.22	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-31 (cont'd)	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher (cont'd)	Lead	6.77E-06	3.31E-05	--	--	--
		Total HAPs ^c	9.51E-05	4.65E-04	--	--	--
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	4.68E-08	2.29E-07	--	--	--
		Total HAPs ^c	6.57E-07	3.21E-06	--	--	--
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	PM (w/ CPM)	0.04	0.17	--	--	--
		PM (w/o CPM)	0.04	0.17	--	--	--
		PM ₁₀	0.02	0.08	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		Lead	5.62E-07	2.29E-06	--	--	--
		Total HAPs ^c	7.89E-06	3.21E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	5.62E-08	2.29E-07	--	--	--
		Total HAPs ^c	7.89E-07	3.21E-06	--	--	--
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	PM (w/ CPM)	0.04	0.17	--	--	--
		PM (w/o CPM)	0.04	0.17	--	--	--
		PM ₁₀	0.02	0.08	--	--	--
		PM _{2.5}	0.003	0.01	--	--	--
		Lead	5.62E-07	2.29E-06	--	--	--
		Total HAPs ^c	7.89E-06	3.21E-05	--	--	--
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.004	0.02	--	--	--
		PM ₁₀	0.002	0.008	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-36 (cont'd)	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100 (cont'd)	Lead	5.62E-08	2.29E-07	--	--	--
		Total HAPs ^c	7.89E-07	3.21E-06	--	--	--
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	PM (w/ CPM)	0.40	1.62	--	--	--
		PM (w/o CPM)	0.40	1.62	--	--	--
		PM ₁₀	0.19	0.77	--	--	--
		PM _{2.5}	0.03	0.12	--	--	--
		Lead	5.25E-06	2.14E-05	--	--	--
		Total HAPs ^c	7.37E-05	3.00E-04	--	--	--
009-38	SPAS Stockpiles to Trucks	PM (w/ CPM)	0.40	1.62	--	--	--
		PM (w/o CPM)	0.40	1.62	--	--	--
		PM ₁₀	0.19	0.77	--	--	--
		PM _{2.5}	0.03	0.12	--	--	--
		Lead	5.25E-06	2.14E-05	--	--	--
		Total HAPs ^c	7.37E-05	3.00E-04	--	--	--
009-39	Wind Erosion of the SPAS Stockpiles	PM (w/ CPM)	1.20	5.27	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
009-39 (cont'd)	Wind Erosion of the SPAS Stockpiles (cont'd)	PM (w/o CPM)	1.20	5.27	--	--	--
		PM ₁₀	0.60	2.64	--	--	--
		PM _{2.5}	0.09	0.40	--	--	--
		Lead	1.68E-05	7.35E-05	--	--	--
		Total HAPs ^c	2.36E-04	1.03E-03	--	--	--
Storage Tanks and Parts Cleaning							
033-3	Gasoline Storage Tank 150 (GDF1)	VOC	0.59	2.60	--	--	--
		Total HAPs ^c	1.80E-02	7.90E-02	--	--	--
033-2	Gasoline Storage Tank FT-3 (GDF2)	VOC	0.59	2.60	--	--	--
		Total HAPs ^c	1.80E-02	7.90E-02	--	--	--
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	VOC	0.56	2.44	--	--	--
		Total HAPs ^c	1.69E-02	7.39E-02	--	--	--
033-5	Gasoline Storage Tank Mine Operations (GDF4)	VOC	0.56	2.44	--	--	--
		Total HAPs ^c	1.69E-02	7.39E-02	--	--	--
030-6	Parts Cleaning Equipment	VOC	0.20	0.86	--	--	--
053-1	Xanthate Mixing and Storage Tanks	VOC	2.98	7.60	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
053-1 (cont'd)	Xanthate Mixing and Storage Tanks (cont'd)	Greatest Single HAP ^b	2.98E+00	7.60E+00	--	--	--
		Total HAPs ^c	2.98E+00	7.60E+00	--	--	--
Diesel Emergency ICE							
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	PM (w/ CPM)	0.22	0.05	--	--	--
		PM (w/o CPM)	0.20	0.05	--	--	--
		PM ₁₀	0.22	0.05	--	--	--
		PM _{2.5}	0.22	0.05	--	--	--
		CO	1.60	0.40	--	--	--
		NO _x	11.28	2.82	--	--	--
		SO ₂	0.01	0.003	--	--	--
		VOC	0.24	0.06	--	--	--
		CO ₂	1,362.53	340.63	--	--	--
		CH ₄	0.06	0.01	--	--	--
		N ₂ O	0.01	0.003	--	--	--
		CO _{2e} ^a	1,367.09	341.77	--	--	--
		Total HAPs ^c	1.34E-02	3.34E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	PM (w/ CPM)	0.13	0.03	--	--	--
		PM (w/o CPM)	0.12	0.03	--	--	--
		PM ₁₀	0.13	0.03	--	--	--
		PM _{2.5}	0.13	0.03	--	--	--
		CO	0.39	0.10	--	--	--
		NO _x	1.83	0.46	--	--	--
		SO ₂	0.0006	0.0002	--	--	--
		VOC	0.15	0.04	--	--	--
		CO ₂	67.34	16.84	--	--	--
		CH ₄	0.003	0.0007	--	--	--
		N ₂ O	0.0005	0.0001	--	--	--
		CO ₂ e ^a	67.56	16.89	--	--	--
		Total HAPs ^c	1.60E-03	4.00E-04	--	--	--
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	PM (w/ CPM)	0.11	0.03	--	--	--
		PM (w/o CPM)	0.10	0.03	--	--	--
		PM ₁₀	0.11	0.03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-28 (cont'd)	Diesel Emergency Generator IA24-D (762 hp engine) (cont'd)	PM _{2.5}	0.11	0.03	--	--	--
		CO	2.00	0.50	--	--	--
		NO _x	6.73	1.68	--	--	--
		SO ₂	0.008	0.002	--	--	--
		VOC	0.11	0.03	--	--	--
		CO ₂	841.44	210.36	--	--	--
		CH ₄	0.04	0.009	--	--	--
		N ₂ O	0.007	0.002	--	--	--
		CO ₂ e ^a	844.30	211.07	--	--	--
		Total HAPs ^c	8.39E-03	2.10E-03	--	--	--
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	PM (w/ CPM)	0.03	0.008	--	--	--
		PM (w/o CPM)	0.03	0.007	--	--	--
		PM ₁₀	0.03	0.008	--	--	--
		PM _{2.5}	0.03	0.008	--	--	--
		CO	0.27	0.07	--	--	--
		NO _x	0.64	0.16	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-29 (cont'd)	Diesel Emergency Generator IA25-D (90 hp engine) (cont'd)	SO ₂	0.001	0.0002	--	--	--
		VOC	0.03	0.01	--	--	--
		CO ₂	122.42	30.60	--	--	--
		CH ₄	0.004	0.001	--	--	--
		N ₂ O	0.0008	0.0002	--	--	--
		CO ₂ e ^a	122.75	30.69	--	--	--
		Total HAPs ^c	2.44E-03	6.10E-04	--	--	--
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	PM (w/ CPM)	0.14	0.03	--	--	--
		PM (w/o CPM)	0.12	0.03	--	--	--
		PM ₁₀	0.14	0.03	--	--	--
		PM _{2.5}	0.14	0.03	--	--	--
		CO	1.73	0.43	--	--	--
		NO _x	12.32	3.08	--	--	--
		SO ₂	0.009	0.002	--	--	--
		VOC	0.04	0.01	--	--	--
		CO ₂	940.31	235.08	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-31 (cont'd)	Diesel Emergency Generator IA28-D (900 hp engine) (cont'd)	CH ₄	0.04	0.01	--	--	--
		N ₂ O	0.008	0.002	--	--	--
		CO ₂ e ^a	943.40	235.85	--	--	--
		Total HAPs ^c	9.07E-03	2.27E-03	--	--	--
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	PM (w/ CPM)	0.08	0.02	--	--	--
		PM (w/o CPM)	0.07	0.02	--	--	--
		PM ₁₀	0.08	0.02	--	--	--
		PM _{2.5}	0.08	0.02	--	--	--
		CO	1.32	0.33	--	--	--
		NO _x	0.99	0.25	--	--	--
		SO ₂	0.002	0.0004	--	--	--
		VOC	0.07	0.02	--	--	--
		CO ₂	183.76	45.94	--	--	--
		CH ₄	0.007	0.002	--	--	--
		N ₂ O	0.001	0.0004	--	--	--
		CO ₂ e ^a	184.37	46.09	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-42 (cont'd)	Diesel Emergency Generator IA36-D (161 hp engine) (cont'd)	Total HAPs ^c	4.37E-03	1.09E-03	--	--	--
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	PM (w/ CPM)	0.03	0.008	--	--	--
		PM (w/o CPM)	0.03	0.007	--	--	--
		PM ₁₀	0.03	0.008	--	--	--
		PM _{2.5}	0.03	0.008	--	--	--
		CO	0.15	0.04	--	--	--
		NO _x	0.52	0.13	--	--	--
		SO ₂	0.0008	0.0002	--	--	--
		VOC	0.05	0.01	--	--	--
		CO ₂	107.56	26.89	--	--	--
		CH ₄	0.003	0.0009	--	--	--
		N ₂ O	0.0007	0.0002	--	--	--
		CO ₂ e ^a	107.84	26.96	--	--	--
		Total HAPs ^c	2.03E-03	5.08E-04	--	--	--
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	PM (w/ CPM)	0.05	0.01	--	--	--
		PM (w/o CPM)	0.04	0.01	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-53 (cont'd)	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine) (cont'd)	PM ₁₀	0.05	0.01	--	--	--
		PM _{2.5}	0.05	0.01	--	--	--
		CO	0.12	0.03	--	--	--
		NO _x	1.00	0.25	--	--	--
		SO ₂	0.001	0.0003	--	--	--
		VOC	0.08	0.02	--	--	--
		CO ₂	114.14	28.53	--	--	--
		CH ₄	0.005	0.001	--	--	--
		N ₂ O	0.0009	0.0002	--	--	--
		CO ₂ e ^a	114.51	28.63	--	--	--
		Total HAPs ^c	2.71E-03	6.78E-04	--	--	--
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	PM (w/ CPM)	0.12	0.03	--	--	--
		PM (w/o CPM)	0.11	0.03	--	--	--
		PM ₁₀	0.12	0.03	--	--	--
		PM _{2.5}	0.12	0.03	--	--	--
		CO	2.60	0.65	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-54 (cont'd)	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine) (cont'd)	NO _x	2.70	0.67	--	--	--
		SO ₂	0.005	0.001	--	--	--
		VOC	0.21	0.05	--	--	--
		CO ₂	573.44	143.36	--	--	--
		CH ₄	0.02	0.006	--	--	--
		N ₂ O	0.004	0.001	--	--	--
		CO ₂ e ^a	575.24	143.81	--	--	--
		Total HAPs ^c	1.30E-02	3.25E-03	--	--	--
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	PM (w/ CPM)	0.04	0.01	--	--	--
		PM (w/o CPM)	0.04	0.009	--	--	--
		PM ₁₀	0.04	0.01	--	--	--
		PM _{2.5}	0.04	0.01	--	--	--
		CO	0.14	0.04	--	--	--
		NO _x	0.57	0.14	--	--	--
		SO ₂	0.0009	0.0002	--	--	--
		VOC	0.03	0.007	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-57 (cont'd)	CLP Diesel Emergency Generator IA47-D (85.8 hp engine) (cont'd)	CO ₂	115.73	28.93	--	--	--
		CH ₄	0.004	0.001	--	--	--
		N ₂ O	0.0008	0.0002	--	--	--
		CO ₂ e ^a	116.05	29.01	--	--	--
		Total HAPs ^c	2.33E-03	5.82E-04	--	--	--
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	PM (w/ CPM)	0.10	0.03	--	--	--
		PM (w/o CPM)	0.09	0.02	--	--	--
		PM ₁₀	0.10	0.03	--	--	--
		PM _{2.5}	0.10	0.03	--	--	--
		CO	1.77	0.44	--	--	--
		NO _x	2.36	0.59	--	--	--
		SO ₂	0.004	0.001	--	--	--
		VOC	0.13	0.03	--	--	--
		CO ₂	473.98	118.49	--	--	--
		CH ₄	0.02	0.005	--	--	--
		N ₂ O	0.004	0.0009	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-58 (cont'd)	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine) (cont'd)	CO ₂ e ^a	475.47	118.87	--	--	--
		Total HAPs ^c	1.08E-02	2.70E-03	--	--	--
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	PM (w/ CPM)	0.02	0.004	--	--	--
		PM (w/o CPM)	0.01	0.004	--	--	--
		PM ₁₀	0.02	0.004	--	--	--
		PM _{2.5}	0.02	0.004	--	--	--
		CO	0.30	0.08	--	--	--
		NO _x	0.37	0.09	--	--	--
		SO ₂	0.0004	0.00009	--	--	--
		VOC	0.04	0.01	--	--	--
		CO ₂	38.24	9.56	--	--	--
		CH ₄	0.002	0.0004	--	--	--
		N ₂ O	0.0003	0.00008	--	--	--
		CO ₂ e ^a	38.36	9.59	--	--	--
		Total HAPs ^c	9.08E-04	2.27E-04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	PM (w/ CPM)	0.12	0.03	--	--	--
		PM (w/o CPM)	0.11	0.03	--	--	--
		PM ₁₀	0.12	0.03	--	--	--
		PM _{2.5}	0.12	0.03	--	--	--
		CO	2.60	0.65	--	--	--
		NO _x	2.70	0.67	--	--	--
		SO ₂	0.005	0.001	--	--	--
		VOC	0.21	0.05	--	--	--
		CO ₂	575.65	143.91	--	--	--
		CH ₄	0.02	0.006	--	--	--
		N ₂ O	0.004	0.001	--	--	--
		CO ₂ e ^a	577.45	144.36	--	--	--
		Total HAPs ^c	1.30E-02	3.25E-03	--	--	--
		Propane Emergency ICE					
049-17	Propane Emergency Generator IA16-P (13 hp engine)	PM (w/ CPM)	0.003	0.0006	--	--	--
		PM (w/o CPM)	0.0012	0.0003	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-17 (cont'd)	Propane Emergency Generator IA16-P (13 hp engine) (cont'd)	PM ₁₀	0.003	0.0006	--	--	--
		PM _{2.5}	0.003	0.0006	--	--	--
		CO	13.04	3.26	--	--	--
		NO _x	0.15	0.04	--	--	--
		SO ₂	0.001	0.0004	--	--	--
		VOC	0.02	0.004	--	--	--
		CO ₂	18.02	4.51	--	--	--
		CH ₄	0.0009	0.0002	--	--	--
		N ₂ O	0.0002	0.00004	--	--	--
		CO ₂ e ^a	18.09	4.52	--	--	--
		Total HAPs ^c	4.22E-03	1.06E-03	--	--	--
049-20	Propane Emergency Generator IA19-P (60 hp engine)	PM (w/ CPM)	0.01	0.003	--	--	--
		PM (w/o CPM)	0.006	0.001	--	--	--
		PM ₁₀	0.01	0.003	--	--	--
		PM _{2.5}	0.01	0.003	--	--	--
		CO	2.25	0.56	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-20 (cont'd)	Propane Emergency Generator IA19-P (60 hp engine) (cont'd)	NO _x	1.37	0.34	--	--	--
		SO ₂	0.007	0.002	--	--	--
		VOC	0.02	0.005	--	--	--
		CO ₂	83.83	20.96	--	--	--
		CH ₄	0.004	0.001	--	--	--
		N ₂ O	0.0008	0.0002	--	--	--
		CO ₂ e ^a	84.15	21.04	--	--	--
		Total HAPs ^c	1.96E-02	4.91E-03	--	--	--
049-30	Propane Emergency Generator IA21-P (80 hp engine)	PM (w/ CPM)	0.01	0.004	--	--	--
		PM (w/o CPM)	0.007	0.002	--	--	--
		PM ₁₀	0.01	0.004	--	--	--
		PM _{2.5}	0.01	0.004	--	--	--
		CO	19.75	4.94	--	--	--
		NO _x	0.61	0.15	--	--	--
		SO ₂	0.008	0.002	--	--	--
		VOC	0.22	0.05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-30 (cont'd)	Propane Emergency Generator IA21-P (80 hp engine) (cont'd)	CO ₂	102.41	25.60	--	--	--
		CH ₄	0.005	0.001	--	--	--
		N ₂ O	0.001	0.0002	--	--	--
		CO ₂ e ^a	102.81	25.70	--	--	--
		Total HAPs ^c	2.40E-02	5.99E-03	--	--	--
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	PM (w/ CPM)	0.006	0.002	--	--	--
		PM (w/o CPM)	0.003	0.0008	--	--	--
		PM ₁₀	0.006	0.002	--	--	--
		PM _{2.5}	0.006	0.002	--	--	--
		CO	3.89	0.97	--	--	--
		NO _x	0.39	0.10	--	--	--
		SO ₂	0.004	0.0009	--	--	--
		VOC	0.05	0.01	--	--	--
		CO ₂	45.41	11.35	--	--	--
		CH ₄	0.002	0.0005	--	--	--
		N ₂ O	0.0004	0.0001	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-34 (cont'd)	Propane Emergency Generator IA31-P (30.52 hp engine) (cont'd)	CO ₂ e ^a	45.58	11.40	--	--	--
		Total HAPs ^c	1.06E-02	2.66E-03	--	--	--
049-39	Propane Emergency Generator IA32-P (32 hp engine)	PM (w/ CPM)	0.005	0.001	--	--	--
		PM (w/o CPM)	0.002	0.0006	--	--	--
		PM ₁₀	0.005	0.001	--	--	--
		PM _{2.5}	0.005	0.001	--	--	--
		CO	1.57	0.39	--	--	--
		NO _x	0.36	0.09	--	--	--
		SO ₂	0.003	0.0007	--	--	--
		VOC	0.06	0.01	--	--	--
		CO ₂	32.83	8.21	--	--	--
		CH ₄	0.002	0.0004	--	--	--
		N ₂ O	0.0003	0.00008	--	--	--
		CO ₂ e ^a	32.96	8.24	--	--	--
		Total HAPs ^c	7.69E-03	1.92E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	PM (w/ CPM)	0.01	0.004	--	--	--
		PM (w/o CPM)	0.007	0.002	--	--	--
		PM ₁₀	0.01	0.004	--	--	--
		PM _{2.5}	0.01	0.004	--	--	--
		CO	7.38	1.85	--	--	--
		NO _x	1.57	0.39	--	--	--
		SO ₂	0.008	0.002	--	--	--
		VOC	0.31	0.08	--	--	--
		CO ₂	170.39	42.60	--	--	--
		CH ₄	0.005	0.001	--	--	--
		N ₂ O	0.001	0.0002	--	--	--
		CO ₂ e ^a	170.78	42.70	--	--	--
		Total HAPs ^c	2.36E-02	5.89E-03	--	--	--
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	PM (w/ CPM)	0.01	0.004	--	--	--
		PM (w/o CPM)	0.007	0.002	--	--	--
		PM ₁₀	0.01	0.004	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-44 (cont'd)	Propane Emergency Generator IA38-P (113.18 hp engine) (cont'd)	PM _{2.5}	0.01	0.004	--	--	--
		CO	7.38	1.85	--	--	--
		NO _x	1.57	0.39	--	--	--
		SO ₂	0.008	0.002	--	--	--
		VOC	0.31	0.08	--	--	--
		CO ₂	170.39	42.60	--	--	--
		CH ₄	0.005	0.001	--	--	--
		N ₂ O	0.001	0.0002	--	--	--
		CO ₂ e ^a	170.78	42.70	--	--	--
		Total HAPs ^c	2.36E-02	5.89E-03	--	--	--
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	PM (w/ CPM)	0.02	0.004	--	--	--
		PM (w/o CPM)	0.008	0.002	--	--	--
		PM ₁₀	0.02	0.004	--	--	--
		PM _{2.5}	0.02	0.004	--	--	--
		CO	5.15	1.29	--	--	--
		NO _x	1.13	0.28	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-69 (cont'd)	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine) (cont'd)	SO ₂	0.01	0.002	--	--	--
		VOC	0.28	0.07	--	--	--
		CO ₂	150.87	37.72	--	--	--
		CH ₄	0.03	0.007	--	--	--
		N ₂ O	0.001	0.0003	--	--	--
		CO _{2e} ^a	151.96	37.99	--	--	--
		Total HAPs ^c	2.76E-02	6.89E-03	--	--	--
Natural Gas Emergency ICE							
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	PM (w/ CPM)	0.004	0.001	--	--	--
		PM (w/o CPM)	0.002	0.0005	--	--	--
		PM ₁₀	0.004	0.001	--	--	--
		PM _{2.5}	0.004	0.001	--	--	--
		CO	0.83	0.21	--	--	--
		NO _x	0.51	0.13	--	--	--
		SO ₂	0.0001	0.00003	--	--	--
		VOC	0.007	0.002	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-23 (cont'd)	Natural Gas Emergency Generator IA13-NG (17 hp engine) (cont'd)	CO ₂	26.25	6.56	--	--	--
		CH ₄	0.0005	0.0001	--	--	--
		N ₂ O	0.00005	0.00001	--	--	--
		CO ₂ e ^a	26.28	6.57	--	--	--
		Total HAPs ^c	7.28E-03	1.82E-03	--	--	--
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	PM (w/ CPM)	0.03	0.007	--	--	--
		PM (w/o CPM)	0.01	0.003	--	--	--
		PM ₁₀	0.03	0.007	--	--	--
		PM _{2.5}	0.03	0.007	--	--	--
		CO	1.75	0.44	--	--	--
		NO _x	0.88	0.22	--	--	--
		SO ₂	0.0008	0.0002	--	--	--
		VOC	0.44	0.11	--	--	--
		CO ₂	167.04	41.76	--	--	--
		CH ₄	0.003	0.0008	--	--	--
		N ₂ O	0.0003	0.00008	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-15 (cont'd)	Natural Gas Emergency Generator IA22-NG (199 hp engine) (cont'd)	CO _{2e} ^a	167.22	41.80	--	--	--
		Total HAPs ^c	4.63E-02	1.16E-02	--	--	--
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	PM (w/ CPM)	0.04	0.009	--	--	--
		PM (w/o CPM)	0.02	0.004	--	--	--
		PM ₁₀	0.04	0.009	--	--	--
		PM _{2.5}	0.04	0.009	--	--	--
		CO	0.44	0.11	--	--	--
		NO _x	0.03	0.008	--	--	--
		SO ₂	0.001	0.0003	--	--	--
		VOC	0.17	0.04	--	--	--
		CO ₂	213.10	53.27	--	--	--
		CH ₄	0.004	0.001	--	--	--
		N ₂ O	0.0004	0.0001	--	--	--
		CO _{2e} ^a	213.32	53.33	--	--	--
		Total HAPs ^c	5.91E-02	1.48E-02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	PM (w/ CPM)	0.005	0.001	--	--	--
		PM (w/o CPM)	0.003	0.0006	--	--	--
		PM ₁₀	0.005	0.001	--	--	--
		PM _{2.5}	0.005	0.001	--	--	--
		CO	2.15	0.54	--	--	--
		NO _x	0.50	0.13	--	--	--
		SO ₂	0.0001	0.00004	--	--	--
		VOC	0.01	0.00	--	--	--
		CO ₂	30.97	7.74	--	--	--
		CH ₄	0.0006	0.0001	--	--	--
		N ₂ O	0.00006	0.00001	--	--	--
		CO ₂ e ^a	31.01	7.75	--	--	--
		Total HAPs ^c	8.59E-03	2.15E-03	--	--	--
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	PM (w/ CPM)	0.007	0.002	--	--	--
		PM (w/o CPM)	0.003	0.0008	--	--	--
		PM ₁₀	0.007	0.002	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-36 (cont'd)	Natural Gas Emergency Generator IA33-NG (31.83 hp engine) (cont'd)	PM _{2.5}	0.007	0.002	--	--	--
		CO	7.11	1.78	--	--	--
		NO _x	0.15	0.04	--	--	--
		SO ₂	0.0002	0.00005	--	--	--
		VOC	0.16	0.04	--	--	--
		CO ₂	40.52	10.13	--	--	--
		CH ₄	0.0008	0.0002	--	--	--
		N ₂ O	0.00008	0.00002	--	--	--
		CO ₂ e ^a	40.56	10.14	--	--	--
		Total HAPs ^c	1.12E-02	2.81E-03	--	--	--
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	PM (w/ CPM)	0.007	0.002	--	--	--
		PM (w/o CPM)	0.003	0.0008	--	--	--
		PM ₁₀	0.007	0.002	--	--	--
		PM _{2.5}	0.007	0.002	--	--	--
		CO	5.34	1.33	--	--	--
		NO _x	0.28	0.07	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-40 (cont'd)	Natural Gas Emergency Generator IA34-NG (32 hp engine) (cont'd)	SO ₂	0.0002	0.00005	--	--	--
		VOC	0.11	0.03	--	--	--
		CO ₂	40.81	10.20	--	--	--
		CH ₄	0.0008	0.0002	--	--	--
		N ₂ O	0.00008	0.00002	--	--	--
		CO ₂ e ^a	40.85	10.21	--	--	--
		Total HAPs ^c	1.13E-02	2.83E-03	--	--	--
Diesel Non-Emergency ICE							
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	PM (w/ CPM)	0.10	0.42	--	--	--
		PM (w/o CPM)	0.09	0.37	--	--	--
		PM ₁₀	0.10	0.42	--	--	--
		PM _{2.5}	0.10	0.42	--	--	--
		CO	0.33	1.45	--	--	--
		NO _x	1.48	6.50	--	--	--
		SO ₂	0.001	0.006	--	--	--
		VOC	0.13	0.58	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-11 (cont'd)	Diesel Non-Emergency Generator IA14-DN (128 hp engine) (cont'd)	CO ₂	146.10	639.90	--	--	--
		CH ₄	0.006	0.03	--	--	--
		N ₂ O	0.001	0.005	--	--	--
		CO ₂ e ^a	146.58	642.00	--	--	--
		Total HAPs ^c	3.47E-03	1.52E-02	--	--	--
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	PM (w/ CPM)	0.04	0.19	--	--	--
		PM (w/o CPM)	0.04	0.17	--	--	--
		PM ₁₀	0.04	0.19	--	--	--
		PM _{2.5}	0.04	0.19	--	--	--
		CO	0.38	1.68	--	--	--
		NO _x	0.74	3.23	--	--	--
		SO ₂	0.001	0.006	--	--	--
		VOC	0.05	0.23	--	--	--
		CO ₂	163.63	716.70	--	--	--
		CH ₄	0.006	0.03	--	--	--
		N ₂ O	0.001	0.005	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-12 (cont'd)	Diesel Non-Emergency Generator IA15-DN (130 hp engine) (cont'd)	CO _{2e} ^a	164.12	718.83	--	--	--
		Total HAPs ^c	3.53E-03	1.54E-02	--	--	--
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	PM (w/ CPM)	0.01	0.05	--	--	--
		PM (w/o CPM)	0.009	0.04	--	--	--
		PM ₁₀	0.01	0.05	--	--	--
		PM _{2.5}	0.01	0.05	--	--	--
		CO	0.06	0.24	--	--	--
		NO _x	0.21	0.90	--	--	--
		SO ₂	0.0003	0.001	--	--	--
		VOC	0.01	0.06	--	--	--
		CO ₂	42.96	188.15	--	--	--
		CH ₄	0.001	0.006	--	--	--
		N ₂ O	0.0003	0.001	--	--	--
		CO _{2e} ^a	43.06	188.61	--	--	--
		Total HAPs ^c	7.65E-04	3.35E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	PM (w/ CPM)	0.07	0.29	--	--	--
		PM (w/o CPM)	0.06	0.26	--	--	--
		PM ₁₀	0.07	0.29	--	--	--
		PM _{2.5}	0.07	0.29	--	--	--
		CO	1.11	4.86	--	--	--
		NO _x	0.83	3.63	--	--	--
		SO ₂	0.001	0.006	--	--	--
		VOC	0.06	0.26	--	--	--
		CO ₂	154.09	674.90	--	--	--
		CH ₄	0.006	0.03	--	--	--
		N ₂ O	0.001	0.005	--	--	--
		CO _{2e} ^a	154.59	677.11	--	--	--
		Total HAPs ^c	3.66E-03	1.60E-02	--	--	--
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	PM (w/ CPM)	0.009	0.04	--	--	--
		PM (w/o CPM)	0.008	0.04	--	--	--
		PM ₁₀	0.009	0.04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-67 (cont'd)	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine) (cont'd)	PM _{2.5}	0.009	0.04	--	--	--
		CO	0.009	0.04	--	--	--
		NO _x	0.21	0.91	--	--	--
		SO ₂	0.006	0.03	--	--	--
		VOC	0.06	0.25	--	--	--
		CO ₂	663.06	2,904.19	--	--	--
		CH ₄	0.11	0.50	--	--	--
		N ₂ O	0.005	0.02	--	--	--
		CO ₂ e ^a	667.66	2,924.35	--	--	--
		Total HAPs ^c	1.56E-02	6.85E-02	--	--	--
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	PM (w/ CPM)	0.001	0.006	--	--	--
		PM (w/o CPM)	0.001	0.006	--	--	--
		PM ₁₀	0.001	0.006	--	--	--
		PM _{2.5}	0.001	0.006	--	--	--
		CO	0.05	0.22	--	--	--
		NO _x	0.03	0.13	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-70 (cont'd)	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine) (cont'd)	SO ₂	0.003	0.01	--	--	--
		VOC	0.01	0.04	--	--	--
		CO ₂	342.41	1,499.77	--	--	--
		CH ₄	0.01	0.06	--	--	--
		N ₂ O	0.003	0.01	--	--	--
		CO ₂ e ^a	343.54	1,504.70	--	--	--
		Total HAPs ^c	8.13E-03	3.56E-02	--	--	--
Propane Non-Emergency ICE							
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	PM (w/ CPM)	0.006	0.03	--	--	--
		PM (w/o CPM)	0.003	0.01	--	--	--
		PM ₁₀	0.006	0.03	--	--	--
		PM _{2.5}	0.006	0.03	--	--	--
		CO	1.17	5.13	--	--	--
		NO _x	0.72	3.13	--	--	--
		SO ₂	0.004	0.02	--	--	--
		VOC	0.01	0.04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-7 (cont'd)	Propane Non-Emergency Generator IA10-PN (27 hp engine) (cont'd)	CO ₂	43.66	191.23	--	--	--
		CH ₄	0.002	0.009	--	--	--
		N ₂ O	0.0004	0.002	--	--	--
		CO ₂ e ^a	43.83	191.97	--	--	--
		Total HAPs ^c	1.02E-02	4.48E-02	--	--	--
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	PM (w/ CPM)	0.005	0.02	--	--	--
		PM (w/o CPM)	0.003	0.01	--	--	--
		PM ₁₀	0.005	0.02	--	--	--
		PM _{2.5}	0.005	0.02	--	--	--
		CO	1.03	4.52	--	--	--
		NO _x	0.63	2.76	--	--	--
		SO ₂	0.003	0.01	--	--	--
		VOC	0.009	0.04	--	--	--
		CO ₂	38.42	168.28	--	--	--
		CH ₄	0.002	0.008	--	--	--
		N ₂ O	0.0004	0.002	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-19 (cont'd)	Propane Non-Emergency Generator IA18-PN (20 hp engine) (cont'd)	CO _{2e} ^a	38.57	168.94	--	--	--
		Total HAPs ^c	9.00E-03	3.94E-02	--	--	--
Miscellaneous Fuel Burning Equipment							
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	PM (w/ CPM)	0.008	0.04	--	--	--
		PM (w/o CPM)	0.005	0.02	--	--	--
		PM ₁₀	0.006	0.03	--	--	--
		PM _{2.5}	0.004	0.02	--	--	--
		CO	0.01	0.05	--	--	--
		NO _x	0.05	0.22	--	--	--
		SO ₂	0.0005	0.002	--	--	--
		VOC	0.0005	0.002	--	--	--
		CO ₂	55.91	244.89	--	--	--
		CH ₄	0.002	0.01	--	--	--
		N ₂ O	0.0005	0.002	--	--	--
		CO _{2e} ^a	56.09	245.70	--	--	--
		Lead	3.09E-06	1.35E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-41 (cont'd)	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr) (cont'd)	Total HAPs ^c	1.78E-04	7.79E-04	--	--	--
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.0009	0.00	--	--	--
		PM ₁₀	0.004	0.02	--	--	--
		PM _{2.5}	0.004	0.02	--	--	--
		CO	0.04	0.18	--	--	--
		NO _x	0.05	0.21	--	--	--
		SO ₂	0.0003	0.001	--	--	--
		VOC	0.003	0.01	--	--	--
		CO ₂	57.32	251.06	--	--	--
		CH ₄	0.001	0.005	--	--	--
		N ₂ O	0.0001	0.0005	--	--	--
		CO ₂ e ^a	57.38	251.31	--	--	--
		Lead	2.40E-07	1.05E-06	--	--	--
		Total HAPs ^c	9.07E-04	3.97E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	PM (w/ CPM)	0.004	0.02	--	--	--
		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	0.21	--	--	--
		SO ₂	0.0003	0.001	--	--	--
		VOC	0.003	0.01	--	--	--
		CO ₂	57.32	251.06	--	--	--
		CH ₄	0.001	0.005	--	--	--
		N ₂ O	0.0001	0.0005	--	--	--
		CO ₂ e ^a	57.38	251.31	--	--	--
		Lead	2.40E-07	1.05E-06	--	--	--
		Total HAPs ^c	9.07E-04	3.97E-03	--	--	--
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	PM (w/ CPM)	0.07	0.31	--	--	--
		PM (w/o CPM)	0.02	0.08	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-13 (cont'd)	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total) (cont'd)	PM ₁₀	0.07	0.31	--	--	--
		PM _{2.5}	0.07	0.31	--	--	--
		CO	0.78	3.43	--	--	--
		NO _x	0.93	4.08	--	--	--
		SO ₂	0.006	0.02	--	--	--
		VOC	0.05	0.22	--	--	--
		CO ₂	1,111.17	4,866.91	--	--	--
		CH ₄	0.02	0.09	--	--	--
		N ₂ O	0.002	0.009	--	--	--
		CO ₂ e ^a	1,112.31	4,871.91	--	--	--
		Lead	4.66E-06	2.04E-05	--	--	--
		Total HAPs ^c	1.76E-02	7.70E-02	--	--	--
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PM (w/ CPM)	0.007	0.03	--	--	--
		PM (w/o CPM)	0.002	0.009	--	--	--
		PM ₁₀	0.007	0.03	--	--	--
		PM _{2.5}	0.007	0.03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-14 (cont'd)	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total) (cont'd)	CO	0.08	0.34	--	--	--
		NO _x	0.13	0.59	--	--	--
		SO ₂	0.01	0.05	--	--	--
		VOC	0.005	0.02	--	--	--
		CO ₂	131.67	576.73	--	--	--
		CH ₄	0.006	0.03	--	--	--
		N ₂ O	0.001	0.006	--	--	--
		CO ₂ e ^a	132.18	578.96	--	--	--
		Lead	4.66E-07	2.04E-06	--	--	--
		Total HAPs ^c	1.76E-03	7.70E-03	--	--	--
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	PM (w/ CPM)	0.005	0.02	--	--	--
		PM (w/o CPM)	0.001	0.006	--	--	--
		PM ₁₀	0.005	0.02	--	--	--
		PM _{2.5}	0.005	0.02	--	--	--
		CO	0.06	0.26	--	--	--
		NO _x	0.07	0.31	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-65 (cont'd)	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr) (cont'd)	SO ₂	0.0004	0.002	--	--	--
		VOC	0.004	0.02	--	--	--
		CO ₂	84.28	369.13	--	--	--
		CH ₄	0.002	0.007	--	--	--
		N ₂ O	0.0002	0.0007	--	--	--
		CO ₂ e ^a	84.36	369.51	--	--	--
		Lead	3.53E-07	1.55E-06	--	--	--
		Total HAPs ^c	1.33E-03	5.84E-03	--	--	--
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	PM (w/ CPM)	0.004	0.02	--	--	--
		PM (w/o CPM)	0.0009	0.00	--	--	--
		PM ₁₀	0.004	0.02	--	--	--
		PM _{2.5}	0.004	0.02	--	--	--
		CO	0.04	0.18	--	--	--
		NO _x	0.05	0.21	--	--	--
		SO ₂	0.0003	0.001	--	--	--
		VOC	0.003	0.01	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-66 (cont'd)	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr) (cont'd)	CO ₂	58.37	255.67	--	--	--
		CH ₄	0.001	0.005	--	--	--
		N ₂ O	0.0001	0.0005	--	--	--
		CO ₂ e ^a	58.43	255.93	--	--	--
		Lead	2.45E-07	1.07E-06	--	--	--
		Total HAPs ^c	9.24E-04	4.05E-03	--	--	--
Copper Decant Solids Handling Operations							
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	PM (w/ CPM)	0.83	0.93	--	--	--
		PM (w/o CPM)	0.83	0.93	--	--	--
		PM ₁₀	0.42	0.46	--	--	--
		PM _{2.5}	0.06	0.07	--	--	--
		Lead	3.03E-04	3.39E-04	--	--	--
		Total HAPs ^c	4.99E-03	5.57E-03	--	--	--
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	PM (w/ CPM)	3.31	0.005	--	--	--
		PM (w/o CPM)	3.31	0.005	--	--	--
		PM ₁₀	1.57	0.002	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
054-2 (cont'd)	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader) (cont'd)	PM _{2.5}	0.24	0.0004	--	--	--
		Lead	1.14E-03	1.71E-06	--	--	--
		Total HAPs ^c	1.88E-02	2.82E-05	--	--	--
AOS1: Two Concentrator Operations							
Mining Operations (AOS1)							
026-3 (AOS1)	Drilling (AOS1)	PM (w/ CPM)	637.31	69.04	--	--	--
		PM (w/o CPM)	637.31	69.04	--	--	--
		PM ₁₀	382.39	41.43	--	--	--
		PM _{2.5}	70.81	7.67	--	--	--
		Lead	9.42E-03	1.02E-03	--	--	--
		Total HAPs ^c	1.59E-01	1.72E-02	--	--	--
026-2 (AOS1)	Blasting (AOS1)	PM (w/ CPM)	4,919.42	486.50	--	--	--
		PM (w/o CPM)	4,919.42	486.50	--	--	--
		PM ₁₀	2,558.10	252.98	--	--	--
		PM _{2.5}	147.58	14.60	--	--	--
		CO	15,319.65	1,659.63	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
026-2 (AOS1) (cont'd)	Blasting (AOS1) (cont'd)	NO _x	678.46	73.50	--	--	--
		SO ₂	4.64	0.50	--	--	--
		CO ₂	143,484.81	15,544.19	--	--	--
		CH ₄	5.60	0.61	--	--	--
		N ₂ O	1.11	0.12	--	--	--
		CO ₂ e ^a	143,934.83	15,592.94	--	--	--
		Lead	7.10E-02	7.09E-03	--	--	--
		Total HAPs ^c	1.52E+00	1.55E-01	--	--	--
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	PM (w/ CPM)	3,517.68	4,193.11	--	--	--
		PM (w/o CPM)	3,517.68	4,193.11	--	--	--
		PM ₁₀	888.93	1,059.61	--	--	--
		PM _{2.5}	88.89	105.96	--	--	--
		Lead	2.19E-02	2.61E-02	--	--	--
		Total HAPs ^c	3.69E-01	4.40E-01	--	--	--
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	PM (w/ CPM)	1,172.56	1,397.70	--	--	--
		PM (w/o CPM)	1,172.56	1,397.70	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
022-2 (AOS1) (cont'd)	Haul Truck Travel Outside the Pit (AOS1) (cont'd)	PM ₁₀	296.31	353.20	--	--	--
		PM _{2.5}	29.63	35.32	--	--	--
		Lead	7.30E-03	8.70E-03	--	--	--
		Total HAPs ^c	1.23E-01	1.47E-01	--	--	--
023-3 (AOS1)	Other Vehicle Travel (AOS1)	PM (w/ CPM)	3,364.91	8,310.20	--	--	--
		PM (w/o CPM)	3,364.91	8,310.20	--	--	--
		PM ₁₀	850.32	2,100.01	--	--	--
		PM _{2.5}	85.03	210.00	--	--	--
		Lead	2.10E-02	5.17E-02	--	--	--
		Total HAPs ^c	3.53E-01	8.71E-01	--	--	--
023-1 (AOS1)	Dozer Operation (AOS1)	PM (w/ CPM)	194.61	589.25	--	--	--
		PM (w/o CPM)	194.61	589.25	--	--	--
		PM ₁₀	35.33	106.96	--	--	--
		PM _{2.5}	20.43	61.87	--	--	--
		Lead	8.70E-04	2.64E-03	--	--	--
		Total HAPs ^c	1.47E-02	4.44E-02	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
023-2 (AOS1)	Road Grader Operation (AOS1)	PM (w/ CPM)	16.93	74.16	--	--	--
		PM (w/o CPM)	16.93	74.16	--	--	--
		PM ₁₀	5.29	23.16	--	--	--
		PM _{2.5}	0.52	2.30	--	--	--
		Lead	1.30E-04	5.71E-04	--	--	--
		Total HAPs ^c	2.19E-03	9.61E-03	--	--	--
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	PM (w/ CPM)	106.78	345.74	--	--	--
		PM (w/o CPM)	106.78	345.74	--	--	--
		PM ₁₀	50.50	163.53	--	--	--
		PM _{2.5}	7.65	24.76	--	--	--
		Lead	1.24E-03	4.03E-03	--	--	--
		Total HAPs ^c	2.10E-02	6.79E-02	--	--	--
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	PM (w/ CPM)	21.71	60.28	--	--	--
		PM (w/o CPM)	21.71	60.28	--	--	--
		PM ₁₀	10.27	28.51	--	--	--
		PM _{2.5}	1.55	4.32	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-6 (AOS1) (cont'd)	Unloading Ore to Primary Crusher 1 (AOS1) (cont'd)	Lead	1.95E-04	5.42E-04	--	--	--
		Total HAPs ^c	5.03E-03	1.40E-02	--	--	--
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	PM (w/ CPM)	18.99	44.27	--	--	--
		PM (w/o CPM)	18.99	44.27	--	--	--
		PM ₁₀	8.98	20.94	--	--	--
		PM _{2.5}	1.36	3.17	--	--	--
		Lead	1.71E-04	3.98E-04	--	--	--
		Total HAPs ^c	4.40E-03	1.03E-02	--	--	--
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	PM (w/ CPM)	3.43	12.52	--	--	--
		PM (w/o CPM)	3.43	12.52	--	--	--
		PM ₁₀	1.62	5.92	--	--	--
		PM _{2.5}	0.25	0.90	--	--	--
		Lead	2.08E-05	7.58E-05	--	--	--
		Total HAPs ^c	3.57E-04	1.30E-03	--	--	--
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	PM (w/ CPM)	62.65	228.66	--	--	--
		PM (w/o CPM)	62.65	228.66	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
045-1 (AOS1) (cont'd)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1) (cont'd)	PM ₁₀	29.63	108.15	--	--	--
		PM _{2.5}	4.49	16.38	--	--	--
		Lead	8.26E-04	3.01E-03	--	--	--
		Total HAPs ^c	1.16E-02	4.23E-02	--	--	--
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)							
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	PM (w/ CPM)	1.74	7.60	--	--	--
		PM (w/o CPM)	1.74	7.60	--	--	--
		PM ₁₀	1.74	7.60	--	--	--
		PM _{2.5}	1.74	7.60	--	--	--
		Lead	3.30E-05	1.44E-04	--	--	--
		Total HAPs ^c	8.50E-04	3.72E-03	--	--	--
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	PM (w/ CPM)	0.22	0.97	--	--	--
		PM (w/o CPM)	0.22	0.97	--	--	--
		PM ₁₀	0.10	0.46	--	--	--
		PM _{2.5}	0.02	0.07	--	--	--
		Lead	1.98E-06	8.68E-06	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-2 (AOS1) (cont'd)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1) (cont'd)	Total HAPs ^c	5.11E-05	2.24E-04	--	--	--
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	PM (w/ CPM)	0.22	0.97	--	--	--
		PM (w/o CPM)	0.22	0.97	--	--	--
		PM ₁₀	0.10	0.46	--	--	--
		PM _{2.5}	0.02	0.07	--	--	--
		Lead	1.98E-06	8.68E-06	--	--	--
		Total HAPs ^c	5.11E-05	2.24E-04	--	--	--
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	PM (w/ CPM)	0.22	0.97	--	--	--
		PM (w/o CPM)	0.22	0.97	--	--	--
		PM ₁₀	0.10	0.46	--	--	--
		PM _{2.5}	0.02	0.07	--	--	--
		Lead	1.98E-06	8.68E-06	--	--	--
		Total HAPs ^c	5.11E-05	2.24E-04	--	--	--
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	PM (w/ CPM)	20.62	72.26	--	--	--
		PM (w/o CPM)	20.62	72.26	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-4 (AOS1) (cont'd)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1) (cont'd)	PM ₁₀	9.75	34.18	--	--	--
		PM _{2.5}	1.48	5.18	--	--	--
		Lead	1.85E-04	6.49E-04	--	--	--
		Total HAPs ^c	4.78E-03	1.67E-02	--	--	--
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	PM (w/ CPM)	20.62	18.07	--	--	--
		PM (w/o CPM)	20.62	18.07	--	--	--
		PM ₁₀	9.75	8.54	--	--	--
		PM _{2.5}	1.48	1.29	--	--	--
		Lead	1.85E-04	1.62E-04	--	--	--
		Total HAPs ^c	4.78E-03	4.19E-03	--	--	--
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	PM (w/ CPM)	20.62	18.07	--	--	--
		PM (w/o CPM)	20.62	18.07	--	--	--
		PM ₁₀	9.75	8.54	--	--	--
		PM _{2.5}	1.48	1.29	--	--	--
		Lead	1.85E-04	1.62E-04	--	--	--
		Total HAPs ^c	4.78E-03	4.19E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	PM (w/ CPM)	1.38	6.07	--	--	--
		PM (w/o CPM)	1.38	6.07	--	--	--
		PM ₁₀	0.69	3.03	--	--	--
		PM _{2.5}	0.10	0.45	--	--	--
		Lead	1.32E-05	5.76E-05	--	--	--
		Total HAPs ^c	3.39E-04	1.49E-03	--	--	--
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)							
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	PM (w/ CPM)	0.29	1.25	--	--	--
		PM (w/o CPM)	0.29	1.25	--	--	--
		PM ₁₀	0.29	1.25	--	--	--
		PM _{2.5}	0.29	1.25	--	--	--
		Lead	5.43E-06	2.38E-05	--	--	--
		Total HAPs ^c	1.40E-04	6.13E-04	--	--	--
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	PM (w/ CPM)	0.33	1.44	--	--	--
		PM (w/o CPM)	0.33	1.44	--	--	--
		PM ₁₀	0.33	1.44	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-13 (AOS1) (cont'd)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1) (cont'd)	PM _{2.5}	0.33	1.44	--	--	--
		Lead	6.26E-06	2.74E-05	--	--	--
		Total HAPs ^c	1.61E-04	7.06E-04	--	--	--
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	PM (w/ CPM)	0.33	1.44	--	--	--
		PM (w/o CPM)	0.33	1.44	--	--	--
		PM ₁₀	0.33	1.44	--	--	--
		PM _{2.5}	0.33	1.44	--	--	--
		Lead	6.26E-06	2.74E-05	--	--	--
		Total HAPs ^c	1.61E-04	7.06E-04	--	--	--
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	PM (w/ CPM)	0.33	1.44	--	--	--
		PM (w/o CPM)	0.33	1.44	--	--	--
		PM ₁₀	0.33	1.44	--	--	--
		PM _{2.5}	0.33	1.44	--	--	--
		Lead	6.26E-06	2.74E-05	--	--	--
		Total HAPs ^c	1.61E-04	7.06E-04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	PM (w/ CPM)	21.71	95.08	--	--	--
		PM (w/o CPM)	21.71	95.08	--	--	--
		PM ₁₀	10.27	44.97	--	--	--
		PM _{2.5}	1.55	6.81	--	--	--
		Lead	1.95E-04	8.54E-04	--	--	--
		Total HAPs ^c	5.03E-03	2.20E-02	--	--	--
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	PM (w/ CPM)	0.68	2.98	--	--	--
		PM (w/o CPM)	0.68	2.98	--	--	--
		PM ₁₀	0.34	1.49	--	--	--
		PM _{2.5}	0.05	0.22	--	--	--
		Lead	6.47E-06	2.83E-05	--	--	--
		Total HAPs ^c	1.67E-04	7.31E-04	--	--	--
Second Concentrator Milling Operations (AOS1)							
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	PM (w/ CPM)	0.43	1.90	--	--	--
		PM (w/o CPM)	0.43	1.90	--	--	--
		PM ₁₀	0.43	1.90	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
002-7 (AOS1) (cont'd)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1) (cont'd)	PM _{2.5}	0.43	1.90	--	--	--
		Lead	8.24E-06	3.61E-05	--	--	--
		Total HAPs ^c	2.12E-04	9.31E-04	--	--	--
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	PM (w/ CPM)	0.43	1.90	--	--	--
		PM (w/o CPM)	0.43	1.90	--	--	--
		PM ₁₀	0.43	1.90	--	--	--
		PM _{2.5}	0.43	1.90	--	--	--
		Lead	8.24E-06	3.61E-05	--	--	--
		Total HAPs ^c	2.12E-04	9.31E-04	--	--	--
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	PM (w/ CPM)	0.45	1.99	--	--	--
		PM (w/o CPM)	0.45	1.99	--	--	--
		PM ₁₀	0.45	1.99	--	--	--
		PM _{2.5}	0.45	1.99	--	--	--
		Lead	8.62E-06	3.77E-05	--	--	--
		Total HAPs ^c	2.22E-04	9.73E-04	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	PM (w/ CPM)	0.53	2.33	--	--	--
		PM (w/o CPM)	0.53	2.33	--	--	--
		PM ₁₀	0.53	2.33	--	--	--
		PM _{2.5}	0.53	2.33	--	--	--
		Lead	1.01E-05	4.43E-05	--	--	--
		Total HAPs ^c	2.61E-04	1.14E-03	--	--	--
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	PM (w/ CPM)	0.49	2.16	--	--	--
		PM (w/o CPM)	0.49	2.16	--	--	--
		PM ₁₀	0.49	2.16	--	--	--
		PM _{2.5}	0.49	2.16	--	--	--
		Lead	9.36E-06	4.10E-05	--	--	--
		Total HAPs ^c	2.41E-04	1.06E-03	--	--	--
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	PM (w/ CPM)	0.20	0.86	--	--	--
		PM (w/o CPM)	0.20	0.86	--	--	--
		PM ₁₀	0.20	0.86	--	--	--
		PM _{2.5}	0.20	0.86	--	--	--
		Lead	3.75E-06	1.64E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
002-12 (AOS1) (cont'd)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1) (cont'd)	Total HAPs ^c	9.66E-05	4.23E-04	--	--	--
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	PM (w/ CPM)	0.20	0.86	--	--	--
		PM (w/o CPM)	0.20	0.86	--	--	--
		PM ₁₀	0.20	0.86	--	--	--
		PM _{2.5}	0.20	0.86	--	--	--
		Lead	3.75E-06	1.64E-05	--	--	--
		Total HAPs ^c	9.66E-05	4.23E-04	--	--	--
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)							
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	H ₂ S	0.50	2.18	--	--	--
		VOC	0.27	1.18	--	--	--
		Total HAPs ^c	2.38E-02	1.04E-01	--	--	--
Second Concentrator Concentrate Handling Operations (AOS1)							
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	PM (w/ CPM)	0.003	0.01	--	--	--
		PM (w/o CPM)	0.003	0.01	--	--	--
		PM ₁₀	0.001	0.006	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
006-11 (AOS1) (cont'd)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1) (cont'd)	PM _{2.5}	0.0002	0.0009	--	--	--
		Lead	1.13E-06	4.97E-06	--	--	--
		Total HAPs ^c	9.25E-06	4.05E-05	--	--	--
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	PM (w/ CPM)	0.003	0.01	--	--	--
		PM (w/o CPM)	0.003	0.01	--	--	--
		PM ₁₀	0.001	0.006	--	--	--
		PM _{2.5}	0.0002	0.0009	--	--	--
		Lead	1.13E-06	4.97E-06	--	--	--
		Total HAPs ^c	9.25E-06	4.05E-05	--	--	--
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	PM (w/ CPM)	0.003	0.01	--	--	--
		PM (w/o CPM)	0.003	0.01	--	--	--
		PM ₁₀	0.001	0.006	--	--	--
		PM _{2.5}	0.0002	0.0009	--	--	--
		Lead	1.13E-06	4.97E-06	--	--	--
		Total HAPs ^c	9.25E-06	4.05E-05	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	PM (w/ CPM)	0.40	1.77	--	--	--
		PM (w/o CPM)	0.40	1.77	--	--	--
		PM ₁₀	0.20	0.88	--	--	--
		PM _{2.5}	0.03	0.13	--	--	--
		Lead	1.70E-04	7.43E-04	--	--	--
		Total HAPs ^c	1.38E-03	6.05E-03	--	--	--
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	PM (w/ CPM)	0.06	0.28	--	--	--
		PM (w/o CPM)	0.01	0.06	--	--	--
		PM ₁₀	0.06	0.28	--	--	--
		PM _{2.5}	0.06	0.28	--	--	--
		VOC	1.83	8.02	--	--	--
		Lead	1.44E-05	6.29E-05	--	--	--
		Total HAPs ^c	1.62E-01	7.08E-01	--	--	--
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	PM (w/ CPM)	0.005	0.02	--	--	--
		PM (w/o CPM)	0.005	0.02	--	--	--
		PM ₁₀	0.002	0.009	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
052-3 (AOS1) (cont'd)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1) (cont'd)	Lead	4.93E-07	2.16E-06	--	--	--
		Total HAPs ^c	1.12E-05	4.89E-05	--	--	--
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	PM (w/ CPM)	0.005	0.02	--	--	--
		PM (w/o CPM)	0.005	0.02	--	--	--
		PM ₁₀	0.002	0.009	--	--	--
		PM _{2.5}	0.0003	0.001	--	--	--
		Lead	4.93E-07	2.16E-06	--	--	--
		Total HAPs ^c	1.12E-05	4.89E-05	--	--	--
Second Concentrator Lime and Other Regent Operations (AOS1)							
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	PM (w/ CPM)	0.15	0.30	--	--	--
		PM (w/o CPM)	0.15	0.30	--	--	--
		PM ₁₀	0.05	0.11	--	--	--
		PM _{2.5}	0.008	0.02	--	--	--
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	PM (w/ CPM)	0.01	0.06	--	--	--
		PM (w/o CPM)	0.01	0.05	--	--	--
		PM ₁₀	0.01	0.06	--	--	--

Emission Source Form

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					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
007-7 (AOS1) (cont'd)	Second Concentrator Lime Slaker (AOS1) (cont'd)	PM _{2.5}	0.01	0.06	--	--	--
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	PM (w/ CPM)	0.21	0.92	--	--	--
		PM (w/o CPM)	0.21	0.92	--	--	--
		PM ₁₀	0.10	0.44	--	--	--
		PM _{2.5}	0.02	0.07	--	--	--
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	PM (w/ CPM)	0.01	0.06	--	--	--
		PM (w/o CPM)	0.01	0.06	--	--	--
		PM ₁₀	0.007	0.03	--	--	--
		PM _{2.5}	0.001	0.004	--	--	--
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	VOC	0.49	1.31	--	--	--
		Greatest Single HAP ^b	4.94E-01	1.31E+00	--	--	--
		Total HAPs ^c	4.94E-01	1.31E+00	--	--	--
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	H ₂ S	0.04	0.17	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
<i>Second Concentrator Prill Handling Operations (AOS1)</i>							
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	PM (w/ CPM)	0.52	0.25	--	--	--
		PM (w/o CPM)	0.52	0.25	--	--	--
		PM ₁₀	0.18	0.09	--	--	--
		PM _{2.5}	0.03	0.01	--	--	--
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	PM (w/ CPM)	1.00	0.25	--	--	--
		PM (w/o CPM)	1.00	0.25	--	--	--
		PM ₁₀	0.35	0.09	--	--	--
		PM _{2.5}	0.05	0.01	--	--	--
<i>Second Concentrator Emergency ICE (AOS1)</i>							
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	PM (w/ CPM)	0.20	0.05	--	--	--
		PM (w/o CPM)	0.18	0.04	--	--	--
		PM ₁₀	0.20	0.05	--	--	--
		PM _{2.5}	0.20	0.05	--	--	--
		CO	3.50	0.88	--	--	--
		NO _x	3.74	0.93	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-59 (AOS1) (cont'd)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine) (cont'd)	SO ₂	0.007	0.002	--	--	--
		VOC	0.27	0.07	--	--	--
		CO ₂	695.10	173.77	--	--	--
		CH ₄	0.03	0.007	--	--	--
		N ₂ O	0.006	0.001	--	--	--
		CO ₂ e ^a	697.38	174.35	--	--	--
		Total HAPs ^c	6.71E-03	1.68E-03	--	--	--
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	PM (w/ CPM)	0.25	0.06	--	--	--
		PM (w/o CPM)	0.22	0.06	--	--	--
		PM ₁₀	0.25	0.06	--	--	--
		PM _{2.5}	0.25	0.06	--	--	--
		CO	4.38	1.10	--	--	--
		NO _x	7.52	1.88	--	--	--
		SO ₂	0.008	0.002	--	--	--
		VOC	0.50	0.13	--	--	--
		CO ₂	869.73	217.43	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-60 (AOS1) (cont'd)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine) (cont'd)	CH ₄	0.04	0.009	--	--	--
		N ₂ O	0.007	0.002	--	--	--
		CO ₂ e ^a	872.59	218.15	--	--	--
		Total HAPs ^c	8.39E-03	2.10E-03	--	--	--
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	PM (w/ CPM)	0.02	0.004	--	--	--
		PM (w/o CPM)	0.008	0.002	--	--	--
		PM ₁₀	0.02	0.004	--	--	--
		PM _{2.5}	0.02	0.004	--	--	--
		CO	16.77	4.19	--	--	--
		NO _x	1.14	0.29	--	--	--
		SO ₂	0.01	0.003	--	--	--
		VOC	0.25	0.06	--	--	--
		CO ₂	123.27	30.82	--	--	--
		CH ₄	0.006	0.001	--	--	--
		N ₂ O	0.001	0.0003	--	--	--
		CO ₂ e ^a	123.74	30.94	--	--	--

Emission Source Form

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					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
049-61 (AOS1) (cont'd)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine) (cont'd)	Total HAPs ^c	2.89E-02	7.22E-03	--	--	--
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	PM (w/ CPM)	0.02	0.004	--	--	--
		PM (w/o CPM)	0.008	0.002	--	--	--
		PM ₁₀	0.02	0.004	--	--	--
		PM _{2.5}	0.02	0.004	--	--	--
		CO	16.77	4.19	--	--	--
		NO _x	1.14	0.29	--	--	--
		SO ₂	0.01	0.003	--	--	--
		VOC	0.25	0.06	--	--	--
		CO ₂	123.27	30.82	--	--	--
		CH ₄	0.006	0.001	--	--	--
		N ₂ O	0.001	0.0003	--	--	--
		CO ₂ e ^a	123.74	30.94	--	--	--
		Total HAPs ^c	2.89E-02	7.22E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
AOS5: Emergency Grizzly Systems							
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	PM (w/ CPM)	11.00	48.18	--	--	--
		PM (w/o CPM)	11.00	48.18	--	--	--
		PM ₁₀	3.70	16.21	--	--	--
		PM _{2.5}	0.25	1.10	--	--	--
		Lead	7.03E-05	3.08E-04	--	--	--
		Total HAPs ^c	1.81E-03	7.94E-03	--	--	--
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	PM (w/ CPM)	1.36	5.94	--	--	--
		PM (w/o CPM)	1.36	5.94	--	--	--
		PM ₁₀	0.64	2.81	--	--	--
		PM _{2.5}	0.10	0.43	--	--	--
		Lead	1.22E-05	5.34E-05	--	--	--
		Total HAPs ^c	3.14E-04	1.38E-03	--	--	--
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	PM (w/ CPM)	0.22	0.98	--	--	--
		PM (w/o CPM)	0.22	0.98	--	--	--
		PM ₁₀	0.11	0.49	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
027-6 (AOS5) (cont'd)	Wind Erosion of Temporary Oversize Stockpile (AOS5) (cont'd)	PM _{2.5}	0.02	0.07	--	--	--
		Lead	2.13E-06	9.32E-06	--	--	--
		Total HAPs ^c	5.49E-05	2.40E-04	--	--	--
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	PM (w/ CPM)	13.57	59.42	--	--	--
		PM (w/o CPM)	13.57	59.42	--	--	--
		PM ₁₀	6.42	28.11	--	--	--
		PM _{2.5}	0.97	4.26	--	--	--
		Lead	1.22E-04	5.34E-04	--	--	--
		Total HAPs ^c	3.14E-03	1.38E-02	--	--	--
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	PM (w/ CPM)	1.45	6.36	--	--	--
		PM (w/o CPM)	1.45	6.36	--	--	--
		PM ₁₀	0.69	3.01	--	--	--
		PM _{2.5}	0.10	0.46	--	--	--
		Lead	1.30E-05	5.71E-05	--	--	--
		Total HAPs ^c	3.36E-04	1.47E-03	--	--	--

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	PM (w/ CPM)	1.45	6.36	--	--	--
		PM (w/o CPM)	1.45	6.36	--	--	--
		PM ₁₀	0.69	3.01	--	--	--
		PM _{2.5}	0.10	0.46	--	--	--
		Lead	1.30E-05	5.71E-05	--	--	--
		Total HAPs ^c	3.36E-04	1.47E-03	--	--	--
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	PM (w/ CPM)	1.45	6.36	--	--	--
		PM (w/o CPM)	1.45	6.36	--	--	--
		PM ₁₀	0.69	3.01	--	--	--
		PM _{2.5}	0.10	0.46	--	--	--
		Lead	1.30E-05	5.71E-05	--	--	--
		Total HAPs ^c	3.36E-04	1.47E-03	--	--	--

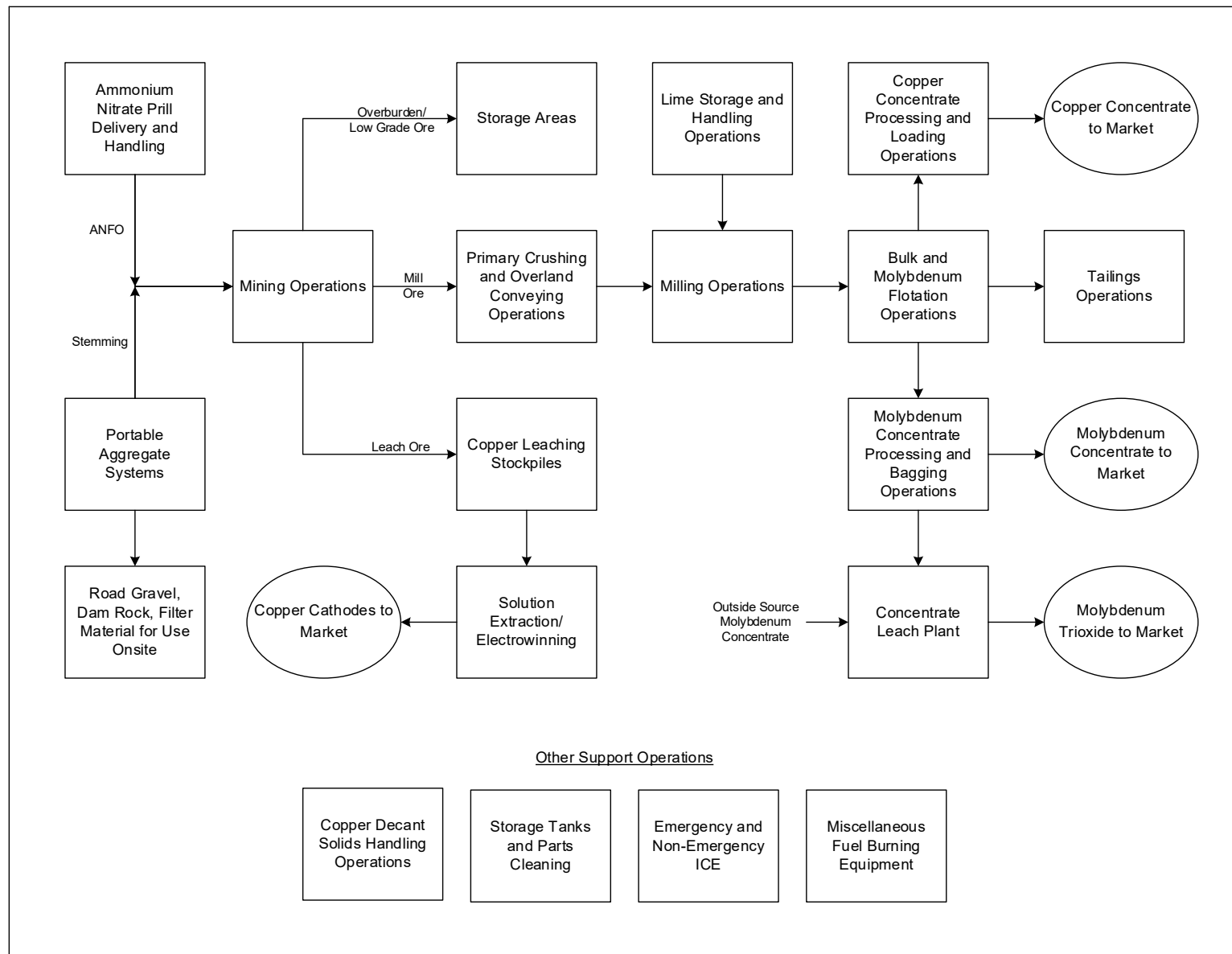
* FMBI a non-categorical source (see A.A.C. R18-2-101.23). Therefore, only non-fugitive emissions are included in the determination of the PTE of regulated air pollutants (except HAPs). All HAPs are included in the determination of facility-wide PTE regardless of their fugitive or non-fugitive classification. For completeness, all potential emissions are included in this table regardless of their fugitive or non-fugitive classification.

^a Potential CO₂e emissions are calculated by summing the individual potential greenhouse gas emissions multiplied by their GWP. GWP of CO₂ = 1, GWP of CH₄ = 28, GWP of N₂O = 265.

^b Carbon disulfide has the greatest potential emissions of any single facility-wide HAP on both an annual and hourly basis.

^c See Appendix F for individual HAPs.

APPENDIX D PROCESS FLOW DIAGRAMS



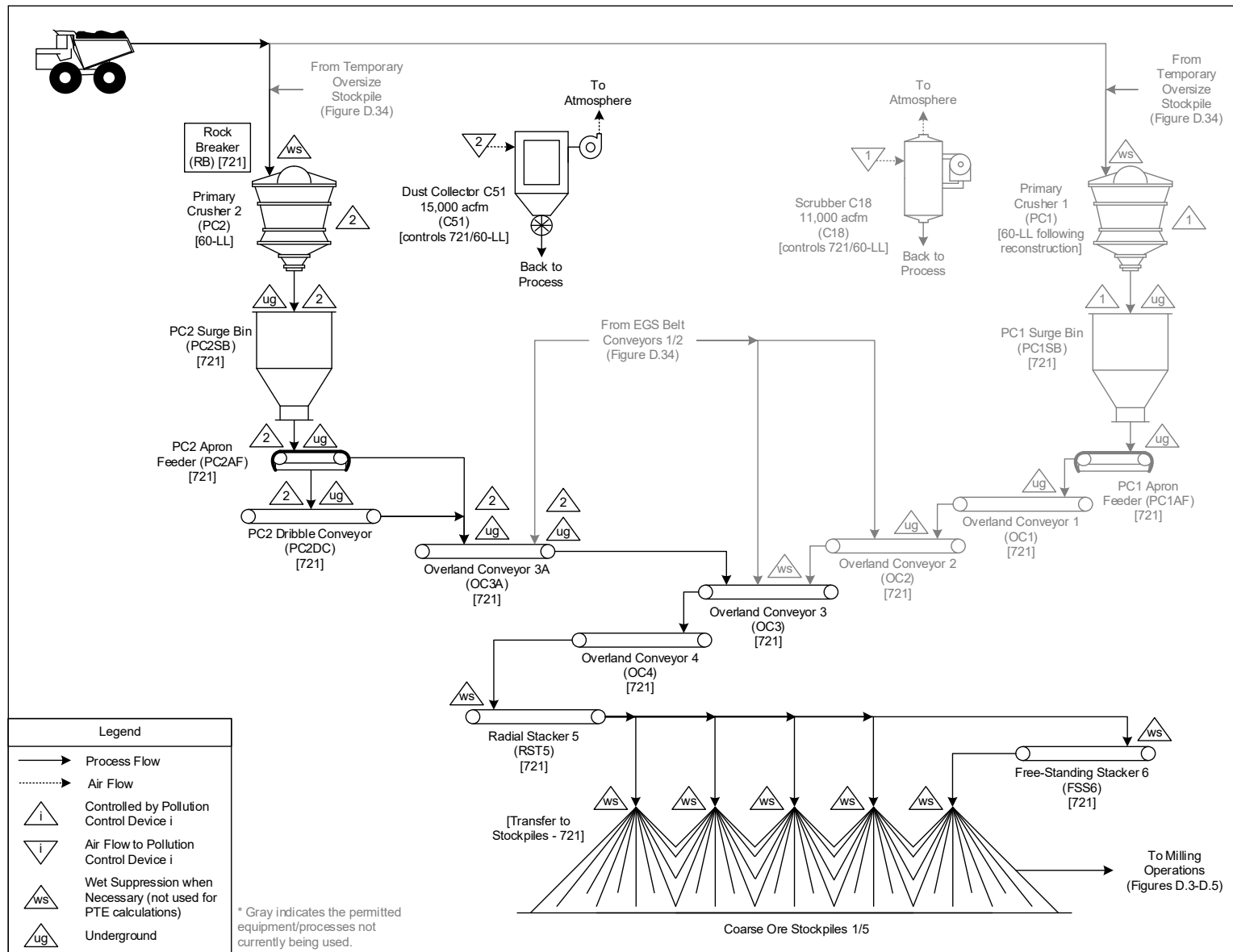


Figure D.2 Primary Crushing and Overland Conveying Operations

Process Flow Diagrams

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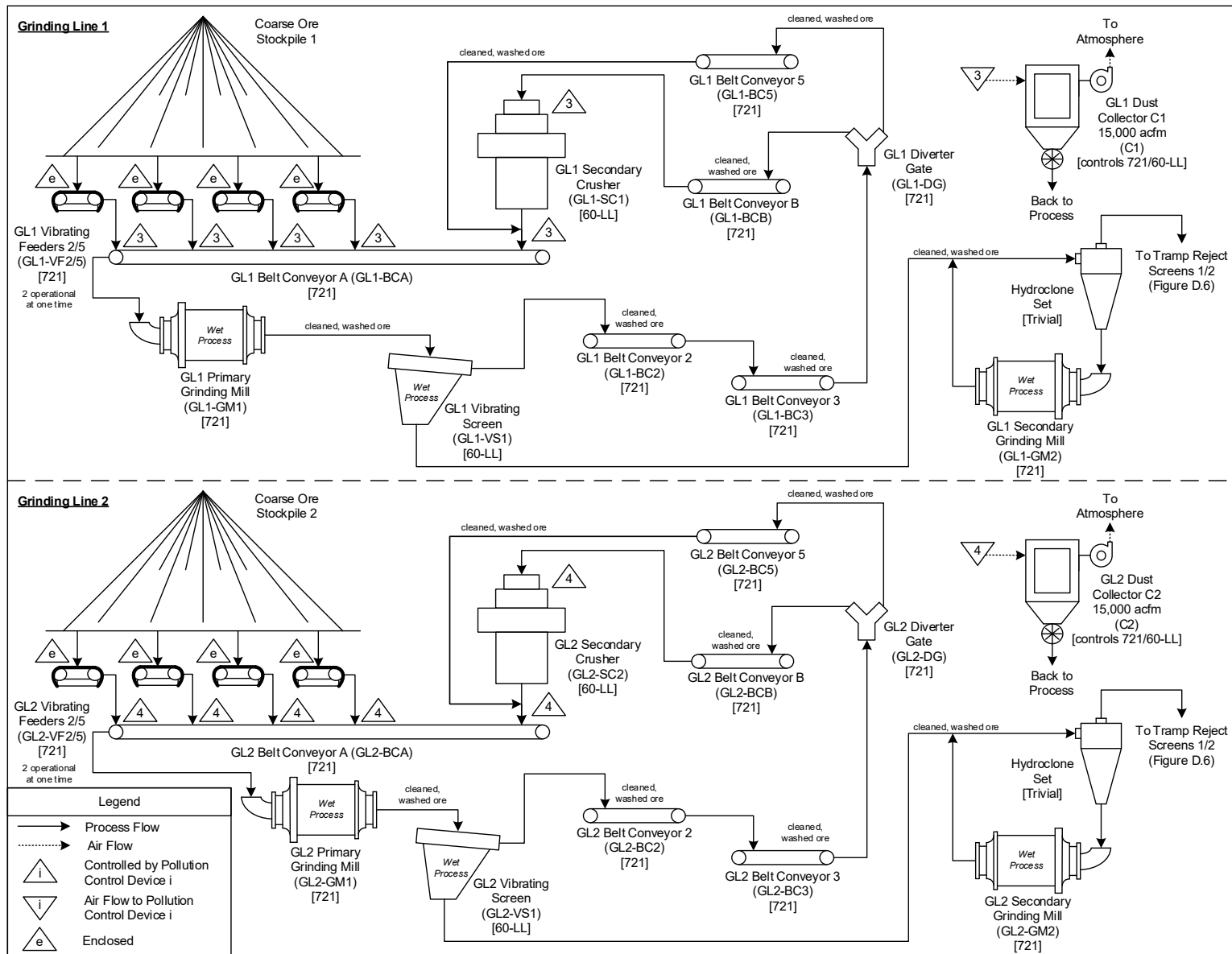


Figure D.3Milling Operations – Grinding Lines 1 and 2

Process Flow Diagrams

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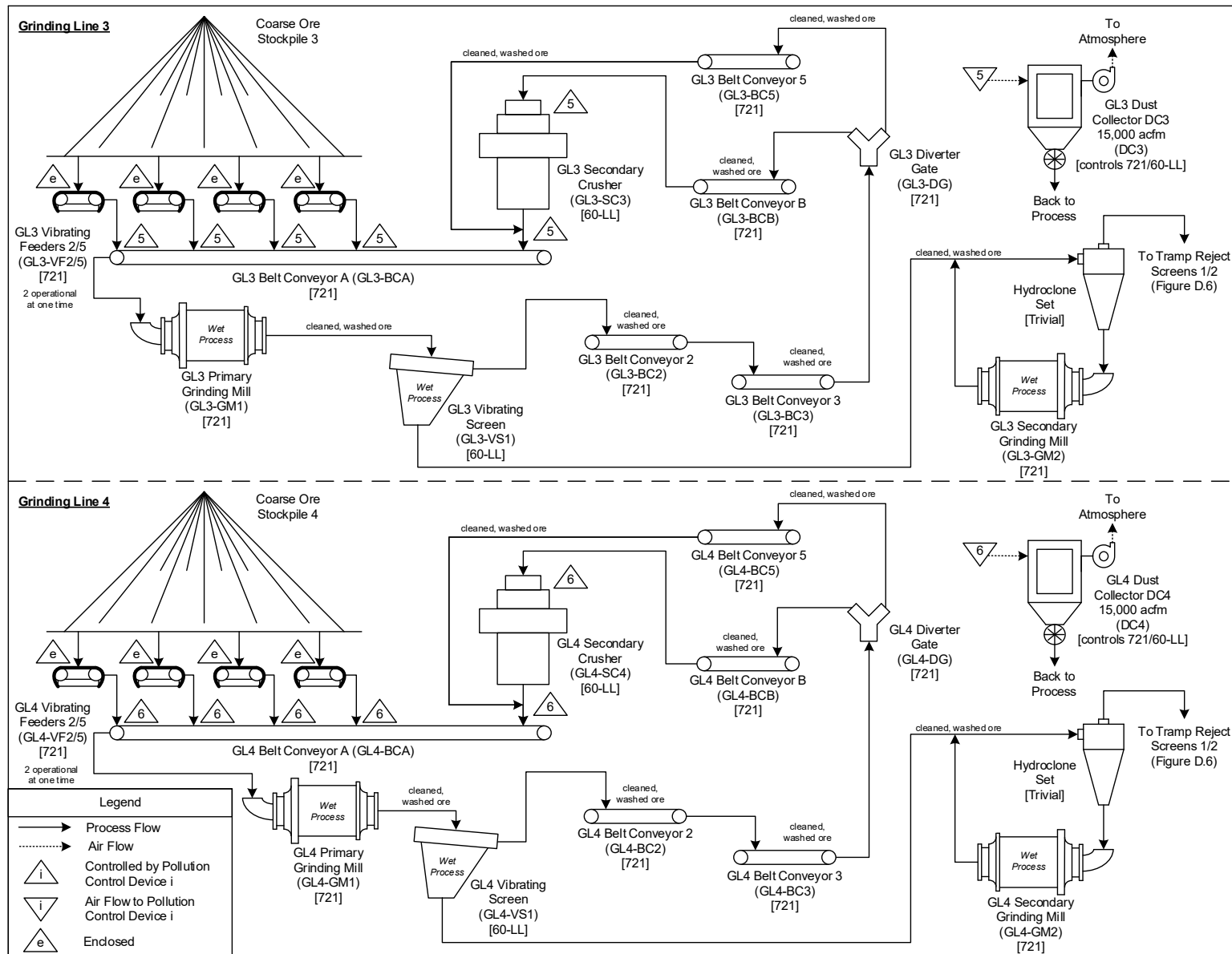


Figure D.4Milling Operations – Grinding Lines 3 and 4

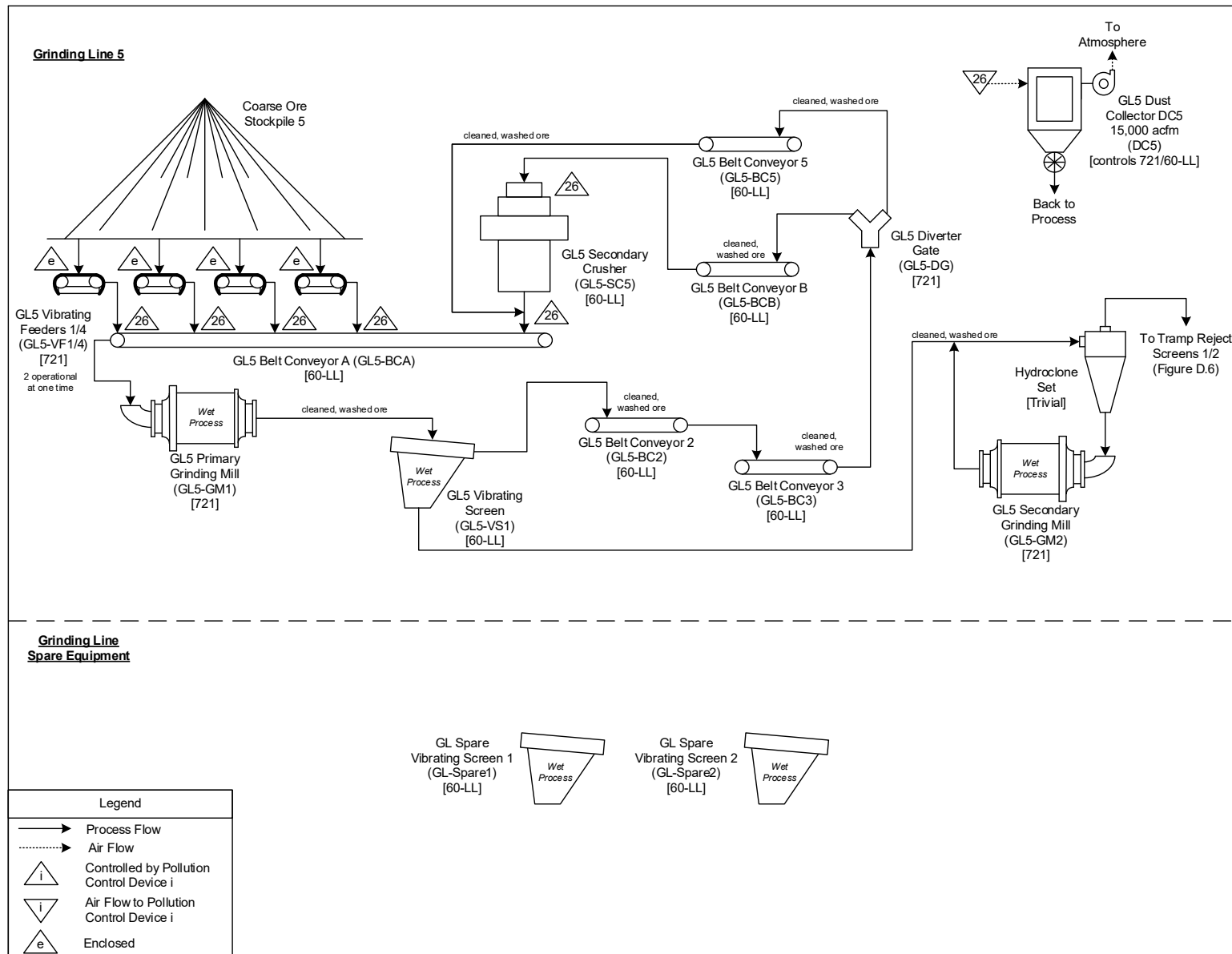


Figure D.5 Milling Operations – Grinding Line 5 and Spare Equipment

Process Flow Diagrams

October 2025

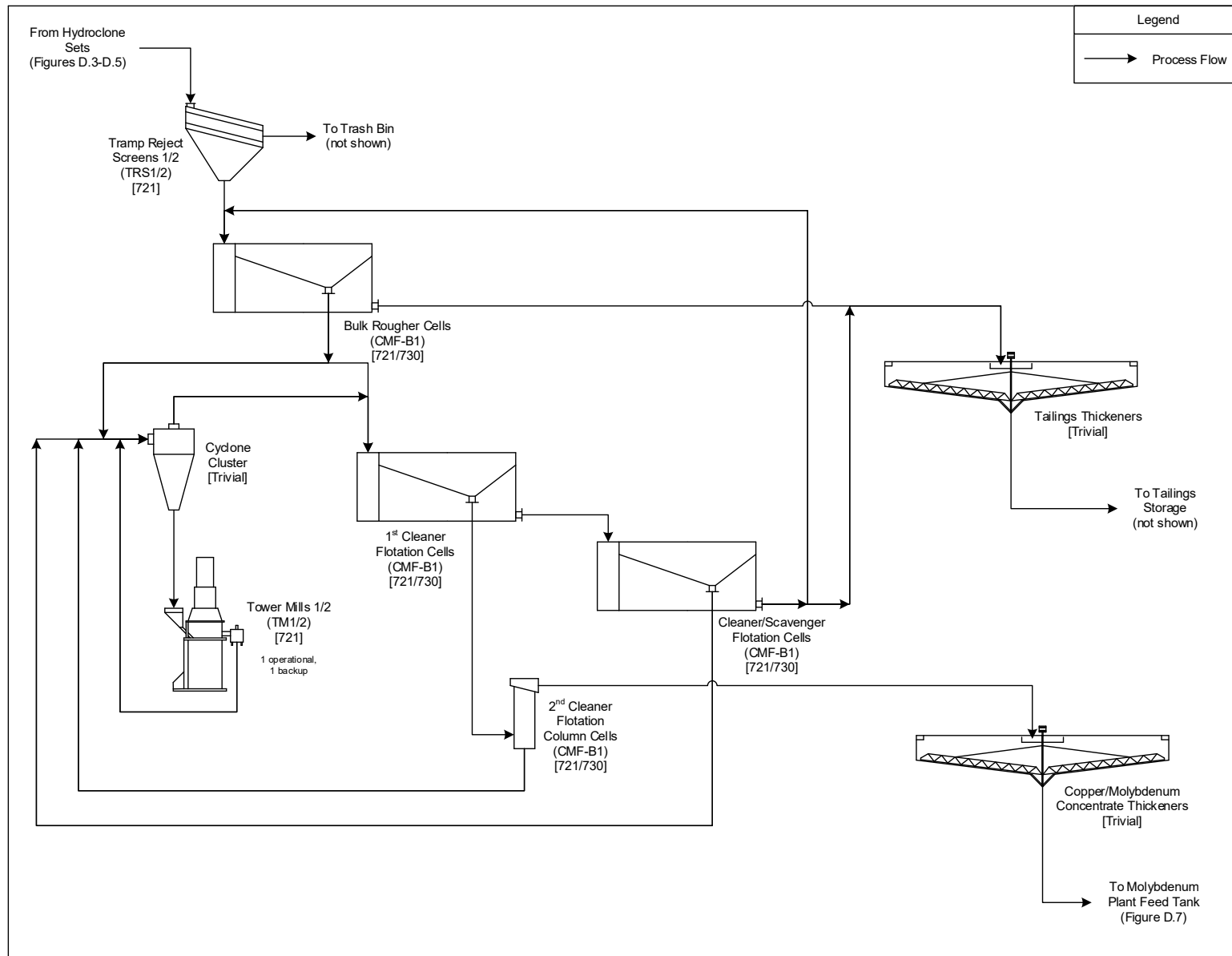


Figure D.6 Bulk Flotation Operations

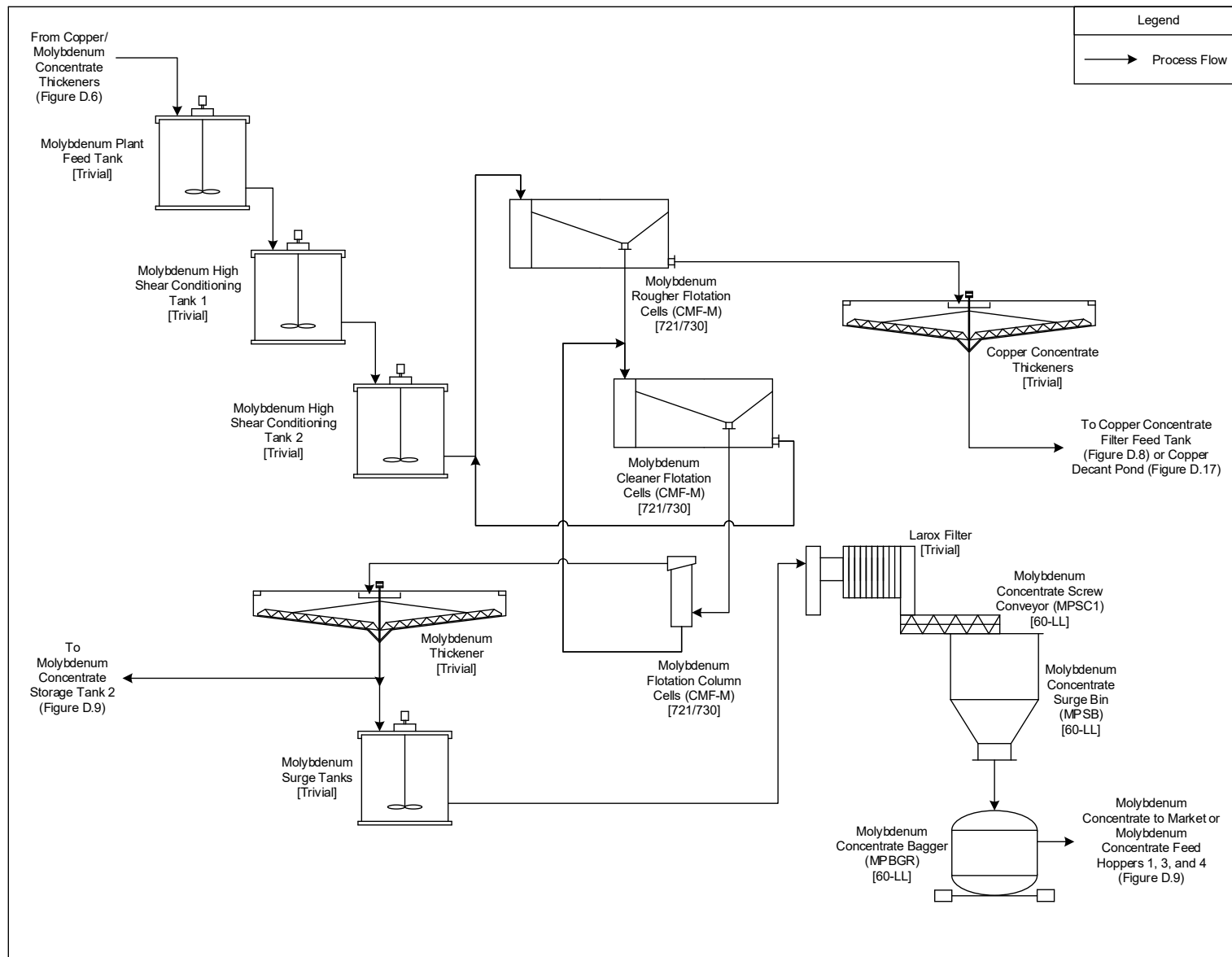


Figure D.7 Molybdenum Flotation and Molybdenum Concentrate Processing and Bagging Operations

Process Flow Diagrams

October 2025

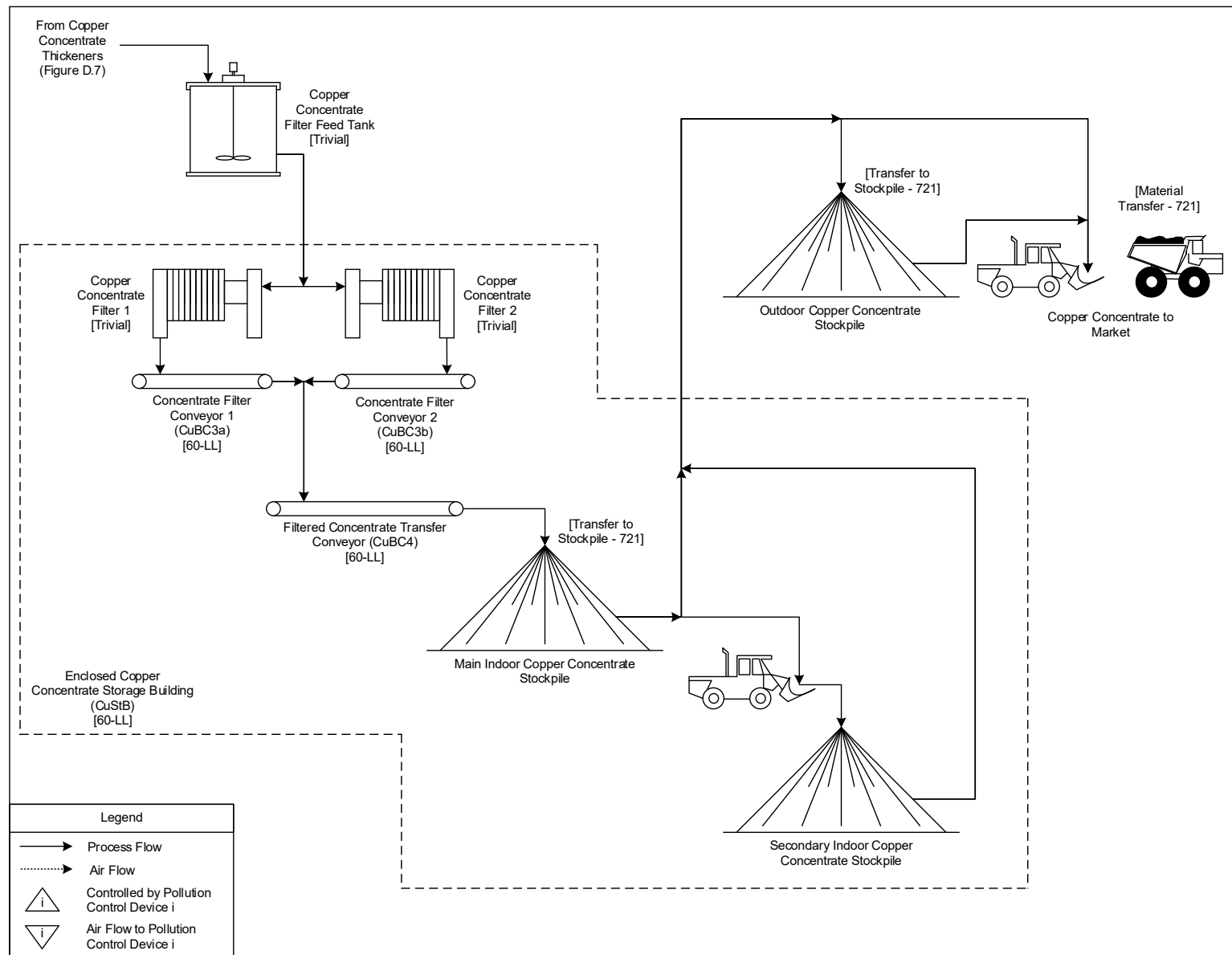


Figure D.8 Copper Concentrate Processing and Loading Operations

CONFIDENTIAL AND PROPRIETARY
(see Section 12)

Figure D.9 Concentrate Leach Plant – Molybdenum Concentrate Handling

CONFIDENTIAL AND PROPRIETARY
(see Section 12)

Figure D.10 Concentrate Leach Plant – Pressure Leach Vessel and Support Equipment

CONFIDENTIAL AND PROPRIETARY
(see Section 12)

Figure D.11 Concentrate Leach Plant – MoO₃ and Rhenium Processing

Process Flow Diagrams

October 2025

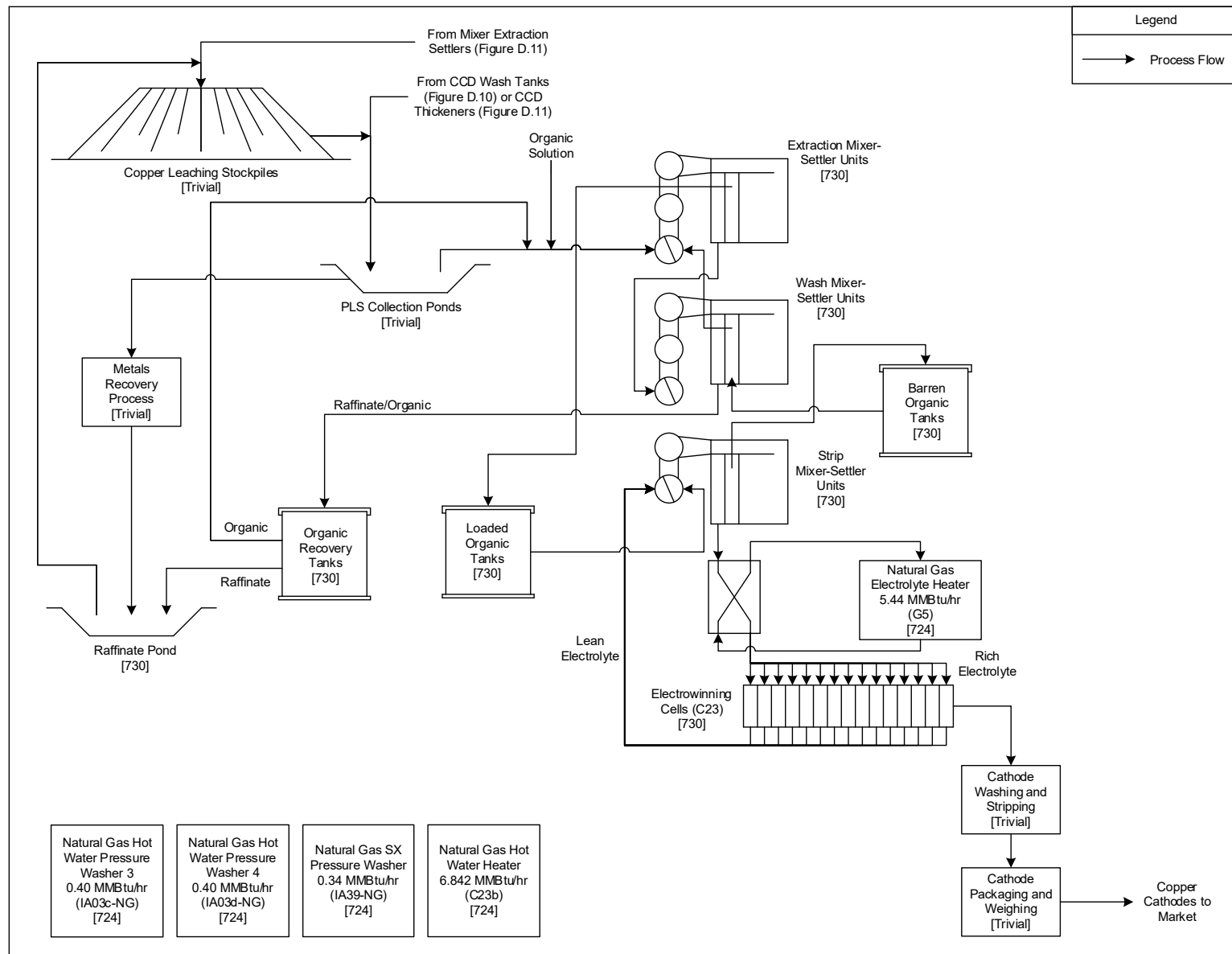


Figure D.12 Solution Extraction/Electrowinning Operations

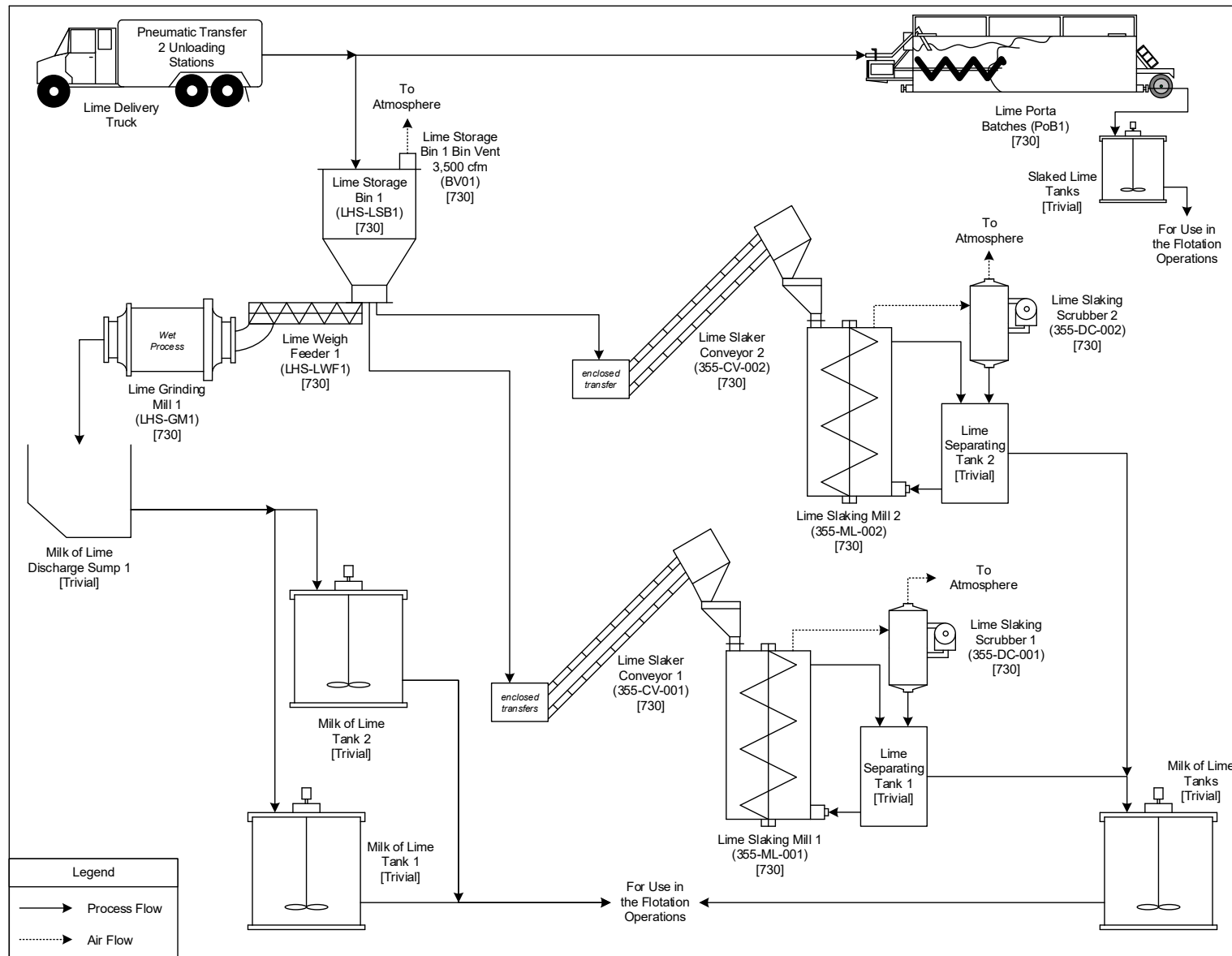


Figure D.13 Lime Storage and Handling Operations

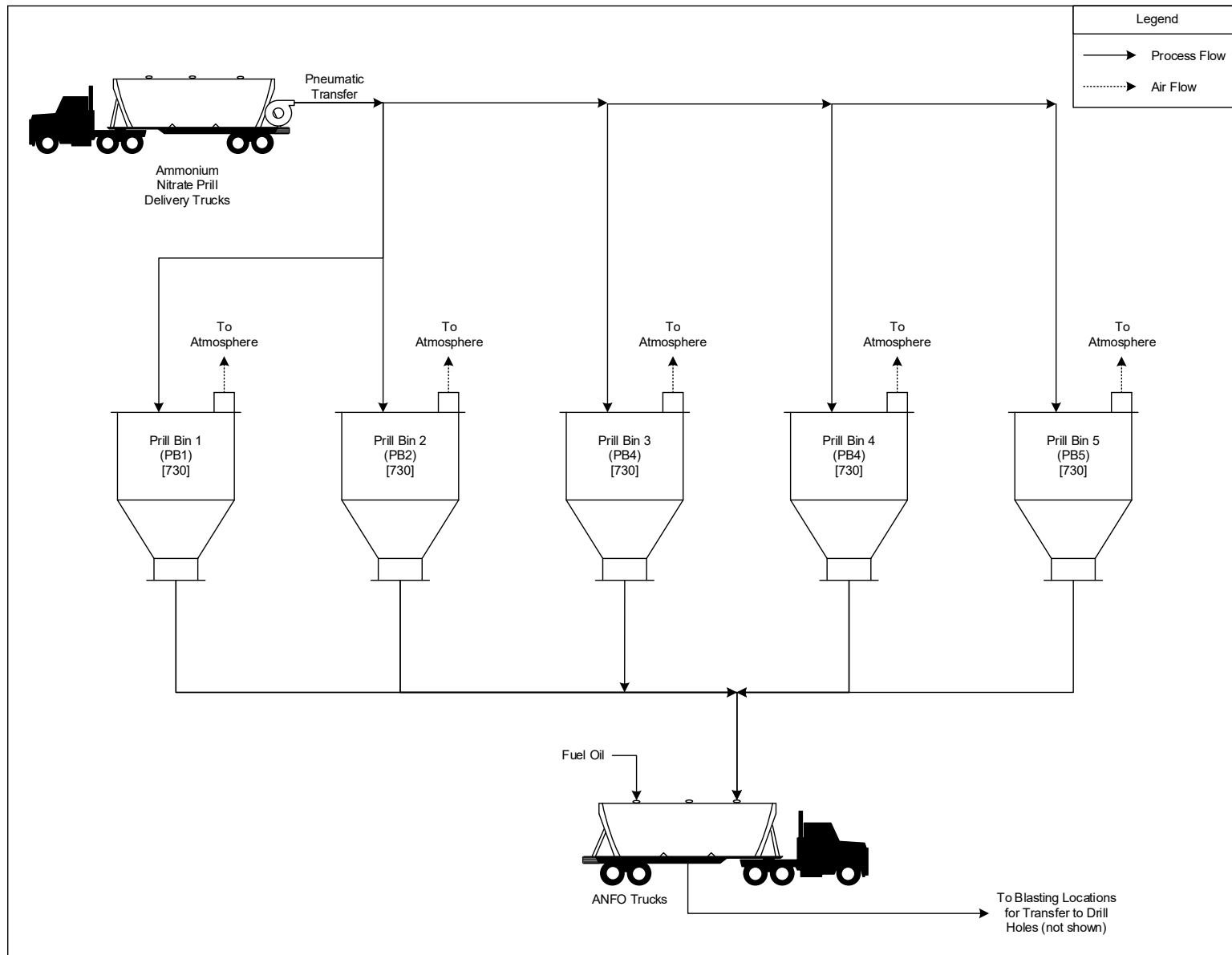


Figure D.14 Ammonium Nitrate Prill Delivery and Handling Operations

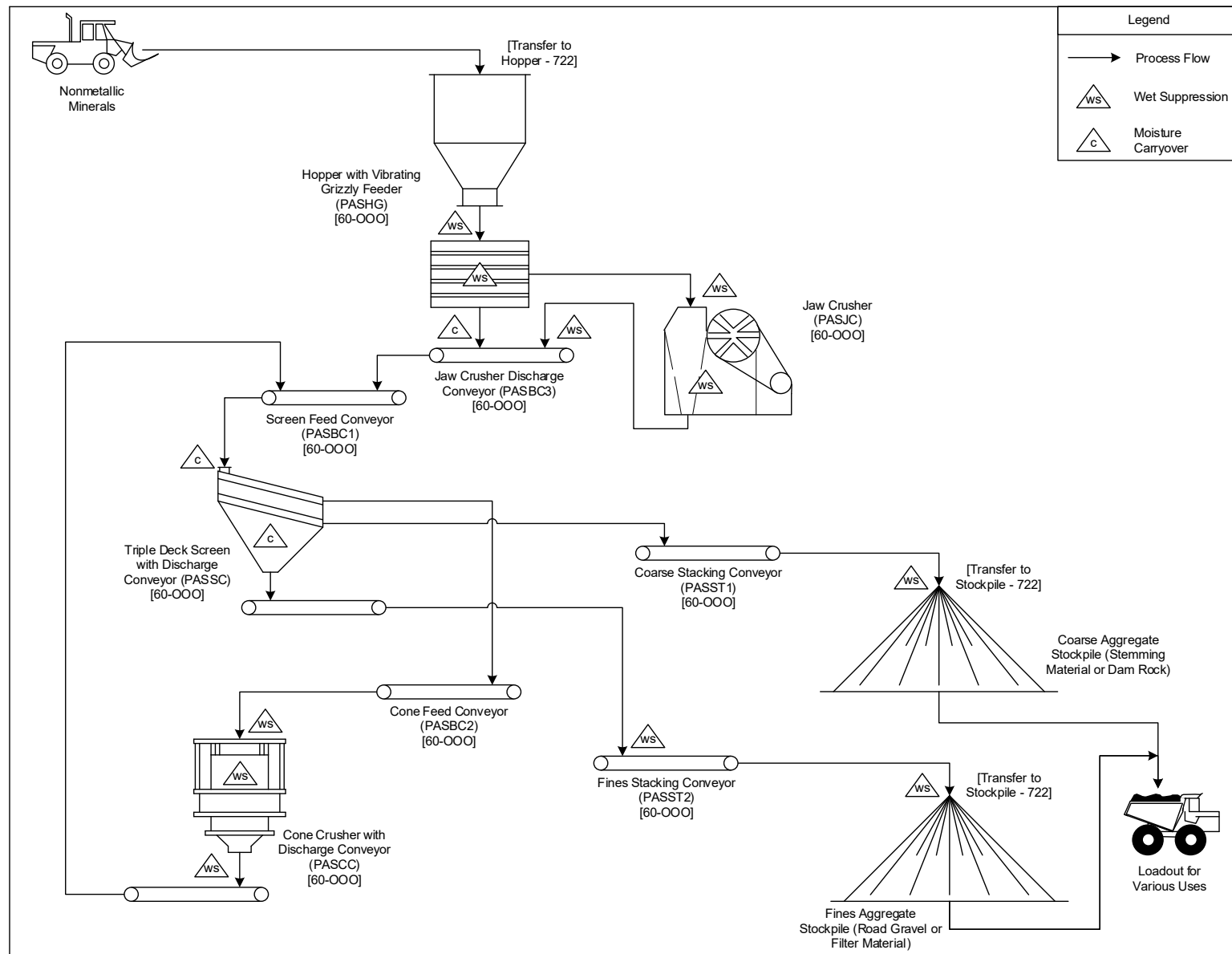


Figure D.15 Portable Aggregate System

Process Flow Diagrams

October 2025

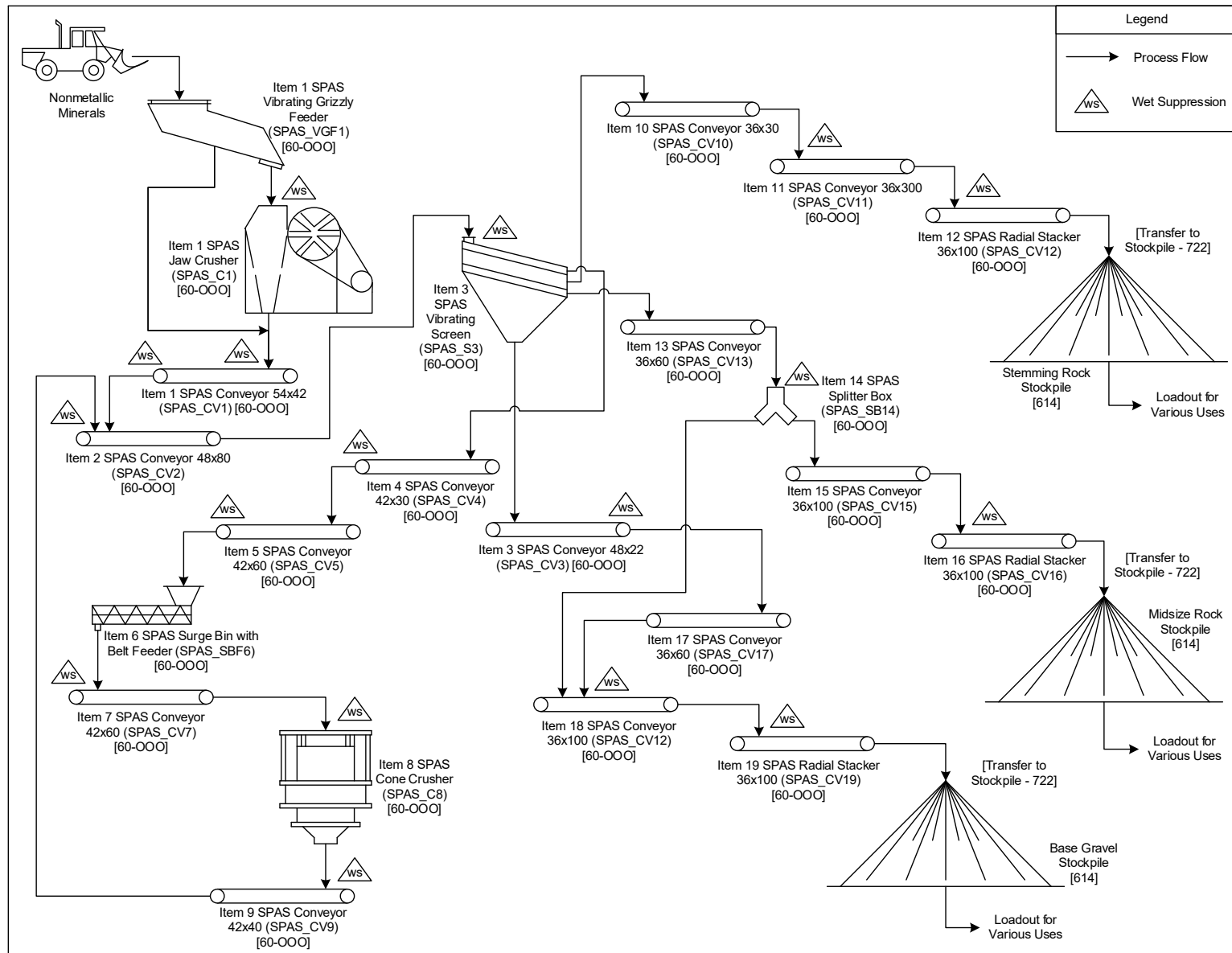


Figure D.16 Supplemental Portable Aggregate System

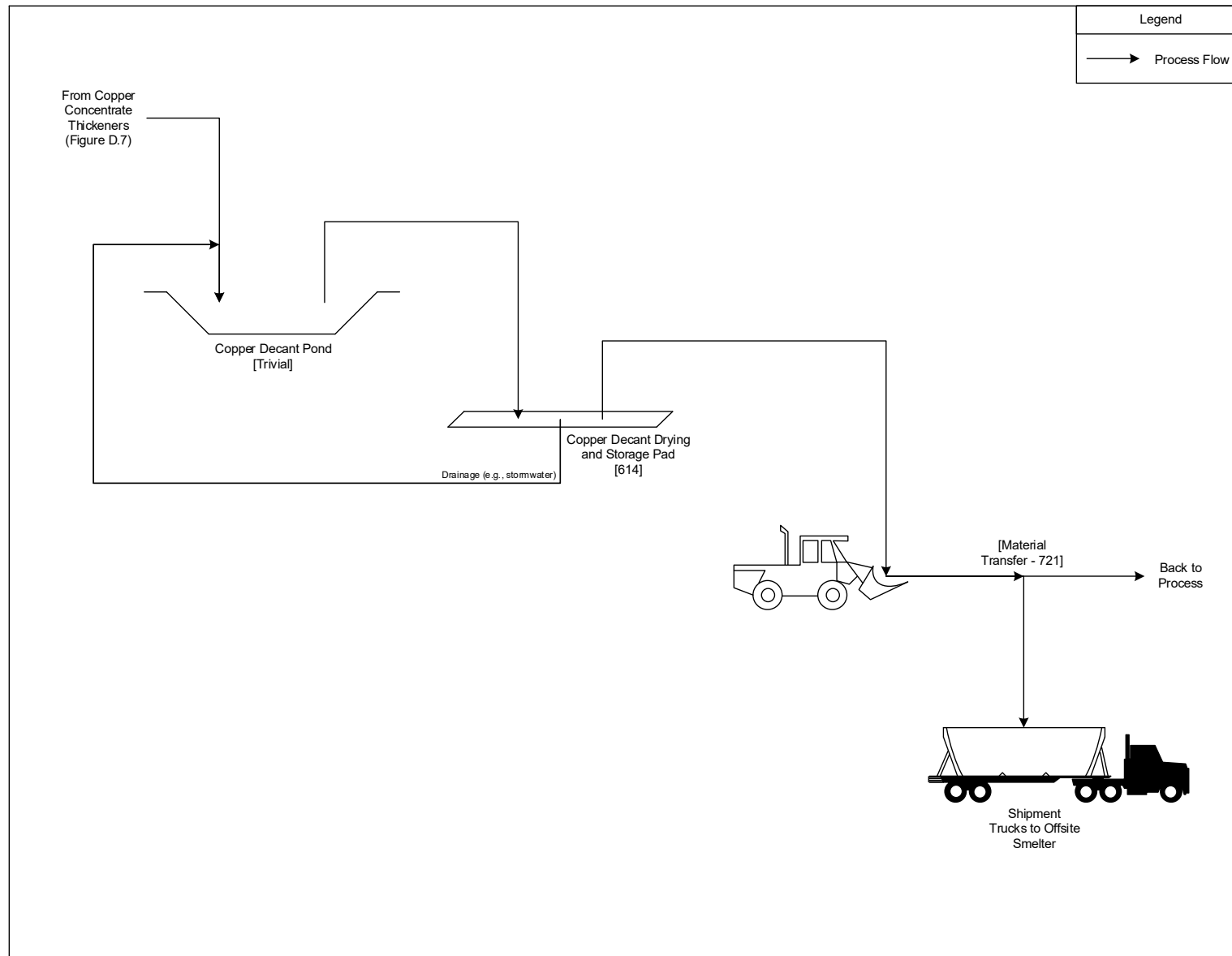


Figure D.17 Copper Decant Solids Handling Operations

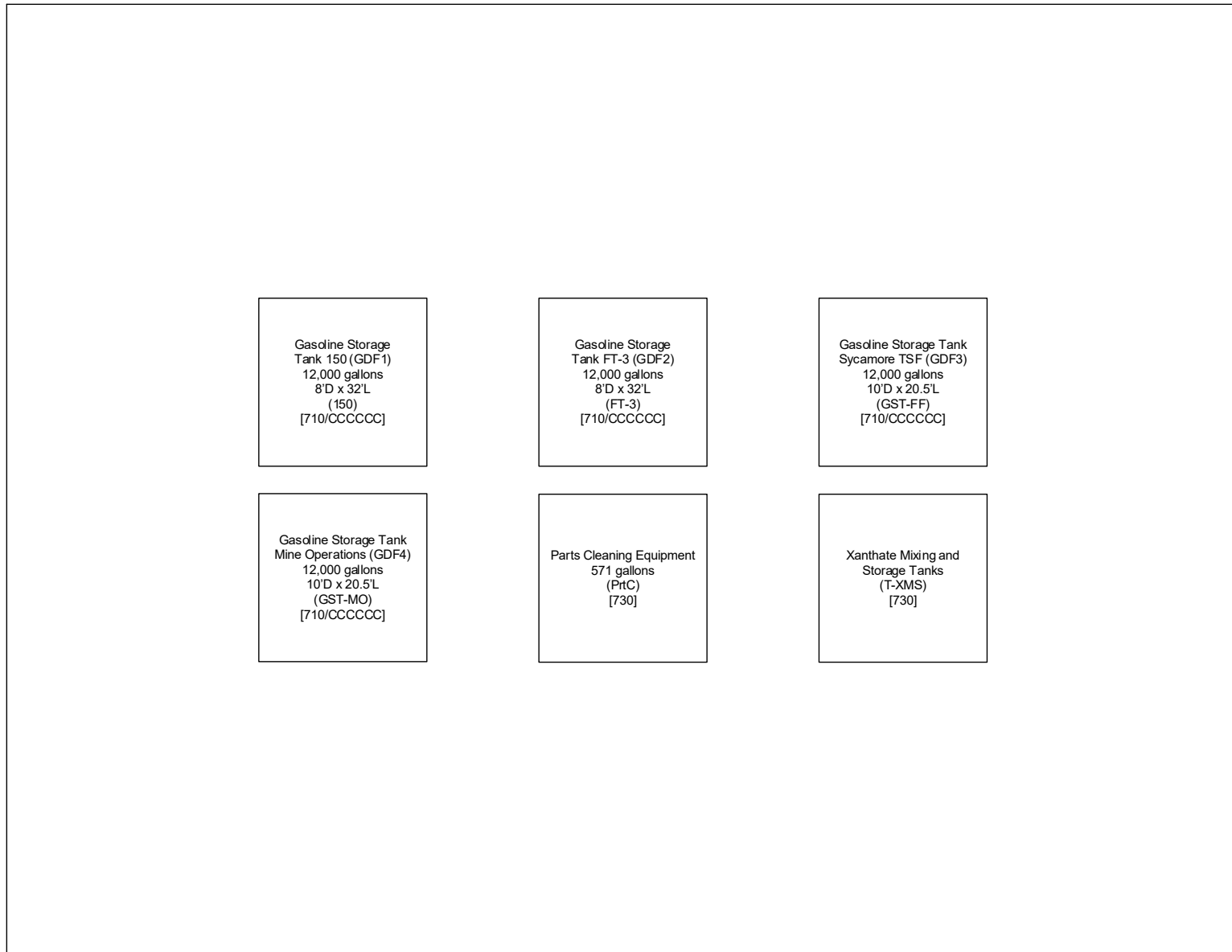


Figure D.18 Storage Tanks and Parts Cleaning

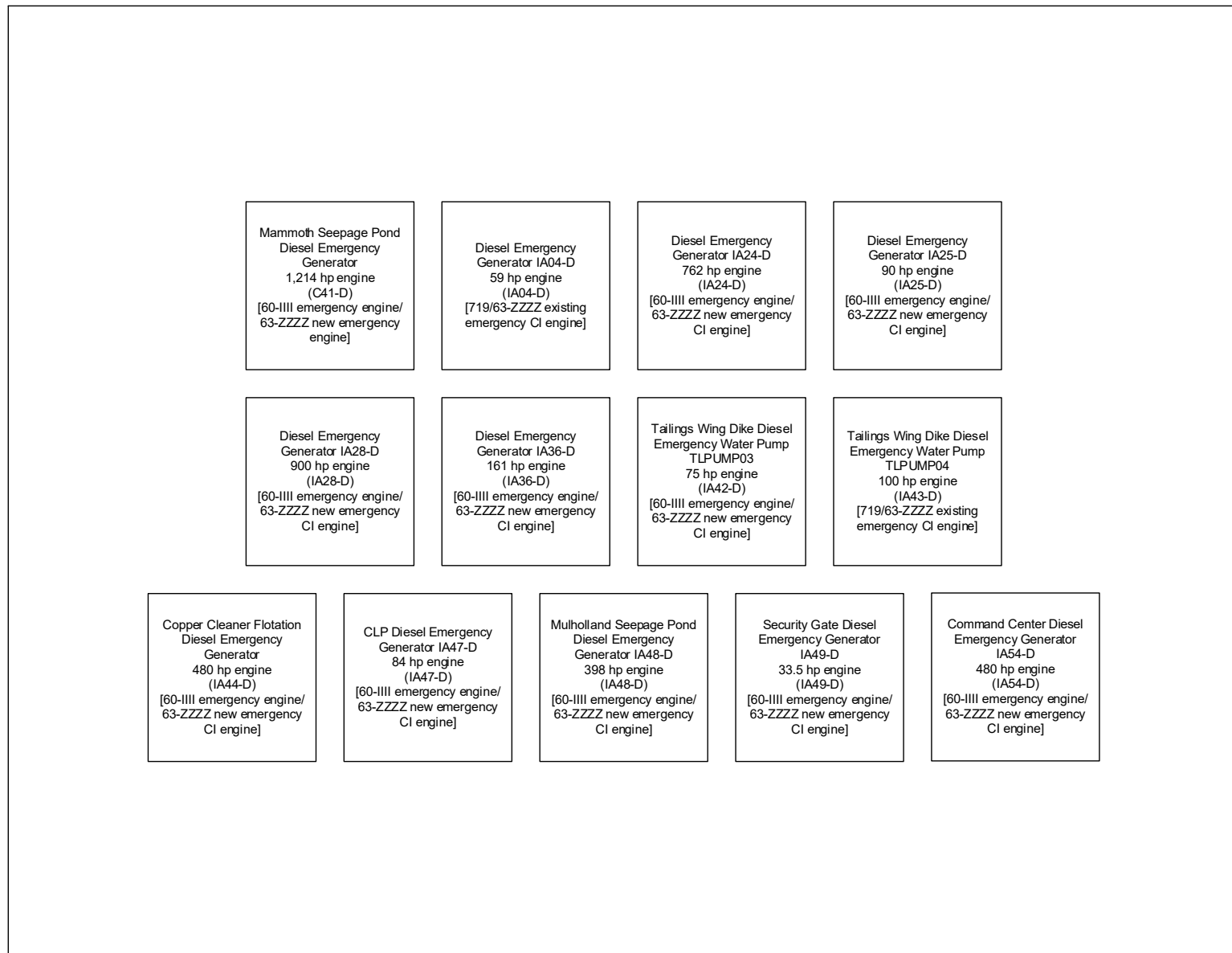


Figure D.19 Diesel Emergency ICE

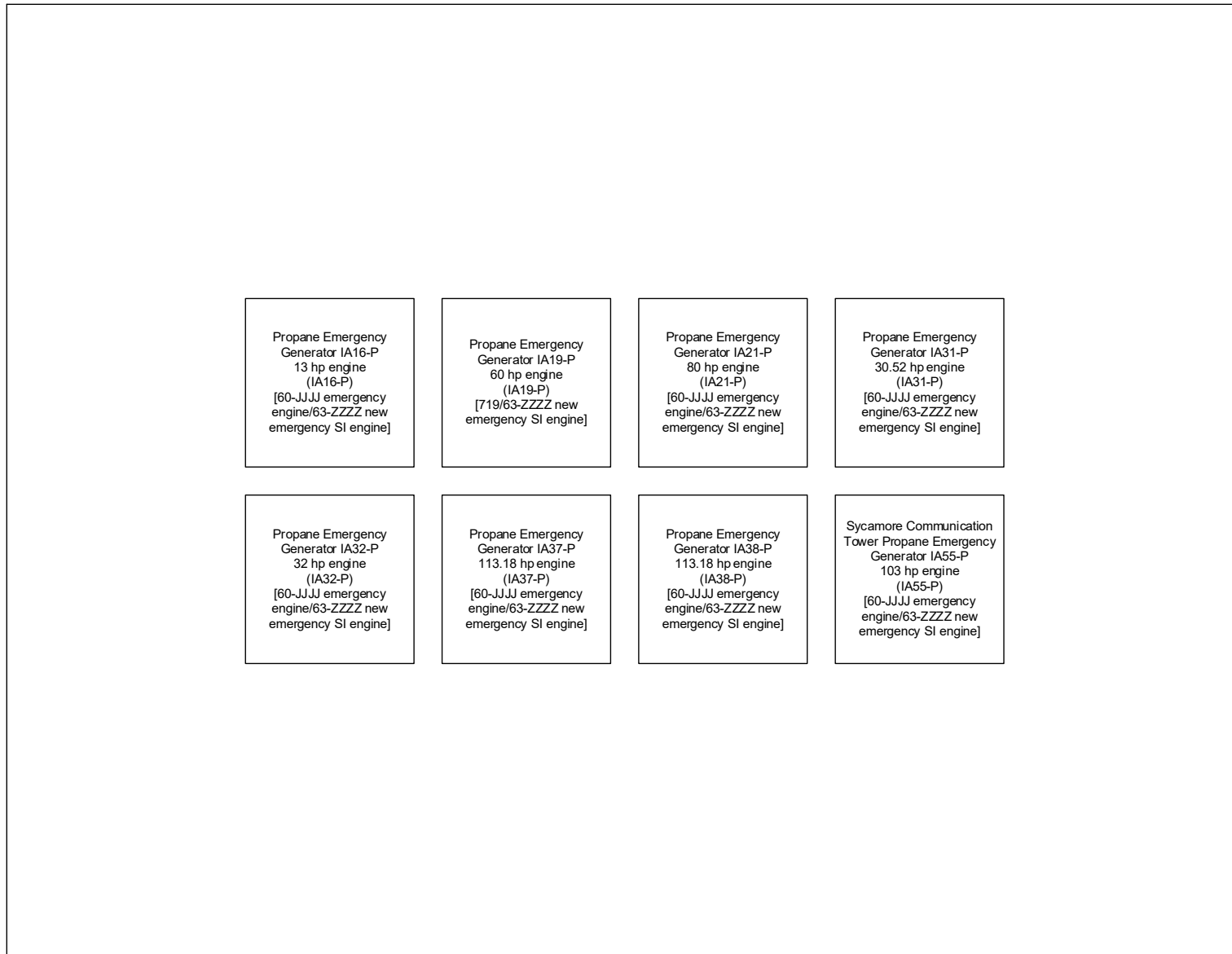


Figure D.20 Propane Emergency ICE

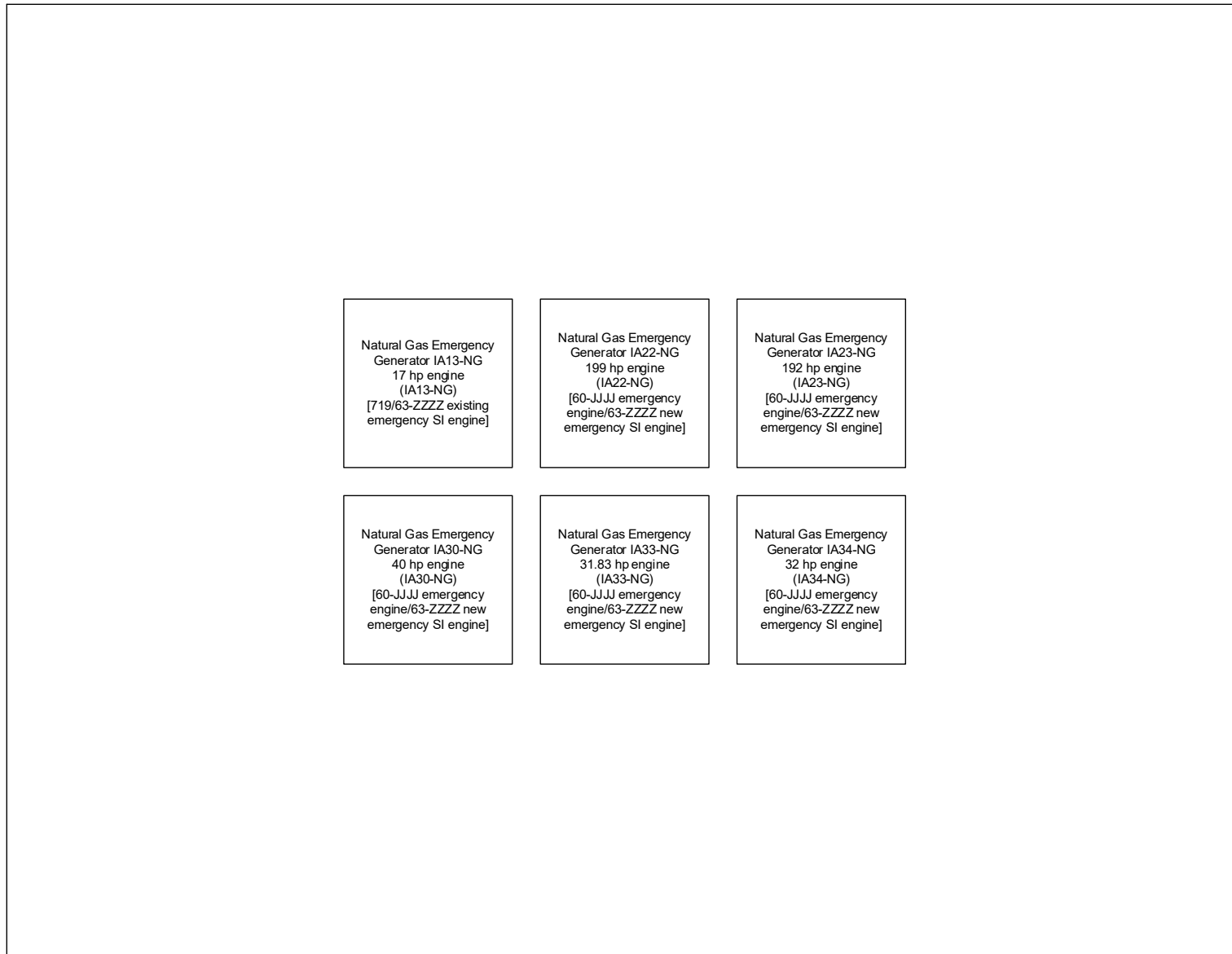


Figure D.21 Natural Gas Emergency ICE

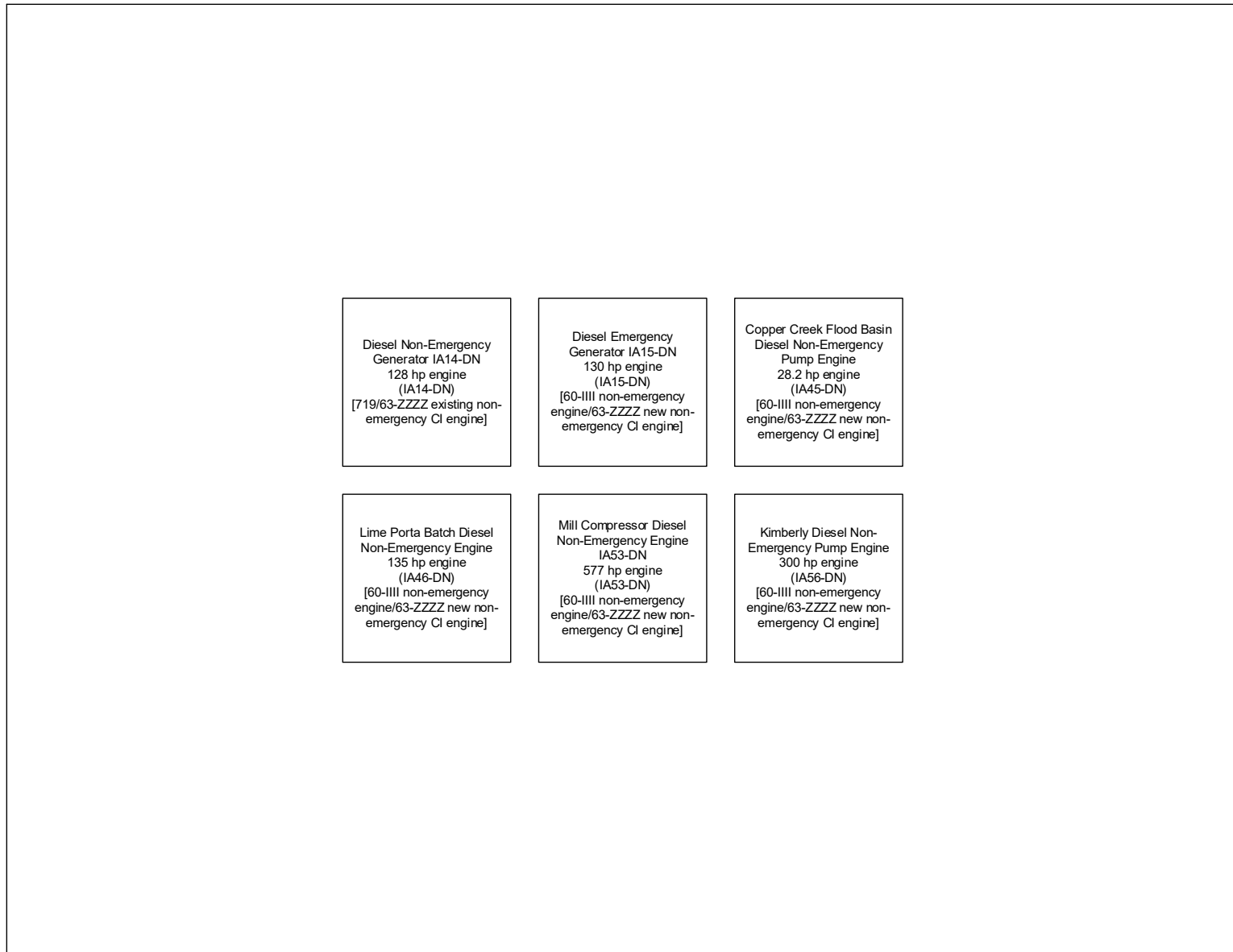


Figure D.22 Diesel Non-Emergency Engines



Figure D.23 Propane Non-Emergency ICE

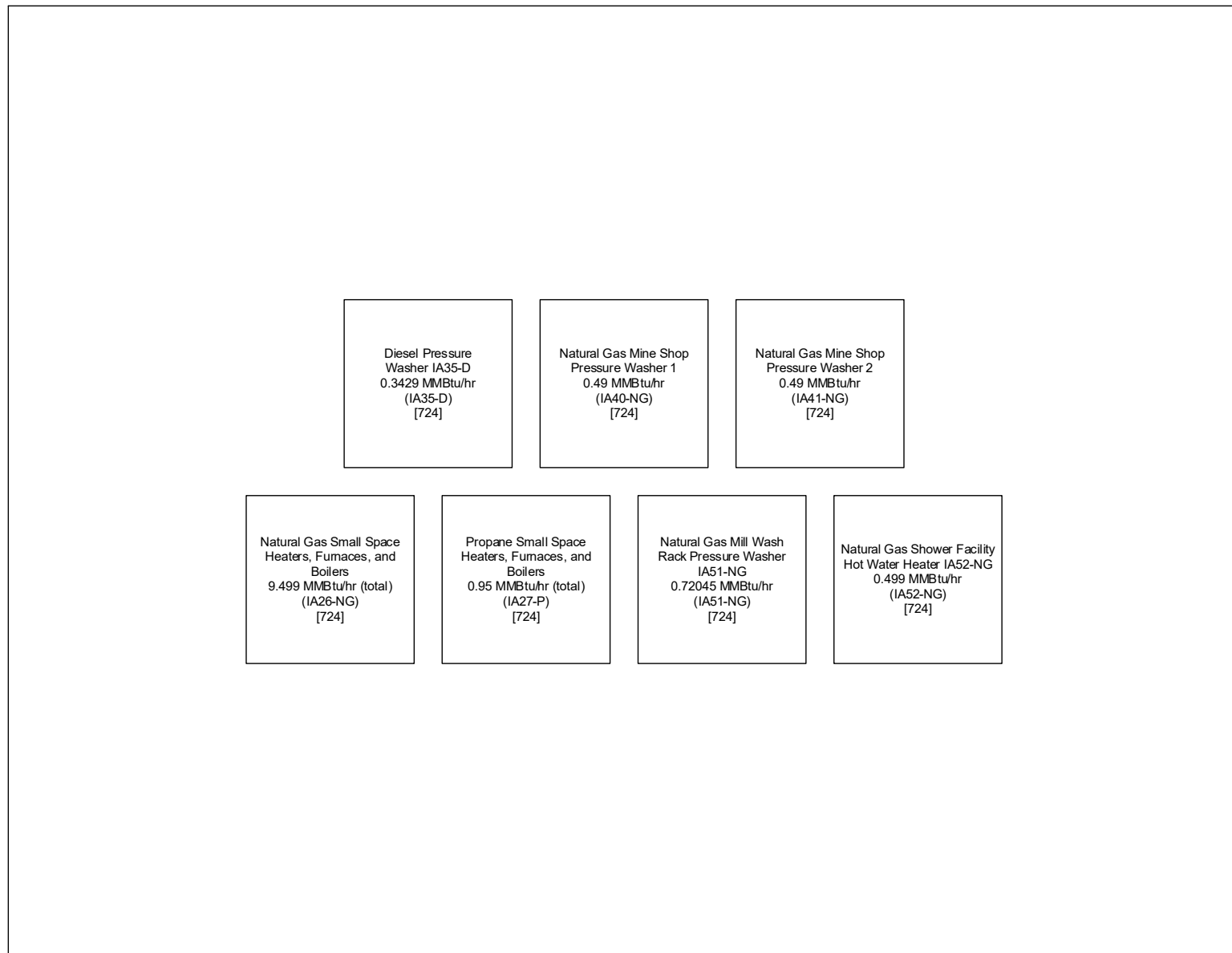


Figure D.24 Miscellaneous Fuel Burning Equipment

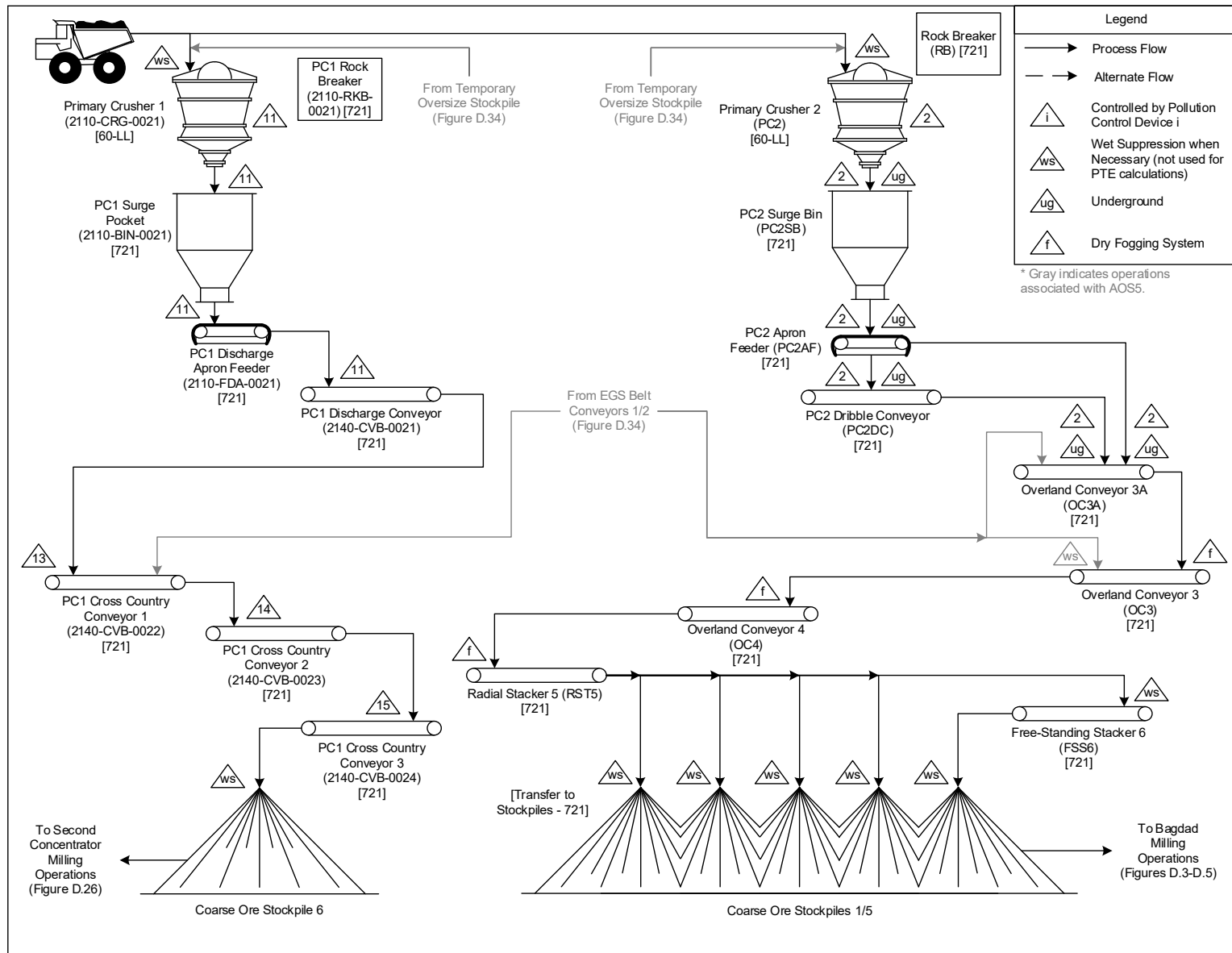


Figure D.25 Primary Crushing and Overland Conveying Operations (AOS1)

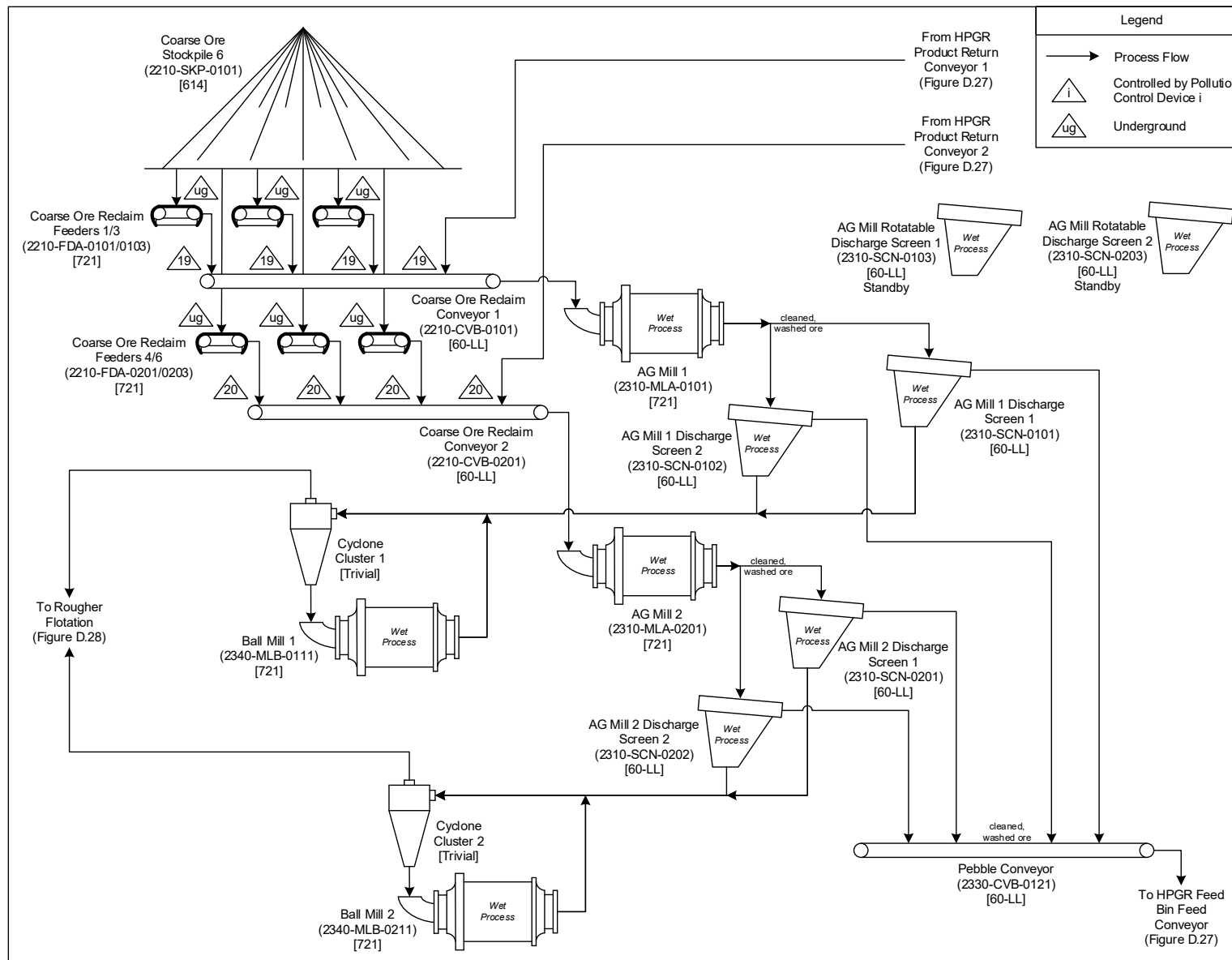


Figure D.26 Second Concentrator Milling Operations 1 (AOS1)

Process Flow Diagrams

October 2025

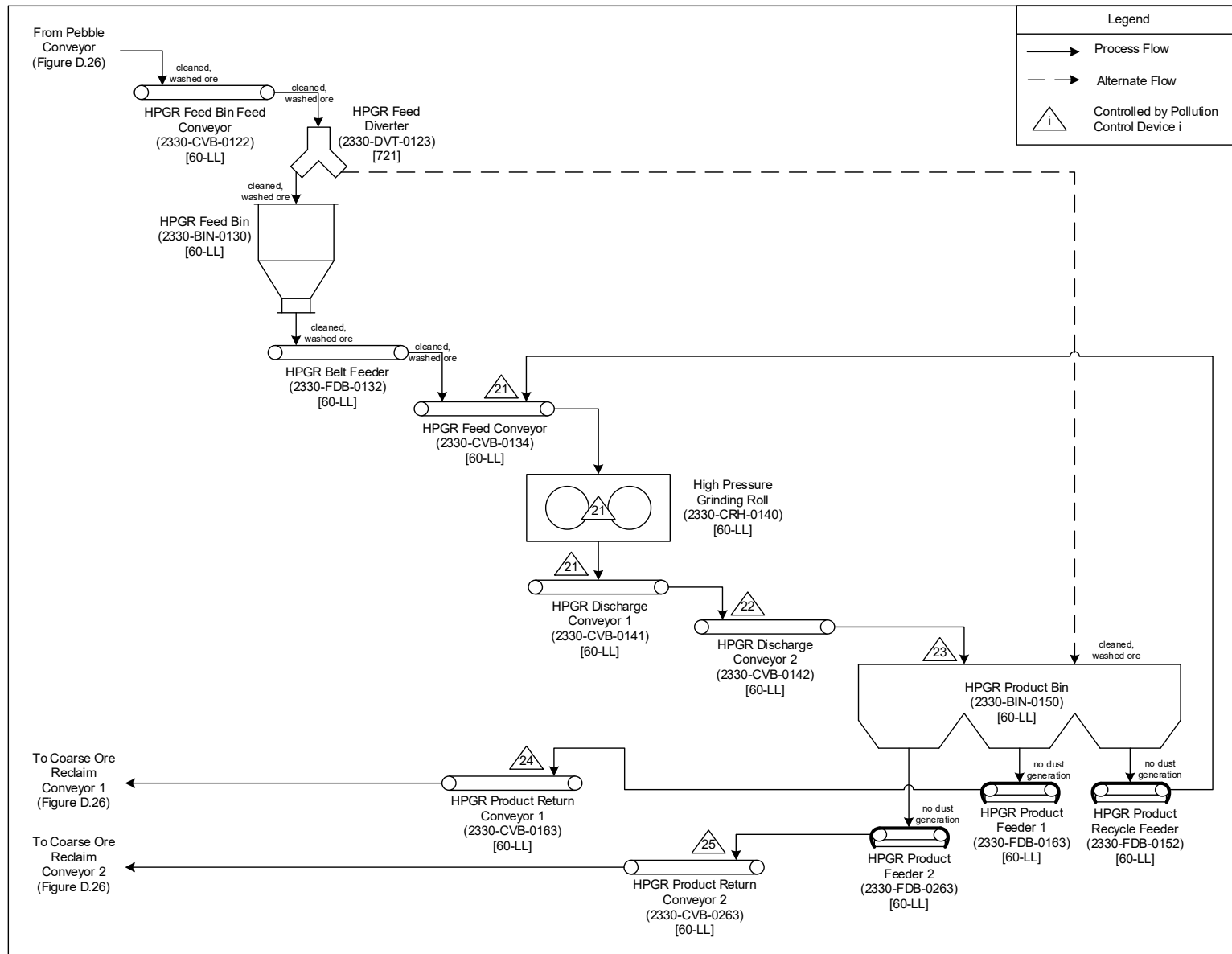


Figure D.27 Second Concentrator Milling Operations 2 (AOS1)

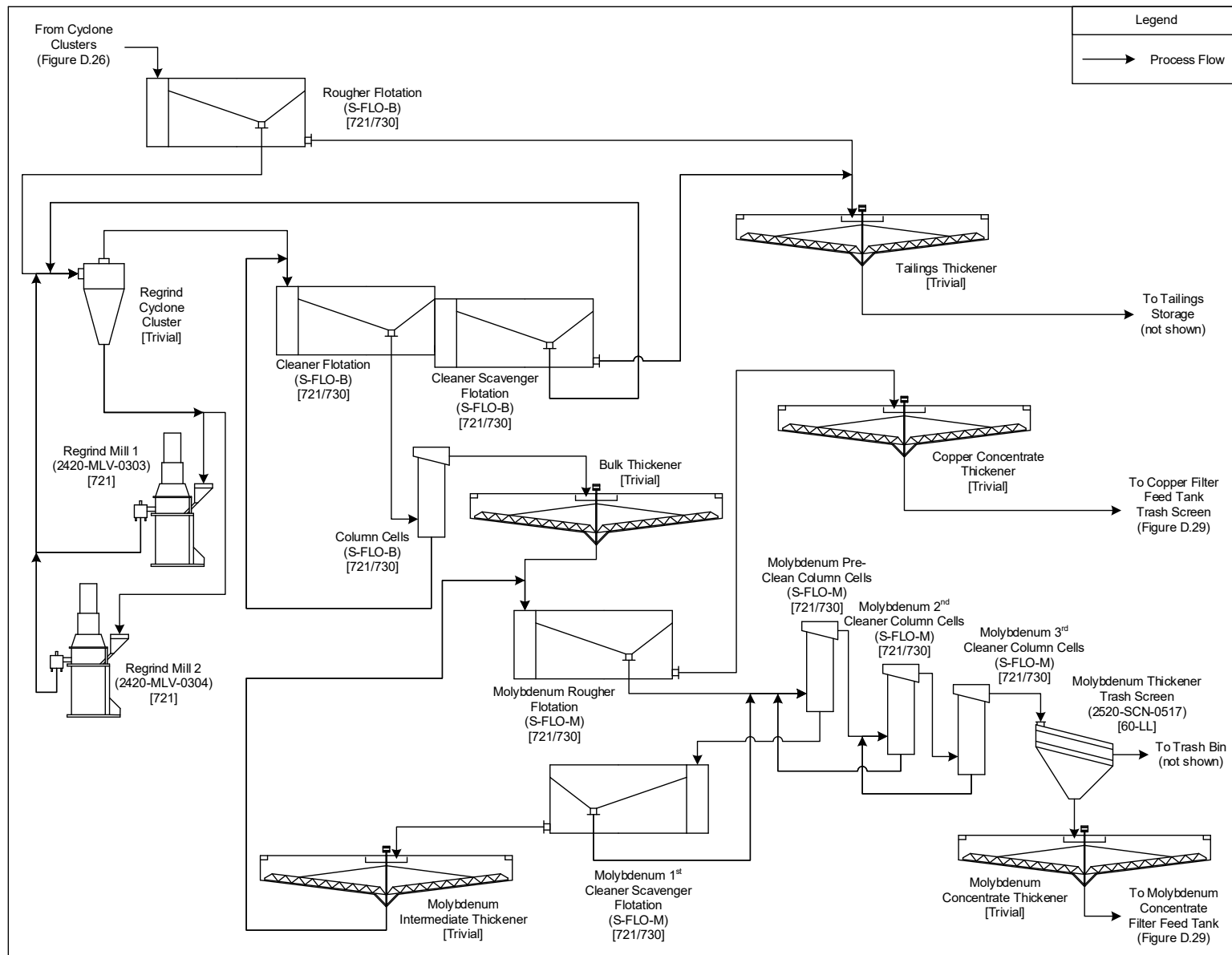


Figure D.28 Second Concentrator Flotation Operations (AOS1)

Process Flow Diagrams

October 2025

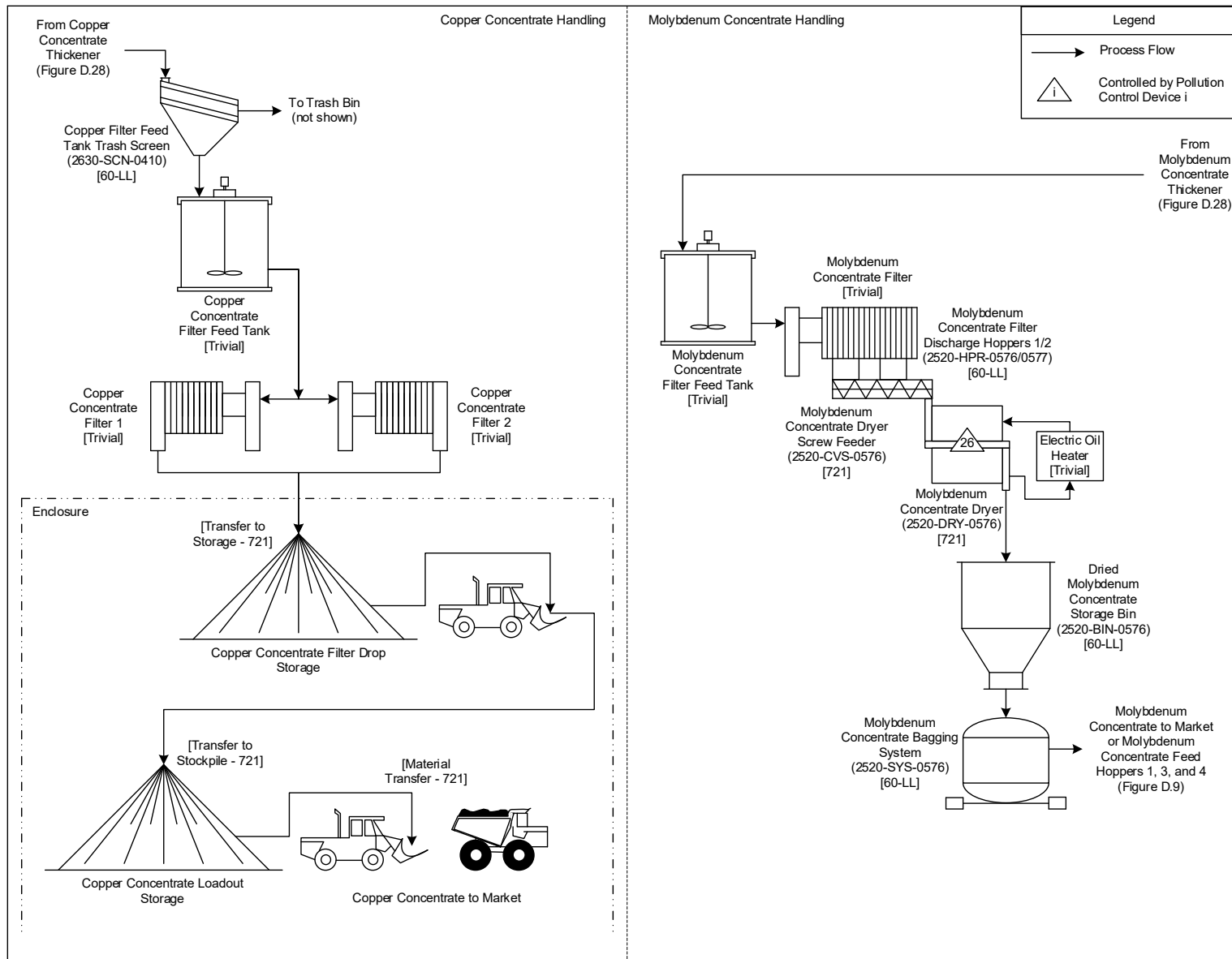


Figure D.29 Second Concentrator Concentrate Handling Operations (AOS1)

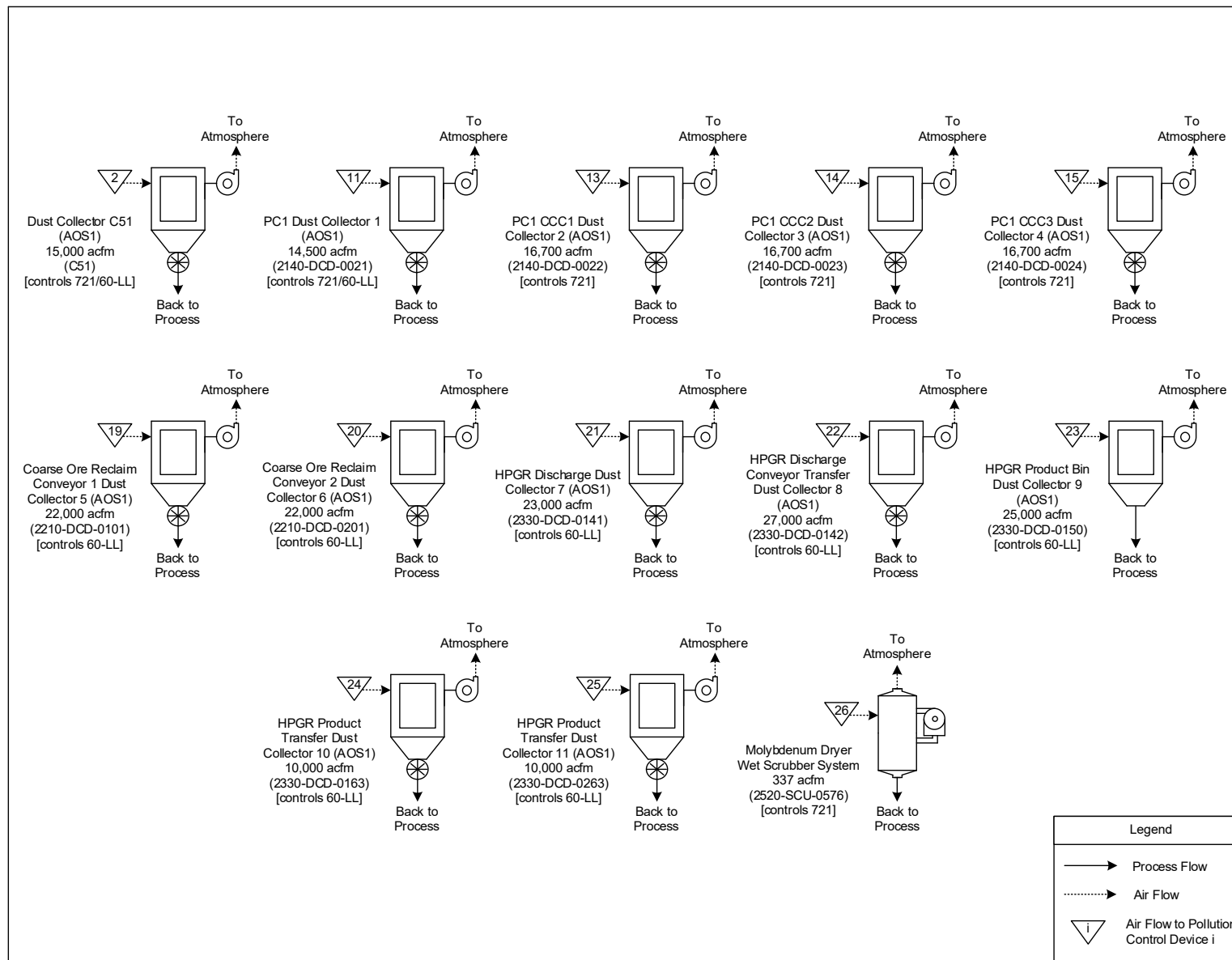


Figure D.30 Pollution Control Devices (AOS1)

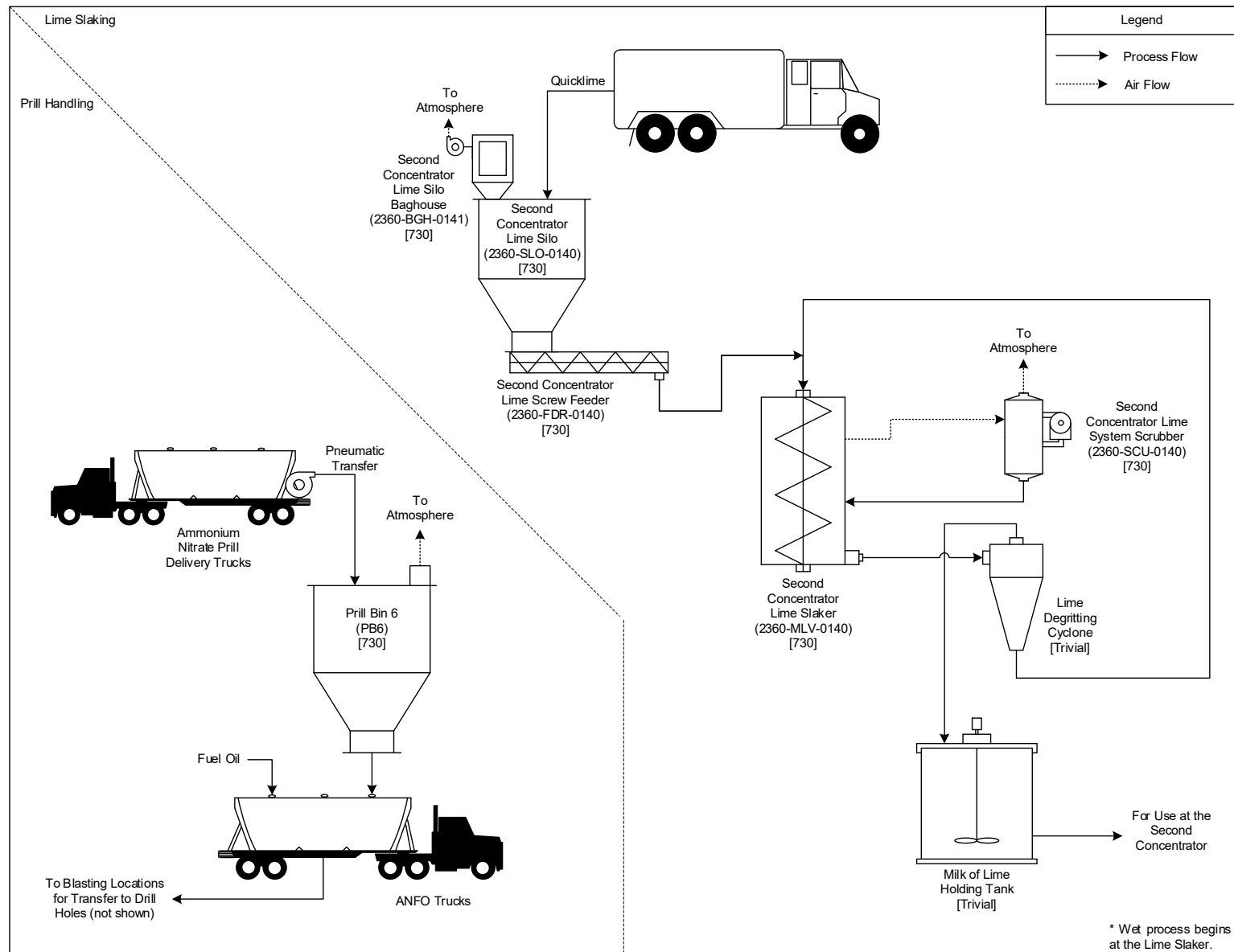


Figure D.31 Second Concentrator Prill Handling and Lime Slaking Operations (AOS1)

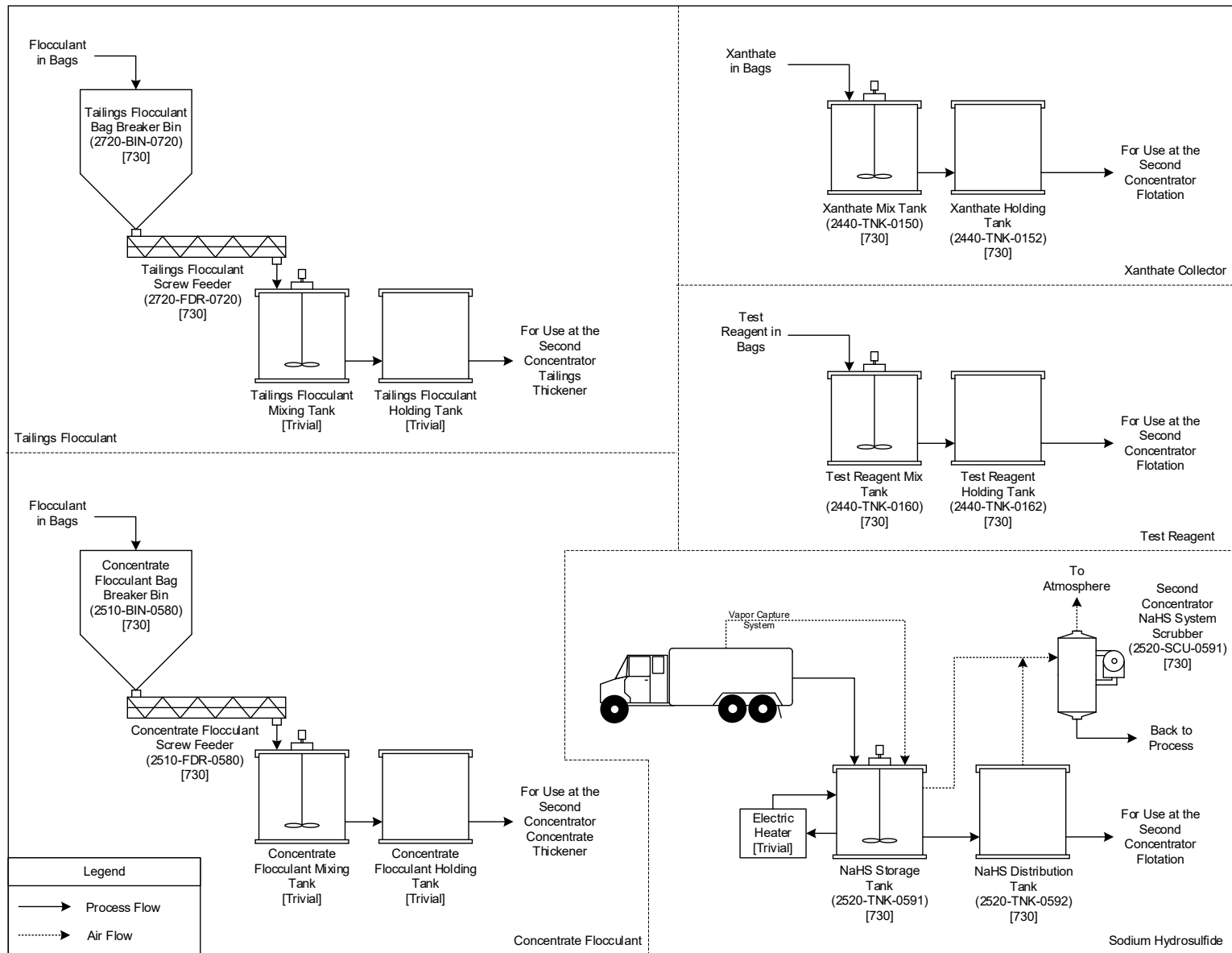


Figure D.32 Second Concentrator Reagent Delivery and Handling Operations (AOS1)

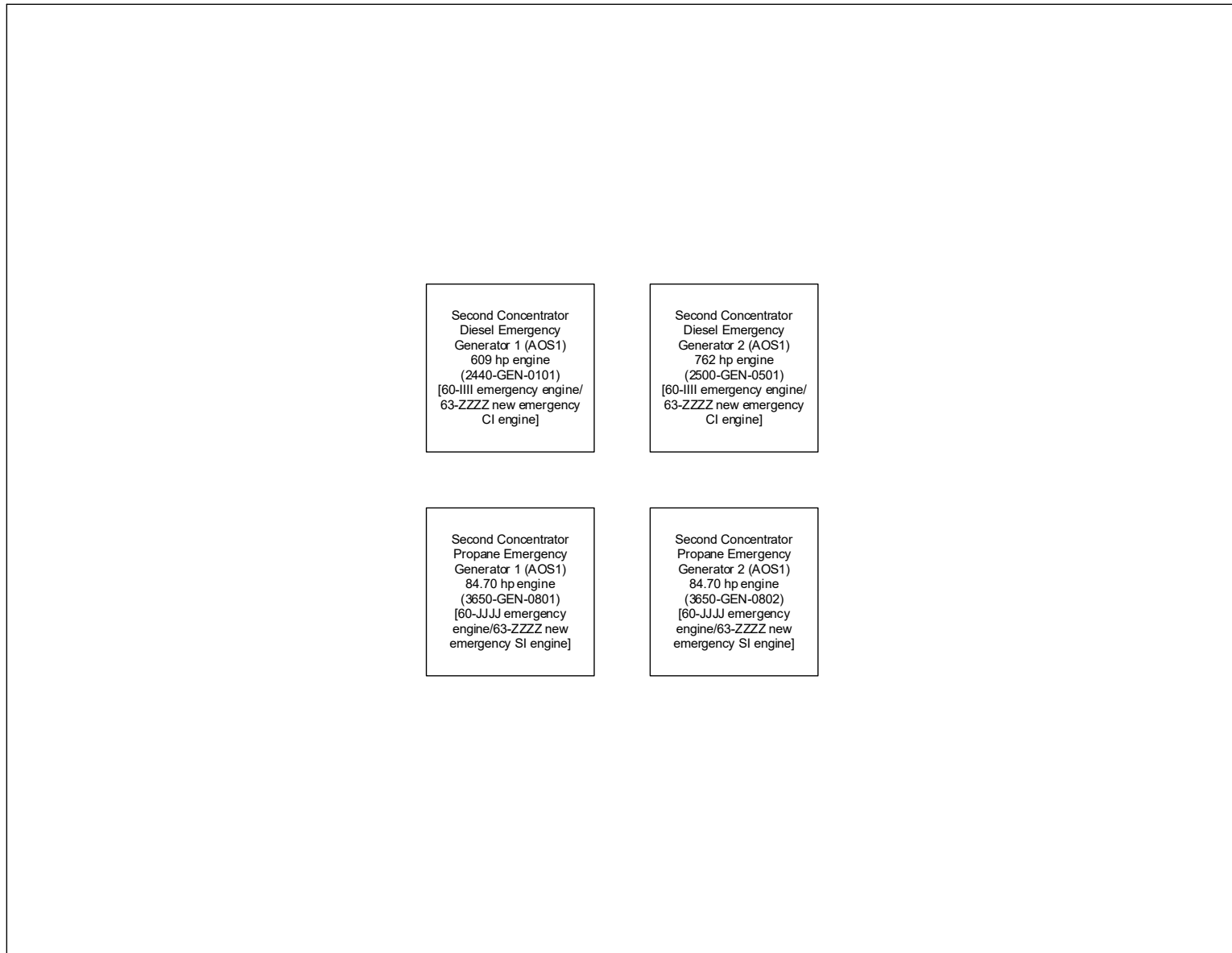


Figure D.33 Second Concentrator Emergency ICE (AOS1)

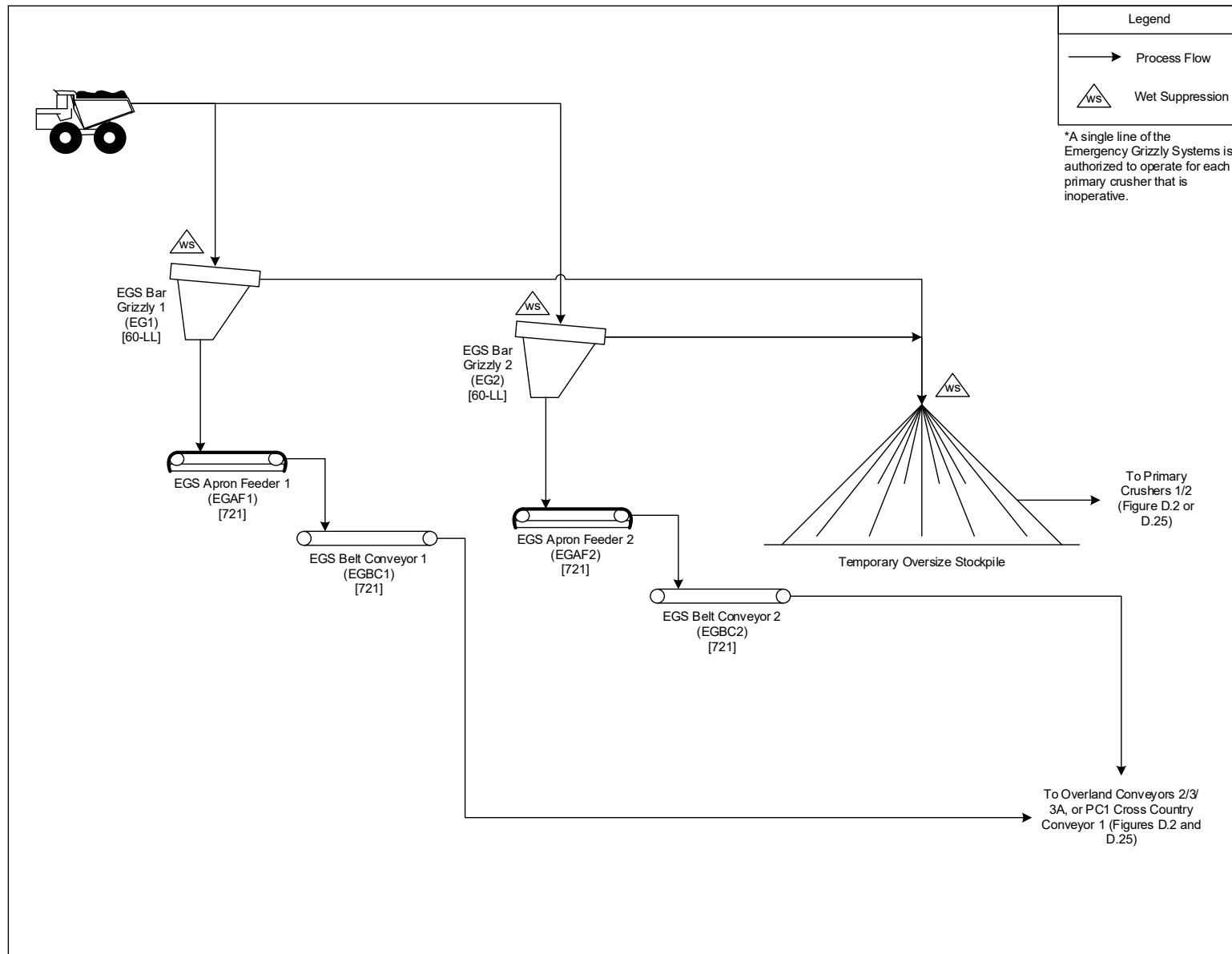


Figure D.34 AOS5 - Emergency Grizzly Systems

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 or acfm is assumed equal to dscfm. The exhaust flow rate in units of dscfm are less than the exhaust flow rate in units of cfm or acfm due to the ambient pressure of the FMBI 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 PM₁₀ 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 7), emission standards (see Section 8) or maximum expected outlet grain loadings converted to units of lb/dscf. PM_{2.5} emissions are assumed equal to PM₁₀ 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

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 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 PM₁₀ emissions from the processes controlled by pollution control devices with emission factors in units of lb/hr are based on emission standards, engineering estimates, manufacturer guarantees, and/or voluntary emission limitations (see Section 7). PM_{2.5} emissions are assumed equal to PM₁₀ 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

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. PM₁₀ and PM_{2.5} emissions from drilling are not listed in AP-42 Table 11.9-4. PM₁₀ 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

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, PM₁₀, 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:

$$EF_h = (k)(0.000014)(A_{\max}^{1.5})$$

$$EF_a = (k)(0.000014)(A_{\text{avg}}^{1.5})$$

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 (200,000 ft ² maximum for the Primary Operating Scenario, 497,956 ft ² maximum for AOS1); and
A _{avg}	=	average horizontal area of the blasts (93,000 ft ² average for the Primary Operating Scenario, 414,963 ft ² for AOS1).

HAP emissions from blasting are calculated by multiplying the concentration of HAPs in the associated process material by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

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. SO₂ emissions are calculated assuming all the sulfur in the ANFO is converted to SO₂ 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 SO₂ emissions more than No. 2 diesel. CO₂, CH₄, and N₂O 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 7.50 lb/gal (SDS);
- 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 78% 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 for the Primary Operating Scenario and Table E.7 for AOS1.

E.6.2 Emission Factors

PM, PM₁₀, 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):

$$EF_h = (k) \left(\frac{s}{12} \right)^a \left(\frac{W}{3} \right)^b$$

$$EF_a = (k) \left(\frac{s}{12} \right)^a \left(\frac{W}{3} \right)^b \left(\frac{(365-p)}{365} \right)$$

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 (4.6%, equivalent to testing completed at a similar Freeport facility);
W	=	mean weight of the haul trucks and other vehicles traveling the unpaved roads (see Tables E.6 and E.7); and

p = number of days per year with precipitation greater than 0.01 inch (41.25 days/yr, based on 2020-2023 onsite meteorological data).

HAP emissions from vehicle travel on unpaved roads are calculated by multiplying the concentration of HAPs in the associated process material by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

The emission factors for vehicle travel on unpaved roads are presented in Table E.8. 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 for the Primary Operating Scenario and AOS1.

E.6.3 Control Efficiencies

The control methods and corresponding control efficiencies for vehicle travel on unpaved roads are presented in Table E.79.

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.9 for the Primary Operating Scenario and Table E.10 for AOS1.

E.7.2 Emission Factors

PM, PM₁₀, 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%, worst-case based on testing completed on crushed ore on Overland Conveyor 4, most bulldozed material is not crushed); and
M	=	material moisture content (2.564%, 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

The emission factors for dozer operations are presented in Table E.11.

E.7.3 Control Efficiencies

The control methods and corresponding control efficiencies for dozer operations are presented in Table E.79.

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 annual 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.9 for the Primary Operating Scenario and Table E.10 for AOS1.

E.8.2 Emission Factors

PM, PM₁₀, 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:

$$EF = (k)(a)(S^b)$$

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 (6.0 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

The emission factors for road grader operations are presented in Table E.12.

E.8.3 Control Efficiencies

The control methods and corresponding control efficiencies for road grader operations are presented in Table E.79.

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.13.

E.9.2 Emission Factors

The material transfer points are presented in Table E.14 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 Flocculant

PM, PM₁₀, and PM_{2.5} emissions from the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and flocculant 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 PM₁₀, 0.053 for PM_{2.5});
- U = mean wind speed; and

The mean ambient wind speed at the FMBI facility is 7.26 mph based on 2020-2023 onsite meteorological data. 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.14.

HAP emissions from the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and flocculant are calculated by multiplying the concentration of HAPs in the associated process material by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the various process materials are presented in Table E.78.

The emission factors for the material transfer points associated with mined materials, concentrate, nonmetallic minerals, and flocculant are presented in Table E.15.

E.9.2.2 Material Transfer of Soda Ash

PM emissions from the material transfer of soda ash are calculated using the emission factor from AP-42 Table 8.12-3 (07/93) for soda ash storage/loading and unloading. PM₁₀ 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 soda ash are presented in Table E.16.

E.9.2.3 Material Transfer of Lime

PM emissions from the material transfer of lime are calculated using the emission factor from AP-42 Table 11.17-4 (02/98) for lime product loading, enclosed truck. PM₁₀ 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 lime are presented in Table E.17.

E.9.2.4 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. PM₁₀ 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.18.

E.9.3 Control Efficiencies

The control methods and corresponding control efficiencies for material transfer points are presented in Table E.79.

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.13.

E.10.2 Emission Factors

PM, PM₁₀, 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 $\frac{3}{16}$ inch to 1 inch while fines crushing product has a maximum size of $\frac{3}{16}$ 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 $\frac{3}{16}$ 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.14) process material that has a moisture content of at least 2.564%, the controlled emission factors are used to estimate PM, PM₁₀, 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The type of material processed by each screen is identified in Table E.14. The HAP concentrations of the various process materials are presented in Table E.78.

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.79.

E.11 CRUSHING OPERATIONS

E.11.1 Process Rates

The annual and hourly process rates for crushing operations are based on the amount of material crushed and are determined using equipment capacities and hours of operations or maximum expected throughputs. The annual and hourly process rates for crushing operations and a description of how they were determined are presented in Table E.13.

E.11.2 Emission Factors

PM, PM₁₀, and PM_{2.5} emissions 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 $\frac{3}{16}$ inch to 1 inch while fines crushing product has a maximum size of $\frac{3}{16}$ inch. Because all crushing operations (as identified in Table E.13) produce ore greater than $\frac{3}{16}$ 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 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 crushing operation.

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.

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 E.14)

process material that has a moisture content of at least 6.5%, the controlled emission factors are used to estimate PM, PM₁₀, and PM_{2.5} emissions.

HAP emissions from crushing operations are calculated by multiplying the concentration of HAPs in the associated process material by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the associated process material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The type of material processed by each crusher is identified in Table E.14. The HAP concentrations of the various process materials are presented in Table E.78.

The emission factors for crushing operations are presented in Table E.20.

E.11.3 Control Efficiencies

The control methods and corresponding control efficiencies for crushing operations are presented in Table E.79.

E.12 LIME SLAKING OPERATIONS

E.12.1 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.13.

E.12.2 Emission Factors

PM emissions from lime slaking operations are calculated using manufacturer's information from a stack test performed on a slaker similar to the ones at the FMBI facility. 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 operations at the FMBI facility. Additionally, a 20% safety factor was added to account for any differences in the configuration and/or location of the slaker. PM₁₀ 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 operations are presented in Table E.21.

E.12.3 Control Efficiencies

The control methods and corresponding control efficiencies for lime slaking operations are presented in Table E.79.

E.13 LIME PORTA BATCHES

E.13.1 Process Rates

The annual and hourly process rates for the Lime Porta Batches are based on the amount of lime processed and are determined using the equipment capacity and hours of operation. The annual and

hourly process rates for the Lime Porta Batches and a description of how they were determined are presented in Table E.13.

E.13.2 Emission Factors

There are no known emission factors for the Lime Porta Batches (i.e., emission factors for the emissions resulting from the mixing of the lime and water to form a slurry). Lime hydrator emission factors are not representative of the emissions from the Lime Porta Batches since in a hydrator, water is added to the lime and only enough water (about 25 percent by weight) is added to form a solid product. In the Lime Porta Batches, lime slurry is formed by adding the lime to the water, resulting in a product which is at least 52 percent water by weight.

AP-42, Section 11.17, Lime Manufacturing, presents emission factors for product loading into enclosed trucks. The reference for this emission factor is a Midwest Research Institute (MRI) report entitled *Characterization of Inhalable Particulate Matter Emissions from a Lime Plant*, May 1983. This report includes an emission factor for the pneumatic loading of lime (i.e., not limestone) into enclosed trucks which is considered the most representative of the loading operations in the Lime Porta Batches. The report also includes a table (Table 3-18) and graphs of emission factor vs. particle size. Emission factors were subsequently taken from this table which presents emission factors for 300-micron and 15-micron particles.

The PM emission factor for the pneumatic loading of lime into an enclosed truck, as presented in the referenced report, is 0.151 lb/ton (50% of the 300-micron emission factor) and the PM₁₀ emission factor is 0.084 lb/ton (67.7% of the 15-micron emission factor). The PM_{2.5} emission factor is equal to 0.016 lb/ton.

The design of the Lime Porta Batches is considered a “self-scrubber” due to: (a) the addition of water to the mixing tank prior to the addition of quicklime, thereby minimizing the amount of dry quicklime that is handled; (b) the addition of lime at a depth of 12 to 60 inches below the water surface which allows the vessel to act as a water filtration system by controlling dry quicklime emissions, and (c) the addition of the quicklime while the agitator is in operation to minimize the amount of dry quicklime which reaches the surface.

The design measures are assumed to produce an emission reduction of 95% based upon the control efficiency achieved by liquid filtration systems (AP-42, Appendix B, Table B.2-3, 1/95) which indicates a control efficiency of 75% for particles between 2.5 to 6 microns. The control efficiency for the Lime Porta Batches is considered greater (i.e., 95%) because the steam generated from the hydration of the quicklime acts as a fogging agent that aids in the absorption of particulates. The inherent 95% control of the Lime Porta Batches is incorporated into the PM, PM₁₀, and PM_{2.5} emission factors.

The emission factors for the Lime Porta Batches are presented in Table E.21.

E.13.3 Control Efficiencies

The control methods and corresponding control efficiencies for the Lime Porta Batches are presented in Table E.79.

E.14 WIND EROSION OF CONTINUOUSLY ACTIVE STOCKPILES AND STORAGE AREAS

E.14.1 Process Rates

The annual and hourly process rates for wind erosion of continuously active stockpiles and storage areas are based on the acreage of the stockpile or storage area. The annual and hourly process rates for the continuously active stockpiles and storage areas are presented in Table E.22.

E.14.2 Emission Factors

PM, PM₁₀, and PM_{2.5} emissions due to wind erosion of continuously active stockpiles and storage areas 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:

$$EF_{\text{annual}} = (k)(1.7) \left(\frac{s}{1.5} \right) \left(\frac{365-p}{235} \right) \left(\frac{f}{15} \right) (a)$$

$$EF_{\text{hourly}} = (k)(1.7) \left(\frac{s}{1.5} \right) \left(\frac{365-p}{235} \right) \left(\frac{f}{15} \right) \left(\frac{1}{h} \right)$$

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.22);
p	=	number of days per year with precipitation greater than 0.01 inch (41.25 days/yr, based on 2020-2023 onsite meteorological data);
f	=	percentage of time the mean wind speed is greater than 12 mph at the mean pile height (12.92%, based on 2020-2023 onsite meteorological data);
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 areas are calculated by multiplying the concentration of HAPs in the associated process material by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the stored material is equivalent to the concentration of HAPs in the PM₁₀ emitted. The type of material in each stockpile or storage pile is identified in Table E.22. The HAP concentrations of the various stored materials are presented in Table E.78.

The emission factors for the wind erosion of continuously active stockpiles and storage areas are presented in Table E.22.

E.14.3 Control Efficiencies

The control methods and corresponding control efficiencies for the wind erosion of continuously active stockpiles and storage areas are presented in Table E.79.

E.15 WIND EROSION OF TAILINGS

E.15.1 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.22.

E.15.2 Emission Factors

PM, PM₁₀, 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:

$$EF_{\text{annual}} = (k) \left(\sum_{i=1}^N P_i \right) \left(\frac{1 \text{ lb}}{453.59237 \text{ g}} \right) \left(\frac{4,4046.856 \text{ m}^2}{1 \text{ acre}} \right)$$

$$EF_{\text{hourly}} = (k) \left(\sum_{i=1}^N P_i \right) \left(\frac{1 \text{ lb}}{453.59237 \text{ g}} \right) \left(\frac{4,4046.856 \text{ m}^2}{1 \text{ acre}} \right) \left(\frac{1}{a} \right) \left(\frac{1}{h} \right)$$

$$P = (58)(u^* - u_t^*)^2 + (25)(u^* - u_t^*) \quad \text{for } u^* > u_t^*$$

$$P = 0 \quad \text{for } u^* \leq u_t^*$$

$$u^* = (0.053)(u_{10}^*)$$

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.22);
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 (16.63 m/s, maximum hourly wind speed recorded by representative onsite meteorological monitors in 2020-2023, 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 PM₁₀ emission factor. It is assumed that the concentration of HAPs in the tailings is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the tailings are presented in Table E.78.

The emission factors for the wind erosion of tailings are presented in Table E.22.

E.15.3 Control Efficiencies

The control methods and corresponding control efficiencies for the wind erosion of tailings are presented in Table E.79.

E.16 COOLING TOWER

E.16.1 Process Rates

The annual and hourly process rates for the cooling tower are based on the water circulation rate and hours of operation. The annual and hourly process rates for the cooling tower are presented in Table E.23.

E.16.2 Emission Factors

PM, PM₁₀, and PM_{2.5} emissions from the cooling tower 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;

The particle size fractions were determined using the Reisman/Frisbie methodology from "Calculating Realistic PM₁₀ Emissions from Cooling Towers." This resulted in particle size fractions of 1 for PM, 0.96 for PM₁₀, and 0.018 for PM_{2.5}.

- Q_d = maximum liquid drift rate percentage (see Table E.23); and

The drift rate for the cooling towers is based on design information for the drift eliminators.

TDS = total parts per million of dissolved solids in the drift (see Table E.23).

HAP emissions from the cooling tower are calculated by multiplying the concentration of HAPs in the TDS by the PM₁₀ emission factor. It is assumed that the concentration of HAPs in the TDS is equivalent to the concentration of HAPs in the PM₁₀ emitted. The HAP concentrations of the TDS is presented in Table E.78.

The emission factors for the cooling tower are presented in Table E.23.

E.16.3 Control Efficiencies

The control methods and corresponding control efficiencies for the cooling tower are presented in Table E.79.

E.17 NATURAL GAS EXTERNAL COMBUSTION EQUIPMENT

E.17.1 Process Rates

The annual and hourly process rates for natural gas external combustion equipment are based on heat input rates and hours of operation. The annual and hourly process rates for natural gas external combustion equipment and a description of how they were determined are presented in Table E.24.

E.17.2 Emission Factors

The natural gas external combustion equipment are presented in Table E.24 along with identification of which of the following emission factors are used to calculate emissions.

E.17.2.1 General Uncontrolled Natural Gas Combustion $0.3 \leq \text{MMBtu/hr} < 100$

When manufacturer's information is not available, CPM, PM (with CPM), CO, NO_x, SO₂, 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. PM₁₀ and PM_{2.5} emissions are assumed to equal PM emissions based on footnote "c" in AP-42 Table 1.4-2 (07/98).

CO₂, CH₄, and N₂O 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 per standard cubic foot (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.25.

E.17.2.2 Natural Gas Hot Water Heater

CPM, PM (with CPM), SO₂, and VOC emissions from the Natural Gas Hot Water Heater are calculated using the emission factors from AP-42 Table 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. PM₁₀ 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 and NO_x emissions are calculated using manufacturer-specified emission factors.

CO₂, CH₄, and N₂O 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 Hot Water Heater are presented in Table E.26.

E.17.2.3 Natural Gas Electrolyte Heater

CPM and SO₂ emissions from the Natural Gas Electrolyte Heater are calculated using the emission factors from AP-42 Table 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 (with CPM), CO, NO_x, SO₂, and VOC emissions are calculated using manufacturer-specified emission factors. PM₁₀ and PM_{2.5} emissions are assumed to equal PM emissions based on footnote “c” in AP-42 Table 1.4-2 (07/98).

CO₂, CH₄, and N₂O 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 Electrolyte Heater are presented in Table E.27.

E.17.3 Control Efficiencies

The control methods and corresponding control efficiencies for the natural gas external combustion equipment are presented in Table E.79.

E.18 DIESEL EXTERNAL COMBUSTION EQUIPMENT < 100 MMBTU/HR

E.18.1 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.24.

E.18.2 Emission Factors

CPM, PM (with CPM), CO, NO_x, SO₂, and VOC emissions from diesel external combustion equipment are calculated using emission factors from 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 SO₂ emission factor includes an input for the sulfur content of the diesel fuel used during external combustion. The only diesel fuel available at the FMBI 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 PM₁₀ 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 (PM₁₀ 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.

CO₂, CH₄, and N₂O 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.28.

E.18.3 Control Efficiencies

The control methods and corresponding control efficiencies for the diesel external combustion equipment are presented in Table E.79.

E.19 PROPANE EXTERNAL COMBUSTION EQUIPMENT

E.19.1 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.19.2 Emission Factors

CPM, PM (with CPM), CO, NO_x, and SO₂ 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. PM₁₀ 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 SO₂ emission factor includes an input for the sulfur content of the propane. The sulfur content is assumed to equal 10 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).

CO₂, CH₄, and N₂O 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/10³ 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.29.

E.19.3 Control Efficiencies

The control methods and corresponding control efficiencies for propane external combustion equipment are presented in Table E.79.

E.20 DIESEL EMERGENCY ENGINES

E.20.1 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.30.

E.20.2 Emission Factors

The diesel emergency engines are presented in Table E.30 along with identification of which of the following emission factors are used to calculate emissions.

E.20.2.1 Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)

PM₁₀, 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 PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum

sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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.

The emission factors for the Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp) are presented in Table E.31.

E.20.2.2 2008+ Diesel Emergency Engines ($19 \leq \text{kW} < 37$)

PM, CO, NO_x, and VOC emissions from 2008+ diesel emergency engines rated greater than or equal to 19 kW, but less than 37 kW are calculated using the applicable exhaust emission standards from Table 2 of 40 CFR 60 Subpart IIII. PM₁₀ 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 MOVES2014b*, which states that NO_x and VOC emissions for Tier 2 engines rated greater than or equal to 19 kW, but less than 37 kW (equivalent to the emission standards from Table 2) are assumed to be equal to 89.29% and 10.71%, respectively, of the combined emission standard.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 2008+ diesel emergency 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.

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 2008+ Diesel Emergency Engines ($19 \leq \text{kW} < 37$) are presented in Table E.32.

E.20.2.3 Tier 2 Diesel Non-Emergency Engines ($\text{kW} > 560$)

PM, CO, NO_x, and VOC emissions from Tier 2 diesel engines rated greater than 560 kW are calculated using the applicable exhaust emission standards from Table 2 of Appendix I of 40 CFR 1039. PM₁₀ 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 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 MOVES2014b*, which states that NO_x and VOC emissions for Tier 2 engines rated greater than 560 kW are assumed to be equal to 93.75% and 6.25%, respectively, of the combined emission standard.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 2 diesel engines rated greater than 560 kW 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.

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 Tier 2 Diesel Non-Emergency Engines (kW > 560) are presented in Table E.33.

E.20.2.4 Tier 3 Diesel Emergency Engines (75 ≤ kW < 130)

PM, 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. PM₁₀ 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 MOVES2014b*, 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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.

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 Tier 3 Diesel Emergency Engines ($75 \leq \text{kW} < 130$) are presented in Table E.34.

E.20.2.5 Tier 3 Diesel Emergency Engines ($450 \leq \text{kW} \leq 560$)

PM, CO, NO_x, and VOC emissions from Tier 3 diesel engines rated greater than or equal to 450 kW, but less than or equal to 560 kW are calculated using the applicable exhaust emission standards from Table 3 of Appendix I of 40 CFR 1039. PM₁₀ 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 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 MOVES2014b*, which states that NO_x and VOC emissions for Tier 3 engines rated greater than or equal to 450 kW, but less than 560 kW are assumed to be equal to 93.33% and 6.67%, respectively, of the combined emission standard.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 450 kW, but less than or equal to 560 kW 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.

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 Tier 3 Diesel Emergency Engines ($450 \leq \text{kW} \leq 560$) are presented in Table E.35.

E.20.2.6 Mammoth Seepage Pond Diesel Emergency Generator (1,214 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Mammoth Seepage Pond Diesel Emergency Generator are calculated using certification values for Engine Family JCPXL18.1NYS. PM₁₀ 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).

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Mammoth Seepage Pond Diesel Emergency Generator 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.

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 Mammoth Seepage Pond Diesel Emergency Generator are presented in Table E.36.

E.20.2.7 Diesel Emergency Generator IA24-D (762 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Diesel Emergency Generator IA24-D are calculated using certification values for EPA Engine Family CCPXL15.2NZS. PM₁₀ 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).

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Diesel Emergency Generator IA24-D 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.

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 Diesel Emergency Generator IA24-D are presented in Table E.37.

E.20.2.8 Diesel Emergency Generator IA25-D (90 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Diesel Emergency Generator IA25-D are calculated using certification values for EPA Engine Family DPKXL04.4NH1. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Diesel Emergency Generator IA25-D 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 the Diesel Emergency Generator IA25-D are presented in Table E.38.

E.20.2.9 Diesel Emergency Generator IA28-D (900 hp engine)

PM, CO, NO_x, and VOC emissions from the Diesel Emergency Generators IA28-D are calculated using manufacturer's information. PM₁₀ 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).

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 Diesel Emergency Generators IA28-D 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.

When necessary, a diesel heating value of 19,300 Btu/lb of diesel fuel and an engine-specific brake-specific fuel consumption value of 0.332 lb/hp-hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Diesel Emergency Generator IA28-D are presented in Table E.39.

E.20.2.10 Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 are calculated using the certification values for EPA Engine Family CJDXL04.5130. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 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 the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 are presented in Table E.40.

E.20.2.11 Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)

PM, CO, NO_x, and VOC emissions from the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 are calculated using the certification values for EPA Engine Family 4PKXL04.4RG1. PM₁₀ 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 MOVES2014b*, which states that NO_x and VOC emissions for Tier 2 engines rated greater than or equal to 37 kW, but less than 75 kW are assumed to be equal to 92.86% and 7.14%, respectively, of combined emissions.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 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 the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 are presented in Table E.41.

E.20.2.12 Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Copper Cleaner Flotation Diesel Emergency Generator IA44-D are calculated using certification values for Engine Family LCPXL08.8NZS. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Copper Cleaner Flotation Diesel Emergency Generator IA44-D 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 the Copper Cleaner Flotation Diesel Emergency Generator IA44-D are presented in Table E.42.

E.20.2.13 CLP Diesel Emergency Generator IA47-D (85.8 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the CLP Diesel Emergency Generator IA47-D are calculated using certification values for Engine Family NPKXL04.4NL1. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 CLP Diesel Emergency Generator IA47-D 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 the CLP Diesel Emergency Generator IA47-D are presented in Table E.43.

E.20.2.14 Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from Mulholland Seepage Pond Diesel Emergency Generator IA48-D are calculated using certification values for EPA Engine Family MCPXL12.5NYS. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Mulholland Seepage Pond Diesel Emergency Generator IA48-D 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 the Mulholland Seepage Pond Diesel Emergency Generator IA48-D are presented in Table E.44.

E.20.2.15 Command Center Diesel Emergency Generator IA54-D (480 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from Command Center Diesel Emergency Generator IA54-D are calculated using certification values for EPA Engine Family PCPXL08.8NZS. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O 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 Command Center Diesel Emergency Generator IA54-D 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 the Command Center Diesel Emergency Generator IA54-D are presented in Table E.45.

E.20.3 Control Efficiencies

The control methods and corresponding control efficiencies for diesel emergency engines are presented in Table E.79.

E.21 PROPANE EMERGENCY ENGINES

E.21.1 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.30.

E.21.2 Emission Factors

The propane emergency engines are presented in Table E.30 along with identification of which of the following emission factors are used to calculate emissions.

E.21.2.1 Propane Emergency Generator IA16-P (13 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA16-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA16-P 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 Emergency Generator IA16-P are calculated using the Phase 3 Class II emission standards from Table 1 of 40 CFR 1054.105. 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 II propane engines rated greater than 25 hp are assumed to be equal to 89.47% and 10.53%, respectively, of the combined emission standard. The Propane Emergency Generator IA16-P is a Phase III engine rated less than 25 hp. Because there is no information on the distribution of NO_x and

VOC emissions from Phase III engines rated less than or equal to 25 hp in *Exhaust Emission Factors for Nonroad Engine Modeling - Spark-Ignition*, the information for Phase II engines rated greater than 25 hp is used as a best estimate.

SO₂ emissions from the Propane Emergency Generator IA16-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 51.6 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA16-P are presented in Table E.46.

E.21.2.2 Propane Emergency Generator IA19-P (60 hp engine)

CPM, PM (with CPM), CO, NO_x, VOC, and HAP emissions from the Propane Emergency Generator IA19-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 VOC emission factor is set equal to the sum of the HAP emission factors to ensure VOC emissions are greater than or equal to VOC-HAP emissions.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Propane Emergency Generator IA19-P 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.

SO₂ emissions from the Propane Emergency Generator IA19-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 240 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA19-P are presented in Table E.47.

E.21.2.3 Propane Emergency Generator IA21-P (80 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA21-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA21-P 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 Emergency Generator IA21-P are calculated using certification values for EPA Engine Family DGNXB05.42NL.

SO₂ emissions from the Propane Emergency Generator IA21-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 293.2 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA21-P are presented in Table E.48.

E.21.2.4 Propane Emergency Generator IA31-P (30.52 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA31-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA31-P 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 Emergency Generator IA31-P are calculated using certification values for EPA Engine Family FGNXB.9992SL.

SO₂ emissions from the Propane Emergency Generator IA31-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 130 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA31-P are presented in Table E.49.

E.21.2.5 Propane Emergency Generator IA32-P (32 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA32-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA32-P 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 Emergency Generator IA32-P are calculated using certification values for EPA Engine Family BGNXB.9992ST.

SO₂ emissions from the Propane Emergency Generator IA32-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 94 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA32-P are presented in Table E.50.

E.21.2.6 Propane Emergency Generator IA37-P (113.18 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA37-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA37-P 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 CO₂ emissions from the Propane Emergency Generator IA37-P are calculated using certification values for EPA Engine Family KPSIB5.702ED.

SO₂ emissions from the Propane Emergency Generator IA37-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CH₄ and N₂O 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 fuel usage rate of 288 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA37-P are presented in Table E.51.

E.21.2.7 Propane Emergency Generator IA38-P (113.18 hp engine)

CPM, PM (with CPM), and HAP emissions from the Propane Emergency Generator IA38-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Propane Emergency Generator IA38-P 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 CO₂ emissions from the Propane Emergency Generator IA38-P are calculated using certification values for EPA Engine Family KPSIB5.702ED.

SO₂ emissions from the Propane Emergency Generator IA38-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CH₄ and N₂O 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 fuel usage rate of 288 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Emergency Generator IA38-P are presented in Table E.52.

E.21.2.8 Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)

CPM, PM (with CPM), and HAP emissions from the Sycamore Communication Tower Propane Emergency Generator IA55-P 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 Sycamore Communication Tower Propane Emergency Generator IA55-P 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, CO₂, and CH₄ emissions from the Sycamore Communication Tower Propane Emergency Generator IA55-P are calculated using certification values for EPA Engine Family NKHXB06.2NNL.

SO₂ emissions from the Sycamore Communication Tower Propane Emergency Generator IA55-P are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. N₂O emissions are calculated using the emission factor from 40 CFR 98 Table C-2 for propane combustion.

When necessary, a propane higher heating value of 2,520 Btu/scf and a fuel usage rate of 337 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Sycamore Communication Tower Propane Emergency Generator IA55-P are presented in Table E.53.

E.21.2.9 Second Concentrator Propane Emergency Generators

CPM, PM (with CPM), and HAP emissions from the engines associated with the Second Concentrator Propane Emergency Generators 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 propane emergency 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 engines associated with the Sycamore propane emergency generators are calculated using certification values for EPA engine family PCEXB05.9ARC. The EPA engine family corresponds to the engines chosen for the Sycamore Concentrator operations.

SO₂ emissions from the Second Concentrator Propane Emergency Generators are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 Second Concentrator Propane Emergency Generators are presented in Table E.54.

E.21.3 Control Efficiencies

The control methods and corresponding control efficiencies for propane emergency engines are presented in Table E.79.

E.22 NATURAL GAS EMERGENCY ENGINES

E.22.1 Process Rates

The annual and hourly process rates for natural gas emergency engines are based on power ratings (capacity) and hours of operation. The annual and hourly process rates for natural gas emergency engines and a description of how they were determined are presented in Table E.30.

E.22.2 Emission Factors

The natural gas emergency engines are presented in Table E.30 along with identification of which of the following emission factors are used to calculate emissions.

E.22.2.1 Natural Gas Emergency Generator IA13-NG (17 hp engine)

CPM, PM (with CPM), CO, NO_x, VOC, and HAP emissions from the Natural Gas Emergency Generator IA13-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 VOC emission factor is set equal to the sum of the HAP emission factors to ensure VOC emissions are greater than or equal to VOC-HAP emissions.

SO₂ emissions from the Natural Gas Emergency Generator IA13-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote "e" of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf and a fuel usage rate of 220 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA13-NG are presented in Table E.55.

E.22.2.2 Natural Gas Emergency Generator IA22-NG (199 hp engine)

CPM, PM (with CPM), and HAP emissions from the Natural Gas Emergency Generator IA22-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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, and VOC emissions from the Natural Gas Emergency Generator IA22-NG are calculated using emission standards from Table 1 of 40 CFR 60 Subpart JJJJ for emergency engines rated greater than or equal to 130 hp.

SO₂ emissions from the Natural Gas Emergency Generator IA22-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote “e” of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf and a fuel usage rate of 1,400 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA22-NG are presented in Table E.56.

E.22.2.3 Natural Gas Emergency Generator IA23-NG (192 hp engine)

CPM, PM (with CPM), and HAP emissions from the Natural Gas Emergency Generator IA23-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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, and VOC emissions from the Natural Gas Emergency Generator IA23-NG are calculated using certification values for EPA Engine Family BGNXB06.82C1.

SO₂ emissions from the Natural Gas Emergency Generator IA23-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote “e” of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf and a fuel usage rate of 1,786 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA23-NG are presented in Table E.57.

E.22.2.4 Natural Gas Emergency Generator IA30-NG (40 hp engine)

CPM, PM (with CPM), and HAP emissions from the Natural Gas Emergency Generator IA30-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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, and VOC emissions from the Natural Gas Emergency Generator IA30-NG are calculated using manufacturer's information.

SO₂ emissions from the Natural Gas Emergency Generator IA30-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote "e" of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf and a fuel usage rate of 259.6 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA30-NG are presented in Table E.58.

E.22.2.5 Natural Gas Emergency Generator IA33-NG (31.83 hp engine)

CPM, PM (with CPM), and HAP emissions from the Natural Gas Emergency Generator IA33-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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, and VOC emissions from the Natural Gas Emergency Generator IA33-NG are calculated using manufacturer's information.

SO₂ emissions from the Natural Gas Emergency Generator IA33-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote "e" of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf, a natural gas density of 23.8 scf/lb, and a fuel usage rate of 220 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA33-NG are presented in Table E.59.

E.22.2.6 Natural Gas Emergency Generator IA34-NG (32 hp engine)

CPM, PM (with CPM), and HAP emissions from the Natural Gas Emergency Generator IA34-NG 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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, and VOC emissions from the Natural Gas Emergency Generator IA34-NG are calculated using certification values for EPA Engine Family GGNXB02.42NN.

SO₂ emissions from the Natural Gas Emergency Generator IA34-NG are calculated assuming all the sulfur in the natural gas fuel is converted to SO₂ emissions and the sulfur content of the natural gas fuel is 2,000 gr/MMscf based on footnote “e” of AP-42 Table 3.2-3 (08/00). CO₂, CH₄, and N₂O emissions are calculated using the emission factors from 40 CFR 98 Tables C-1 and C-2 for natural gas combustion.

When necessary, a natural gas heating value of 1,020 Btu/scf and a fuel usage rate of 342 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Natural Gas Emergency Generator IA34-NG are presented in Table E.60.

E.22.3 Control Efficiencies

The control methods and corresponding control efficiencies for natural gas emergency engines are presented in Table E.79.

E.23 DIESEL NON-EMERGENCY ENGINES

E.23.1 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.30.

E.23.2 Emission Factors

The diesel non-emergency engines are presented in Table E.30 along with identification of which of the following emission factors are used to calculate emissions.

E.23.2.1 Tier 3 Diesel Non-Emergency Engines (75 ≤ kW < 130)

PM, CO, NO_x, and VOC emissions from Tier 3 diesel non-emergency 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 40 CFR 1039 Appendix I. PM₁₀ 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 MOVES2014b*, 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 non-emergency 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.

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 Tier 3 Diesel Non-Emergency Engines (75 ≤ kW < 130) are presented in Table E.61.

E.23.2.2 Diesel Non-Emergency Generator IA14-DN (128 hp engine)

PM, CO, NO_x, and VOC emissions from the Diesel Non-Emergency Generator IA14-DN are calculated using manufacturer's information. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 Diesel Non-Emergency Generator IA14-DN 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 the Diesel Non-Emergency Generator IA14-DN are presented in Table E.62.

E.23.2.3 Diesel Non-Emergency Generator IA15-DN (130 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Diesel Non-Emergency Generator IA15-DN are calculated using certification values for EPA Engine Family APKXL04.4NJ1. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Diesel Non-Emergency Generator IA15-DN 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 the Diesel Non-Emergency Generator IA15-DN are presented in Table E.63.

E.23.2.4 Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)

PM, CO, NO_x, VOC, and CO₂ emissions from the Copper Creek Flood Basin Diesel Non-Emergency Pump Engine are calculated using certification values for EPA Engine Family CH3XL2.00N84. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CH₄ and N₂O emissions are calculated using the emission factors from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Copper Creek Flood Basin Diesel Non-Emergency 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.

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 Copper Creek Flood Basin Diesel Non-Emergency Pump Engine are presented in Table E.64.

E.23.2.5 Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)

PM, CO, NO_x, VOC, CO₂, and CH₄ emissions from the Mill Compressor Diesel Non-Emergency Engine IA53-DN are calculated using certification values for EPA Engine Family RCPXL12.5NTF. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. N₂O emissions are calculated using the emission factor from 40 CFR 98 Table C-2 for distillate fuel oil No. 2.

HAP emissions from the Mill Compressor Diesel Non-Emergency Engine IA53-DN 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 the Mill Compressor Diesel Non-Emergency Engine IA53-DN are presented in Table E.65.

E.23.2.6 Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)

PM, CO, NO_x, and VOC emissions from the Kimberly Diesel Non-Emergency Pump Engine are calculated using certification values for EPA Engine Family KJDXL06.8309. PM₁₀ 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.

SO₂ emissions are calculated assuming all the sulfur in the diesel fuel combusted in the engine is converted to SO₂ emissions. The FMBI facility uses ultra-low sulfur diesel fuel, which has a maximum sulfur content of 0.0015%. CO₂, CH₄, and N₂O 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 Kimberly Diesel Non-Emergency 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.

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 Kimberly Diesel Non-Emergency Pump Engine are presented in Table E.66.

E.23.3 Control Efficiencies

The control methods and corresponding control efficiencies for diesel non-emergency engines are presented in Table E.79.

E.24 PROPANE NON-EMERGENCY ENGINES

E.24.1 Process Rates

The annual and hourly process rates for propane non-emergency engines are based on power ratings (capacity) and hours of operation. The annual and hourly process rates for propane non-emergency engines and a description of how they were determined are presented in Table E.30.

E.24.2 Emission Factors

The propane non-emergency engines are presented in Table E.30 along with identification of which of the following emission factors are used to calculate emissions.

E.24.2.1 Propane Non-Emergency Generator IA10-PN (27 hp engine)

CPM, PM (with CPM), CO, NO_x, VOC, and HAP emissions from the Propane Non-Emergency Generator IA10-PN 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 VOC emission factor is set equal to the sum of the HAP emission factors to ensure VOC emissions are greater than or equal to VOC-HAP emissions.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Propane Non-Emergency Generator IA10-PN 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.

SO₂ emissions from the Propane Non-Emergency Generator IA10-PN are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is

10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 125 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Non-Emergency Generator IA10-PN are presented in Table E.67.

E.24.2.2 Propane Non-Emergency Generator IA18-PN (20 hp engine)

CPM, PM (with CPM), CO, NO_x, VOC, and HAP emissions from the Propane Non-Emergency Generator IA18-PN 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 PM₁₀ emission factor and the condensable PM emission factor. PM₁₀ 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 VOC emission factor is set equal to the sum of the HAP emission factors to ensure VOC emissions are greater than or equal to VOC-HAP emissions.

The AP-42 section for natural gas fired reciprocating engines is used to estimate emissions from the Propane Non-Emergency Generator IA18-PN 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.

SO₂ emissions from the Propane Non-Emergency Generator IA18-PN are calculated assuming all the sulfur in the propane fuel is converted to SO₂ emissions and the sulfur content of the propane fuel is 10 gr/100 scf. CO₂, CH₄, and N₂O 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 fuel usage rate of 110 scf/hr are used to calculate the emission factors in units of lb/hp-hr.

The emission factors for the Propane Non-Emergency Generator IA18-PN are presented in Table E.68.

E.24.3 Control Efficiencies

The control methods and corresponding control efficiencies for propane non-emergency engines are presented in Table E.79.

E.25 SX, ORGANIC TANKS, AND RAFFINATE PONDS

E.25.1 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.69.

E.25.2 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.70 through E.72 are used to calculate VOC and HAP emissions from SX, organic tanks, and raffinate ponds.

$$EF_i = (F_{i,UC})(A) \left(1 - \left(\frac{COV}{100} \right) \right) + (F_{i,C})(A) \left(\frac{COV}{100} \right)$$

$$F_{i,UC} = \frac{(C_i^0 - C_i^H)(D_i) \left(\frac{m^2}{100^2 \text{ cm}^2} \right)}{H} \left(\frac{3,600 \text{ sec}}{1 \text{ hr}} \right) \left(\frac{1 \text{ lb}}{453.59237 \text{ g}} \right) \left(\frac{1 \text{ m}^2}{10.76 \text{ ft}^2} \right)$$

$$F_{i,C} = \frac{(C_i^0 - C_i^H)(D_i) \left(\frac{m^2}{100^2 \text{ cm}^2} \right)}{H} \left(\frac{3,600 \text{ sec}}{1 \text{ hr}} \right) \left(\frac{1 \text{ lb}}{453.59237 \text{ g}} \right) \left(\frac{1 \text{ m}^2}{10.76 \text{ ft}^2} \right) (1 - CE)$$

$$D_i = (10^{-3})(T^{1.75}) \left(\frac{\left(\frac{M_i + M_A}{(M_i)(M_A)} \right)^{1/2}}{\left(P \left(V_i^{1/3} + V_A^{1/3} \right) \right)^2} \right)$$

where:

- EF_i = emission factor for component i (lb/hr)
- $F_{i,UC}$ = uncontrolled diffusive flux of component i in the air (lb/ft²-hr, VOC emissions are calculated by summing the diffusive flux of each component in the air, see Tables E.70 through E.72);
- $F_{i,C}$ = controlled diffusive flux of component i in the air (lb/ft²-hr, VOC emissions are calculated by summing the diffusive flux of each component in the air, see Tables E.70 through E.72);
- A = surface area of the SX, organic tank, or raffinate pond (see Table E.69);
- COV = percent of the SX, organic tank, or raffinate pond that is covered (see Table E.69)
- C_i^0 = component concentration at the surface (g/m³, see Tables E.70 through E.72, 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/m³, see Tables E.70 through E.72, 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.70 through E.72);
T	=	temperature (292.20 K, based on 2020-2023 onsite meteorological data);
M_i	=	molecular weight of the component in the air (g/g-mol, see Tables E.70 through E.72);
M_A	=	molecular weight of the air (28.97 g/g-mol);
P	=	pressure (0.87 atm, the actual pressure at the FMBI facility, calculated using an elevation of 3,800 feet);
V_i	=	sum of atmospheric diffusion volume increments by atom and structure for the component in the air (see Tables E.70 through E.72); 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.69.

E.25.3 Control Efficiencies

The control methods and corresponding control efficiencies for the SX, organic tanks, and raffinate ponds are presented in Table E.79.

E.26 ELECTROWINNING

E.26.1 Process Rates

The annual and hourly process rates for EW are based on hours of operation and are presented in Table E.73.

E.26.2 Emission Factors

PM, PM₁₀, PM_{2.5}, and H₂SO₄ emissions from EW are calculated using the emission factor of 0.000157 pounds per square foot-hour (lb/ft²-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. FMBI's EW operations use similar methods to control H₂SO₄ 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 FMBI's EW.

HAP emissions from 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 H₂SO₄ emissions from EW contain the same fraction of cobalt compounds.

The PM, PM₁₀, PM_{2.5}, H₂SO₄, and HAP emission factors are converted from units of lb/ft²-hr to units of lb/hr using the surface areas of the EW cells.

The emission factors for the EW operations are presented in Table E.73.

E.26.3 Control Efficiencies

The control methods and corresponding control efficiencies for EW are presented in Table E.79.

E.27 GASOLINE STORAGE TANKS, SETTLING TANK, AND PARTS CLEANING

E.27.1 Process Rates

The annual and hourly process rates for the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning are based on hours of operation. The process rates of the storage tanks are presented in Table E.74.

E.27.2 Emission Factors

VOC and HAP emissions from the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning are calculated using the EPA TANKS Program, Version 4.09B. The input parameters for the 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 ft/ft;
- f) The meteorological data corresponds to Winslow, Arizona as it is most similar to Bagdad, Arizona; and
- g) The throughput of the tanks is evenly distributed throughout the year.

The input parameters for the TANKS program that vary between the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning are presented in Tables E.74 and E.75. The VOC and HAP emission factors are equivalent to the 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, Version 4.09B 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.74.

E.27.3 Control Efficiencies

The control methods and corresponding control efficiencies for the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning are presented in Table E.79.

E.28 BULK AND MOLYBDENUM FLOTATION EQUIPMENT

E.28.1 Process Rates

The annual and hourly process rates for the Bulk and Molybdenum Flotation Equipment are based on the quantity of concentrate processed in the bulk flotation operations. The process rates of the Bulk and Molybdenum Flotation Equipment are presented in Table E.76.

E.28.2 Emission Factors

VOC emissions from the Bulk and Molybdenum Flotation Equipment are calculated using an emission factor of approximately 2.35 lb per ton of organic, based on testing conducted at the Freeport-McMoRan Henderson Mill in 2009. The emission factor is converted to units of lb per ton of concentrate using organic reagent and concentrate data. HAP emissions are calculated by applying diesel vapor mass fractions to the VOC emission factor. Diesel is the primary organic used in the flotation equipment.

H₂S emissions from the Bulk and Molybdenum Flotation Equipment are calculated using an emission factor of approximately 0.0084 lb/ton, from a Freeport-McMoRan Technology Center study titled *Hydrogen Sulfide and Carbon Dioxide Emissions from Flotation Cell Operations Under Targeted Conditions* conducted by Hazen Research Inc. (02/2013). The emission factor is a conservative value based on tests conducted using a pH of 9.5. The Bulk and Molybdenum Flotation Equipment will typically operate at a pH greater than or equal to 11.

The emission factor for the Bulk and Molybdenum Flotation Equipment is presented in Table E.76.

E.28.3 Control Efficiencies

The control methods and corresponding control efficiencies for the Bulk and Molybdenum Flotation Equipment are presented in Table E.79.

E.29 XANTHATE MIXING AND STORAGE TANKS

E.29.1 Process Rates

The annual and hourly process rates for the Xanthate Mixing and Storage Tanks are based on xanthate usage rates. The process rates are presented in Table E.77.

E.29.2 Emission Factors

VOC and HAP emissions from the Xanthate Mixing and Storage Tanks are calculated using the following equation adapted from data presented in the *AERO Xanthate Handbook* (1972):

$$EF = \left(\frac{L \text{ lb xan. loss}}{100 \text{ lb xan. } \cdot \text{day}} \right) \left(\frac{2,000 \text{ lb xan.}}{1 \text{ ton xan.}} \right) \left(\frac{1 \text{ mol xan. loss}}{MW \text{ lb xan. loss}} \right) \left(\frac{3 \text{ mol CS}_2 \text{ gen.}}{6 \text{ mol xan. loss}} \right) \left(\frac{76.14 \text{ lb CS}_2 \text{ gen.}}{1 \text{ mol CS}_2 \text{ gen.}} \right) (T \text{ days})$$

where:

EF = emission factor (lb CS₂ generated/ton xanthate);

- L = xanthate decomposition rate (%; see Table E.16, from the *AERO Xanthate Handbook* for AERO 325 [sodium ethyl xanthate] at a 25% solution concentration and onsite temperature data); and
- MW = molecular weight of the xanthate (lb/lb-mol, see Table E.77)
- T = average tank holding period (days, see Table E.77).

The emission factors for the Xanthate Mixing and Storage Tanks are presented in Table E.77.

E.29.3 Control Efficiencies

The control methods and corresponding control efficiencies for the Xanthate Mixing and Storage Tanks are presented in Table E.79.

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	
Primary Crushing and Overland Conveying Operations														
001-1	Processes Controlled by Scrubber C18	11,000	660,000	5.78E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0135	0.0135	Emission Limits	1.93E-06	1.93E-06	1.93E-06	3.66E-11	9.45E-10	
001-5	Processes Controlled by Dust Collector C51	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0135	0.0135	Emission Limits	1.93E-06	1.93E-06	1.93E-06	3.66E-11	9.45E-10	
Milling Operations														
002-1	Processes Controlled by GL1 Dust Collector C1	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0124	0.0124	Emission Limits	1.77E-06	1.77E-06	1.77E-06	3.37E-11	8.68E-10	
002-2	Processes Controlled by GL2 Dust Collector C2	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0124	0.0124	Emission Limits	1.77E-06	1.77E-06	1.77E-06	3.37E-11	8.68E-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
002-3	Processes Controlled by GL3 Dust Collector DC3	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0124	0.0124	Emission Limits	1.77E-06	1.77E-06	1.77E-06	3.37E-11	8.68E-10
002-4	Processes Controlled by GL4 Dust Collector DC4	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0124	0.0124	Emission Limits	1.77E-06	1.77E-06	1.77E-06	3.37E-11	8.68E-10
002-6	Processes Controlled by GL5 Dust Collector DC5	15,000	900,000	7.88E+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	1.09E-11	2.80E-10
Concentrate Leach Plant													
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	500	30,000	2.63E+08	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.022	0.022	Emission Standards	3.12E-06	3.12E-06	3.12E-06	7.11E-10	8.72E-08
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	900	54,000	4.73E+08	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.022	0.022	Emission Standards	3.12E-06	3.12E-06	3.12E-06	7.11E-10	8.72E-08

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	
AOS1: Two Concentrator Operations														
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)														
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	15,000	900,000	7.88E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0135	0.0135	Emission Limits	1.93E-06	1.93E-06	1.93E-06	3.66E-11	9.45E-10	
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)														
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	14,500	870,000	7.62E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10	
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	16,700	1,002,000	8.78E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10	
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	16,700	1,002,000	8.78E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-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
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	16,700	1,002,000	8.78E+09	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
<i>Second Concentrator Milling Operations (AOS1)</i>													
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	22,000	1,320,000	1.16E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	22,000	1,320,000	1.16E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	23,000	1,380,000	1.21E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	27,000	1,620,000	1.42E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-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
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	25,000	1,500,000	1.31E+10	Assume continuous operation (60 min/hr and 8,760 hr/yr) at the full exhaust flow rate with dscfm equal to acfm.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	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.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	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.	0.0023	0.0023	Emission Limits	3.29E-07	3.29E-07	3.29E-07	6.24E-12	1.61E-10

Table E.2 Process Rate and Emission Factor Information for Pollution Control Devices with Emission Factors in Units of lb/hr

Process Number	Emission Unit Description	Process Rates			Emission Factors	
		Hourly (hr/hr)	Annual (hr/yr)	Description	Pollutant	Value (lb/hr)
Concentrate Leach Plant						
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr)	PM (w/ CPM)	2.75
					CPM	2.75
					PM ₁₀	2.75
					PM _{2.5}	2.75
					VOC	2.10
					H ₂ SO ₄	0.68
					Lead	6.27E-04
					HAPs	1.07E-01
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr)	PM (w/ CPM)	0.13
					CPM	0.10
					PM ₁₀	0.13
					PM _{2.5}	0.13
					CO	0.82
					NO _x	0.13
					SO ₂	0.25

Table E.2 Process Rate and Emission Factor Information for Pollution Control Devices with Emission Factors in Units of lb/hr

Process Number	Emission Unit Description	Process Rates			Emission Factors	
		Hourly (hr/hr)	Annual (hr/yr)	Description	Pollutant	Value (lb/hr)
047-5 (cont'd)	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare (cont'd)	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr)	VOC	1.36
					CO2	181.31
					CH4	0.0034
					N2O	0.00034
					Lead	2.97E-05
					HAPs	6.42E-03
AOS1: Two Concentrator Operations						
Second Concentrator Concentrate Handling Operations (AOS1)						
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr)	PM (w/ CPM)	0.063
					CPM	0.05
					PM10	0.063
					PM2.5	0.063
					VOC	1.83
					Lead	1.44E-05
					HAPs	1.62E-01

Table E.2 Process Rate and Emission Factor Information for Pollution Control Devices with Emission Factors in Units of lb/hr

Process Number	Emission Unit Description	Process Rates			Emission Factors	
		Hourly (hr/hr)	Annual (hr/yr)	Description	Pollutant	Value (lb/hr)
Second Concentrator Lime and Other Regent Operations (AOS1)						
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	1	8,760	Assume continuous operation (60 min/hr and 8,760 hr/yr)	H2S	0.038

Table E.3 Process Rate Information for Drilling and Blasting

Process Number	Emission Unit Description	Hourly Process Rate			Annual Process Rate		
		Value	Units	Description	Value	Units	Description
Primary Operating Scenario							
026-3	Drilling	200	holes	Estimated maximum hourly drilling rate.	90,000	holes	Based on the maximum possible number of holes drilled in a year to achieve the maximum annual mining rates.
026-2	Blasting	1	blasts	Assumption that only one blast can occur in an hour.	600	blasts	Based on the maximum possible number of blasts in a year needed to achieve the maximum annual mining rates.
AOS1: Two Concentrator Operations							
026-3 (AOS1)	Drilling (AOS1)	490	holes	Estimated maximum hourly drilling rate.	106,219	holes	Based on the maximum possible number of holes drilled in a year to achieve the maximum annual mining rates.
026-2 (AOS1)	Blasting (AOS1)	1	blasts	Assumption that only one blast can occur in an hour.	260	blasts	Based on the maximum possible number of blasts in a year needed to achieve the maximum annual mining rates.

Table E.4 Emission Factors for Drilling

Pollutant	Emission Factor	Reference
Primary Operating Scenario		
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	1.81E-05 lb/ton	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	3.10E-04 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material
AOS1: Two Concentrator Operations		
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	1.92E-05 lb/ton	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	3.24E-04 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

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	
Primary Operating Scenario					
PM	1,252.20 lb/blast	--	397.06 lb/blast	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
PM ₁₀	651.14 lb/blast	--	206.47 lb/blast	--	
PM _{2.5}	37.57 lb/blast	--	11.91 lb/blast	--	
CO	17.8 L/kg	4,064.40 lb/blast	17.8 L/kg	3,048.30 lb/blast	<i>Factors Affecting ANFO Fumes Production</i> from NIOSH (2001)
NO _x	0.9 kg/metric ton	180.00 lb/blast	0.9 kg/metric ton	135.00 lb/blast	<i>NO_x Emissions from Blasting Operations in Open-Cut Coal Mining</i> from Atmospheric Environment 42 (2008)
SO ₂	--	1.23 lb/blast	--	0.92 lb/blast	Complete Sulfur Conversion Using a Diesel Sulfur 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	38,066.47 lb/blast	73.96 kg/MMBtu	28,549.85 lb/blast	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and Rendered Animal Fat
	71.06 kg/MMBtu		71.06 kg/MMBtu		
CH ₄	3.00E-03 kg/MMBtu	1.49 lb/blast	3.00E-03 kg/MMBtu	1.11 lb/blast	
	1.10E-03 kg/MMBtu		1.10E-03 kg/MMBtu		

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 ₂ O	6.00E-04 kg/MMBtu	0.29 lb/blast	6.00E-04 kg/MMBtu	0.22 lb/blast	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and Rendered Animal Fat (cont'd)
	1.10E-04 kg/MMBtu		1.10E-04 kg/MMBtu		
Lead	varies	0.017 lb/blast	varies	0.0064 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 in the material
Total HAPs	varies	0.38 lb/blast	varies	0.17 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 in the material
AOS1: Two Concentrator Operations					
PM	4,919.42 lb/blast	--	3,742.33 lb/blast	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
PM ₁₀	2,558.10 lb/blast	--	1,946.01 lb/blast	--	
PM _{2.5}	147.58 lb/blast	--	112.27 lb/blast	--	
CO	17.8 L/kg	15,319.65 lb/blast	17.8 L/kg	12,766.38 lb/blast	<i>Factors Affecting ANFO Fumes Production</i> from NIOSH (2001)
NO _x	0.9 kg/metric ton	678.46 lb/blast	0.9 kg/metric ton	565.38 lb/blast	<i>NO_x Emissions from Blasting Operations in Open-Cut Coal Mining</i> from Atmospheric Environment 42 (2008)

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	
SO ₂	--	4.64 lb/blast	--	3.86 lb/blast	Complete Sulfur Conversion Using a Diesel Sulfur 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	143,484.81 lb/blast	73.96 kg/MMBtu	119,570.67 lb/blast	40 CFR 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 and Rendered Animal Fat
	71.06 kg/MMBtu		71.06 kg/MMBtu		
CH ₄	3.00E-03 kg/MMBtu	5.60 lb/blast	3.00E-03 kg/MMBtu	4.67 lb/blast	
	1.10E-03 kg/MMBtu		1.10E-03 kg/MMBtu		
N ₂ O	6.00E-04 kg/MMBtu	1.11 lb/blast	6.00E-04 kg/MMBtu	0.92 lb/blast	
	1.10E-04 kg/MMBtu		1.10E-04 kg/MMBtu		
Lead	varies	0.071 lb/blast	varies	0.055 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 in the material
Total HAPs	varies	1.52 lb/blast	varies	1.19 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 in the material

Table E.6 Vehicle Travel on Unpaved Roads - Primary Operating Scenario

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Annual	Hourly	Annual
793B Haul Trucks	11	158	423	290.50	17.5	193	1,023,966	55,921.25	297,462,171
793D Haul Trucks	23	158	423	290.50	17.5	403	2,141,020	116,926.25	621,966,358
777 Haul Trucks	2	83.10	181.50	132.30	17.5	35	186,176	4,630.50	24,631,041
Water Trucks	4	98.10	181.50	139.80	17.5	70	54,340	9,786.00	7,596,732
994 Loaders	2	213		213.00	8.4	17	54,566	3,578.40	11,622,643
988 Loaders	1	55		55.00	12.2	12	68,277	671.00	3,755,252
PV 271 Drills	5	84		84.00	1.0	5	21,166	420.00	1,777,907
Low Boys	1	134.5		134.50	15	15	76,650	2,017.50	10,309,425
Road Compactors	3	16		16.00	5	15	16,425	240.00	262,800
Excavators/Trackhoes	4	93.68		93.68	11.5	46	193,200	4,309.28	18,098,976
Backhoes	1	12.07		12.07	12.5	12	52,290	150.28	631,166
Cable Reel Trucks	3	--	--	58.26	17.0	51	214,200	2,971.26	12,479,292
Dump Trucks	2	--	--	58.26	17.5	35	147,000	2,039.10	8,564,220
Shipment/Delivery Trucks	--	15	40	27.50	17.5	84	613,763	2,312.12	16,878,476
Small Support/Employee Vehicles	--	5.25		5.25	17.5	1,515	11,058,850	7,953.28	58,058,962

Table E.6 Vehicle Travel on Unpaved Roads - Primary Operating Scenario

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Annual	Hourly	Annual
Total for the Primary Operating Scenario:						2,507.44	15,921,889	213,926.22	1,094,095,421
Mean Vehicle Weighted Average for the Primary Operating Scenario (tons):								85.32	68.72

Table E.7 Vehicle Travel on Unpaved Roads - AOS1

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Annual	Hourly	Annual
793B/C Haul Trucks	11	180.0	445.0	312.50	24	264	836,928	82,500.00	261,539,861
793D/F Haul Trucks	109	169.5	425.5	297.50	24	2,616	8,293,191	778,260.00	2,467,224,386
777 Haul Trucks	3	80	101	90.50	35	105	336,086	9,502.50	30,415,759
Water Trucks	8	58	182	120.00	20	160	108,680	19,200.00	13,041,600
994 Loaders	2	267		267.00	8	16	64,000	4,272.00	17,088,000
988 Loaders	0	55		55.00	12.2	0	0	0	0
PV 271 Drills	9	34		34.00	1	9	37,458	306.00	1,273,572
Low Boys	1	100		100.00	20	20	102,200	2,000.00	10,220,000
Road Compactors	5	36		36.00	7	35	38,325	1,260.00	1,379,700
Excavators/Trackhoes	3	73		73.00	2	6	25,200	438.00	1,839,600
Backhoes	3	12		12.00	10	30	126,000	360.00	1,512,000
Cable Reel Trucks	2	33		33.00	8	16	67,200	528.00	2,217,600
Dump Trucks	0	--	--	58.26	17.5	0	0	0	0
Shipment/Delivery Trucks	--	15	40	27.50	17.5	97	709,930	2,674.39	19,523,081
Small Support/Employee Vehicles	--	5.25		5.25	17.5	1,752	12,791,607	9,199.44	67,155,937

Table E.7 Vehicle Travel on Unpaved Roads - AOS1

Vehicle Description	Quantity of Vehicles	Vehicle Weight (tons)			Average Speed (mph)	Vehicle Miles Traveled (VMT)		Weighted Average Calculation (W*VMT)	
		Empty Weight	Loaded Weight	Average		Hourly	Annual	Hourly	Annual
Total for AOS1:						5,126.53	23,536,805	910,500.34	2,894,431,096
Mean Vehicle Weighted Average for AOS1 (tons):								177.61	122.97

Table E.8 Emission Factors for Vehicle Travel on Unpaved Roads

Pollutant	Emission Factor on an Hourly Basis	Emission Factor on an Annual Basis	Reference
Primary Operating Scenario			
PM	11.30 lb/VMT	9.09 lb/VMT	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
PM ₁₀	2.85 lb/VMT	2.30 lb/VMT	
PM _{2.5}	0.29 lb/VMT	0.23 lb/VMT	
Lead	6.61E-05 lb/VMT	5.32E-05 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	1.13E-03 lb/VMT	9.13E-04 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material
AOS1: Two Concentrator Operations			
PM	15.71 lb/VMT	11.81 lb/VMT	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
PM ₁₀	3.97 lb/VMT	2.98 lb/VMT	
PM _{2.5}	0.40 lb/VMT	0.30 lb/VMT	
Lead	9.78E-05 lb/VMT	7.36E-05 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	1.65E-03 lb/VMT	1.24E-03 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

Table E.9 Process Rate Information for the Dozers and Graders - Primary Operating Scenario

Vehicle Description	Quantity of Vehicles	Average Speed (mph)	Time Operated Per Vehicle (hr)		Total Hours Operated (hr)		Vehicle Miles Traveled (VMT)	
			Annual	Hourly	Annual	Hourly	Annual	Hourly
Dozers (Primary Operating Scenario)								
834 RTD	5	--	6,056	1	30,278	5	--	--
824 RTD	2	--	6,056	1	12,111	2	--	--
D10 Dozers	9	--	3,962	1	35,657	9	--	--
Total for Dozers for the Primary Operating Scenario					78,046	16	--	--
Graders (Primary Operating Scenario)								
Graders	5	6	3,953	1	--	--	118,587	30
Total for Graders for the Primary Operating Scenario					--	--	118,587	30

Table E.10 Process Rate Information for the Dozers and Graders - AOS1

Vehicle Description	Quantity of Vehicles	Average Speed (mph)	Time Operated Per Vehicle (hr)		Total Hours Operated (hr)		Vehicle Miles Traveled (VMT)	
			Annual	Hourly	Annual	Hourly	Annual	Hourly
Dozers (AOS1)								
Dozers	14	--	6,056	1	84,777	14	--	--
Rubber Tire Dozers	8	--	6,056	1	48,444	8	--	--
Total for Dozers for AOS1					133,221	22	--	--
Graders (AOS1)								
Graders	8	6	8,760	1	70,080	--	420,480	48
Total for Graders for AOS1					--	--	420,480	48

Table E.11 Emission Factors for Dozer Operations

Pollutant	Emission Factor	Reference
Primary Operating Scenario		
PM	8.85 lb/hr	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
PM ₁₀	1.61 lb/hr	
PM _{2.5}	0.93 lb/hr	
Lead	3.72E-05 lb/hr	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	6.38E-04 lb/hr	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material
AOS1: Two Concentrator Operations		
PM	8.85 lb/hr	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
PM ₁₀	1.61 lb/hr	
PM _{2.5}	0.93 lb/hr	
Lead	3.96E-05 lb/hr	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	6.66E-04 lb/hr	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

Table E.12 Emission Factors for Road Grader Operations

Pollutant	Emission Factor	Reference
Primary Operating Scenario		
PM	3.53 lb/VMT	AP-42 Table 11.9-1 (10/98), Grading
PM ₁₀	1.10 lb/VMT	
PM _{2.5}	0.11 lb/VMT	
Lead	2.55E-05 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	4.38E-04 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material
AOS1: Two Concentrator Operations		
PM	3.53 lb/VMT	AP-42 Table 11.9-1 (10/98), Grading
PM ₁₀	1.10 lb/VMT	
PM _{2.5}	0.11 lb/VMT	
Lead	2.71E-05 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of lead in the material
Total HAPs	4.57E-04 lb/VMT	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
Mining Operations					
021-1	Loading Mined Material into Haul Trucks	30,515	Based on the maximum hourly mining rate of oxide ore and overburden/low grade ore and the maximum hourly capacity of Primary Crusher 1 (5,865 tph) and Primary Crusher 2 (6,300 tph) for sulfide ore.	220,314,000	Based on a daily mining rate of 603,600 tpd (180,000 tpd sulfide ore, 82,400 tpd oxide ore, 341,200 tpd overburden/low grade ore) and operation of 365 day/yr.
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	12,865	Equal to the sum of the maximum hourly capacity of Primary Crusher 1 (5,865 tph) and Primary Crusher 2 (6,300 tph).	65,700,000	Based on a sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr.
045-3	Unloading Ore to Leaching Areas	3,433	Based on the maximum hourly mining rate of oxide ore.	30,076,000	Based on a daily oxide ore mining rate of 82,400 tpd and operation of 365 day/yr.
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	14,217	Based on the maximum hourly mining rate of overburden/low grade ore.	124,538,000	Based on a daily overburden/low grade ore mining rate of 341,200 tpd and operation of 365 day/yr.
Primary Crushing and Overland Conveying Operations					
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	7,600	Equal to the maximum hourly capacity of the transfer.	65,700,000	Based on a sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr.
001-8	Overland Conveyor 3 to Overland Conveyor 4	7,600	Equal to the maximum hourly capacity of the transfer.	65,700,000	Based on a sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr.
001-9	Overland Conveyor 4 to Radial Stacker 5	7,600	Equal to the maximum hourly capacity of the transfer.	65,700,000	Based on a sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	0	Worst-case emissions on an hourly basis assume all ore is transferred to Free-Standing Stacker 6.	52,560,000	Based on 4/5 the sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr (on an annual basis, 4/5 of the ore will be transferred to Coarse Ore Stockpiles 1/4).
001-10	Radial Stacker 5 to Free-Standing Stacker 6	7,600	Equal to the maximum hourly capacity of the transfer.	13,140,000	Based on 1/5 the sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr (on an annual basis, 1/5 of the ore will be transferred to Free-Standing Stacker 6).
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	7,600	Equal to the maximum hourly capacity of Free-Standing Stacker 6.	13,140,000	Based on 1/5 the sulfide ore mining rate of 180,000 tpd and operation of 365 day/yr (on an annual basis, 1/5 of the ore will be transferred to Coarse Ore Stockpile 5).
Copper Concentrate Processing and Loading Operations					
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.
006-7	All Copper Concentrate Stockpiles to Trucks	240	Equal to the maximum capacity of the copper concentrate processing operations.	2,102,400	Equal to the maximum capacity of the copper concentrate processing operations at continuous operation.
Molybdenum Concentrate Processing and Bagging Operations					
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	5.00	Equal to the maximum capacity of the molybdenum bagging operations.	43,800	Equal to the maximum capacity of the molybdenum bagging operations at continuous operation.
Concentrate Leach Plant					
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	4.00	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant.	35,040	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant at continuous operation.
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	4.00	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant.	35,040	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant at continuous operation.
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	4.00	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant.	35,040	Equal to the maximum capacity of molybdenum concentrate processing in the Concentrate Leach Plant at continuous operation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
047-11	MoO ₃ Inclined Screw Conveyor to MoO ₃ Bags	7.00	Assume equal to the maximum MoO ₃ bagging rate.	61,320	Assume equal to the maximum MoO ₃ bagging rate at continuous operation.
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	25	Equal to the maximum soda ash delivery rate.	6,000	Equal to the maximum usage rate corresponding to the maximum amount of molybdenum concentrate processed in the Concentrate Leach Plant.
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	37.50	Equal to the maximum capacity of the Molybdenum Concentrate Re-Bagger.	600	Equal to the conservative maximum for a single year based on 1.5 ton bags being stored for multiple years before re-bagging all at once.
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	37.50	Equal to the maximum capacity of the Molybdenum Concentrate Re-Bagger.	600	Equal to the conservative maximum for a single year based on 1.5 ton bags being stored for multiple years before re-bagging all at once.
Lime Storage and Handling Operations					
007-3	Transfer of Lime to Lime Storage Bin 1	60	Equal to the maximum hourly capacity of the transfer.	525,600	Based on the maximum hourly capacity of the transfer at continuous operation.
007-5	Lime Porta Batches	9.60	Equal to the maximum hourly capacity of the Lime Porta Batches (a maximum 48 ton batch is completed in 5 hours).	84,096	Based on the maximum hourly capacity of the Lime Porta Batches at continuous operation.
007-8	Lime Slaking Mill 1	22	Assume equal to the maximum process rate of Lime Slaking Mill 1.	192,720	Assume equal to the maximum process rate of Lime Slaking Mill 1 at continuous operation.
007-9	Lime Slaking Mill 2	22	Assume equal to the maximum process rate of Lime Slaking Mill 2.	192,720	Assume equal to the maximum process rate of Lime Slaking Mill 2 at continuous operation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
Ammonium Nitrate Prill Delivery and Handling Operations					
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	25.75	Assume equal to the maximum delivery rate.	6,244	Assume equal to the maximum prill usage rate equally divided between five bins.
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	25.75	Assume equal to the maximum delivery rate.	6,244	Assume equal to the maximum prill usage rate equally divided between five bins.
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	25.75	Assume equal to the maximum delivery rate.	6,244	Assume equal to the maximum prill usage rate equally divided between five bins.
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	25.75	Assume equal to the maximum delivery rate.	6,244	Assume equal to the maximum prill usage rate equally divided between five bins.
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	25.75	Assume equal to the maximum delivery rate.	6,244	Assume equal to the maximum prill usage rate equally divided between five bins.
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	255	Based on 17 tons transferred to a truck and five trucks can be loaded at a time, assume no single truck is loaded more than three times per hour.	31,219	Assume equal to the maximum prill usage rate.
Portable Aggregate System					
009-9	Aggregate to Hopper (via front-end loader)	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	850	Equal to the maximum capacity of the grizzly.	2,500,000	Equal to the voluntary production limitation.
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	850	Equal to the maximum capacity of the crusher.	2,500,000	Equal to the voluntary production limitation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	850	Equal to the maximum capacity of the screen.	2,500,000	Equal to the voluntary production limitation.
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	850	Equal to the maximum capacity of the crusher.	2,500,000	Equal to the voluntary production limitation.
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	850	Equal to the maximum capacity of the transfer.	2,500,000	Equal to the voluntary production limitation.
Supplemental Portable Aggregate System					
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	540	Equal to the maximum capacity of the grizzly.	4,400,000	Equal to the voluntary production limitation.
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	540	Equal to the maximum capacity of the crusher.	4,400,000	Equal to the voluntary production limitation.
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	990	Equal to the maximum capacity of the transfer.	6,400,000	Equal to the voluntary production limitation.
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	990	Equal to the maximum capacity of the screen.	6,400,000	Equal to the voluntary production limitation.
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	450	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	450	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	450	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	450	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	450	Equal to the maximum capacity of the crusher.	4,400,000	Equal to the voluntary production limitation.
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	450	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
009-38	SPAS Stockpiles to Trucks	540	Equal to the maximum capacity of the transfer.	4,400,000	Equal to the voluntary production limitation.
Copper Decant Solids Handling Operations					
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	6,000	All material from one decant operation can be transferred in an hour. Each decant operation is about 1 ton.	18,000	Assume a maximum of 3 decant operations per year. Each decant operation is about 1 ton.
AOS1: Two Concentrator Operations					
<i>Mining Operations (AOS1)</i>					
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	39,352	Sum of unloading to crushers, leaching areas, and storage areas.	254,833,922	Sum of unloading to crushers, leaching areas, and storage areas.
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	8,000	Equal to the maximum hourly capacity of the crusher.	44,433,881	Maximum expected value based on the AOS1 mining process rates.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	7,000	Equal to the maximum hourly capacity of the crusher.	32,632,000	Maximum expected value based on the AOS1 mining process rates.
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	1,264	20% greater than the average annual tons/year.	9,230,000	Maximum expected value based on the AOS1 mining process rates.
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	23,087	20% greater than the average annual tons/year.	168,538,041	Maximum expected value based on the AOS1 mining process rates.
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>					
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	66,576,000	Assume equal to the maximum capacity of the transfer at continuous operation.
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	66,576,000	Assume equal to the maximum capacity of the transfer at continuous operation.
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	66,576,000	Assume equal to the maximum capacity of the transfer at continuous operation.
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	53,260,800	Equal to 4/5 of the maximum capacity of the transfer at continuous operation.
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	13,315,200	Equal to 1/5 the maximum capacity of the transfer at continuous operation.
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	7,600	Assume equal to the maximum capacity of the transfer.	13,315,200	Assume equal to the quantity not sent to the other Coarse Ore Stockpiles.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)					
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	8,000	Assume equal to the maximum capacity of the transfer.	70,080,000	Assume equal to the maximum capacity of the transfer at continuous operation.
Second Concentrator Concentrate Handling Operations (AOS1)					
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	57.00	Assume equal to the maximum rate of the copper concentrate handling operations.	499,320	Assume equal to the maximum rate of the copper concentrate handling operations at continuous operation.
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	57.00	Assume equal to the maximum rate of the copper concentrate handling operations.	499,320	Assume equal to the maximum rate of the copper concentrate handling operations at continuous operation.
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	57.00	Assume equal to the maximum rate of the copper concentrate handling operations.	499,320	Assume equal to the maximum rate of the copper concentrate handling operations at continuous operation.
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	2.10	Assume equal to the maximum rate of the Molybdenum Concentrate Dryer.	18,396	Assume equal to the maximum rate of the Molybdenum Concentrate Dryer at continuous operation.
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	2.10	Assume equal to the maximum rate of the Molybdenum Concentrate Bagging System.	18,396	Assume equal to the maximum rate of the Molybdenum Concentrate Bagging System at continuous operation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
Second Concentrator Lime and Other Regent Operations (AOS1)					
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	25.00	Assume equal to the maximum delivery rate.	99,514	Assume equal to the maximum capacity of the slaker at continuous operation.
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	11.36	Assume equal to the maximum capacity of the slaker	99,514	Assume equal to the maximum capacity of the slaker at continuous operation.
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	0.83	Assume equal to the maximum flocculant usage rate.	7,227	Assume equal to the maximum hourly usage rate at continuous operation.
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	0.06	Assume equal to the maximum flocculant usage rate.	481.80	Assume equal to the maximum hourly usage rate at continuous operation.
Second Concentrator Prill Handling Operations (AOS1)					
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	25.75	Assume equal to the maximum delivery rate.	25,365	Equal to the additional prill needed for the Second Concentrator based on maximum mining rates.
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	50.00	Equal to the ANFO truck capacities, the trucks can only be filled once per hour.	25,365	Equal to the additional prill needed for the Second Concentrator based on maximum mining rates.
AOS5: Emergency Grizzly Systems					
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.

Table E.13 Process Rate Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batches

Process Number	Process/Emission Unit Description	Hourly Process Rate		Annual Process Rate	
		Quantity (tph)	Description	Quantity (tpy)	Description
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	5,000	Equal to the maximum capacity of the Emergency Grizzly Systems.	43,800,000	Equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation.

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
Mining Operations						
021-1	Loading Mined Material into Haul Trucks	Material Transfer Point	Combination of All Mined Material	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
045-3	Unloading Ore to Leaching Areas	Material Transfer Point	Leach Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Material Transfer Point	Overburden/Low Grade Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
Primary Crushing and Overland Conveying Operations						
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
001-8	Overland Conveyor 3 to Overland Conveyor 4	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
001-9	Overland Conveyor 4 to Radial Stacker 5	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
Copper Concentrate Processing and Loading Operations						
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	Material Transfer Point	Copper Concentrate	9% (site-specific)	Unprotected	See Section E.9.2.1
006-7	All Copper Concentrate Stockpiles to Trucks	Material Transfer Point	Copper Concentrate	9% (site-specific)	Unprotected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
Molybdenum Concentrate Processing and Bagging Operations						
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	Material Transfer Point	FMBI Molybdenum Concentrate	8.4% (site-specific)	Protected	See Section E.9.2.1
Concentrate Leach Plant						
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	Material Transfer Point	FMBI or Outside Source Molybdenum Concentrate	8.4% (site-specific)	Protected	See Section E.9.2.1
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	Material Transfer Point	FMBI or Outside Source Molybdenum Concentrate	8.4% (site-specific)	Protected	See Section E.9.2.1
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	Material Transfer Point	FMBI or Outside Source Molybdenum Concentrate	0.1% (site-specific)	Protected	See Section E.9.2.1
047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	Material Transfer Point	Molybdenum Trioxide	8% (site-specific)	Protected	See Section E.9.2.1
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	Material Transfer Point	Soda Ash	N/A	N/A	See Section E.9.2.2

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	Material Transfer Point	FMBI or Outside Source Molybdenum Concentrate	0.1% (site-specific)	Unprotected	See Section E.9.2.1
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	Material Transfer Point	FMBI or Outside Source Molybdenum Concentrate	0.1% (site-specific)	Unprotected	See Section E.9.2.1
Lime Storage and Handling Operations						
007-3	Transfer of Lime to Lime Storage Bin 1	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.3
007-5	Lime Porta Batches	Lime Porta Batches	Lime	N/A	N/A	See Section E.13.2
007-8	Lime Slaking Mill 1	Lime Slaking Mill	Lime	N/A	N/A	See Section E.12.2
007-9	Lime Slaking Mill 2	Lime Slaking Mill	Lime	N/A	N/A	See Section E.12.2
Ammonium Nitrate Prill Delivery and Handling Operations						
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
Portable Aggregate System						
009-9	Aggregate to Hopper (via front-end loader)	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Unprotected	See Section E.9.2.1
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	Screening Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.10.2
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	Crushing Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.11.2
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	Screening Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.10.2
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	Crushing Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.11.2
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Unprotected	See Section E.9.2.1
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Unprotected	See Section E.9.2.1
Supplemental Portable Aggregate System						
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	Screening Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.10.2

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	Crushing Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.11.2
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	Screening Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.10.2
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	Crushing Operation	Nonmetallic Minerals	6.5% (site-specific)	N/A	See Section E.11.2
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Protected	See Section E.9.2.1
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Unprotected	See Section E.9.2.1
009-38	SPAS Stockpiles to Trucks	Material Transfer Point	Nonmetallic Minerals	6.5% (site-specific)	Unprotected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
Copper Decant Solids Handling Operations						
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	Material Transfer Point	Copper Decant Material	8% (minimum of the 8% - 10% range)	Unprotected	See Section E.9.2.1
AOS1: Two Concentrator Operations						
Mining Operations (AOS1)						
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Material Transfer Point	Combination of All Mined Material (AOS1)	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Material Transfer Point	Leach Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Material Transfer Point	Overburden/Low Grade Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)						
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>						
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>						
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	Material Transfer Point	Copper Concentrate	9% (site-specific)	Protected	See Section E.9.2.1
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	Material Transfer Point	Second Concentrator Molybdenum Concentrate Post-Dryer	3% (site-specific)	Protected	See Section E.9.2.1
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	Material Transfer Point	Second Concentrator Molybdenum Concentrate Post-Dryer	3% (site-specific)	Protected	See Section E.9.2.1
<i>Second Concentrator Lime and Other Regent Operations (AOS1)</i>						
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	Material Transfer Point	Lime	N/A	N/A	See Section E.9.2.3
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	Second Concentrator Lime Slaker (AOS1)	Lime	N/A	N/A	See Section E.12.2
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	Material Transfer Point	Flocculant	0.1% (site-specific)	Unprotected	See Section E.9.2.1
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	Material Transfer Point	Flocculant	0.1% (site-specific)	Unprotected	See Section E.9.2.1

Table E.14 Emission Factor Information for Material Transfer Points, Screening Operations, Crushing Operations, Lime Slaking, and the Lime Porta Batch

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
Second Concentrator Prill Handling Operations (AOS1)						
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	Material Transfer Point	Ammonium Nitrate Prill	N/A	N/A	See Section E.9.2.4
AOS5: Emergency Grizzly Systems						
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	Screening Operation	Mill Ore	2.564% (good operating practices)	N/A	See Section E.10.2
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Unprotected	See Section E.9.2.1
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Material Transfer Point	Mill Ore	2.564% (site-specific)	Protected	See Section E.9.2.1

Table E.15 Emission Factors for the Material Transfer Points Associated with Mined Materials, Concentrate, Nonmetallic Minerals, and Flocculant

Material	Moisture Content (%)	Protected/ Unprotected	Wind Speed (mph)	Emission Factors (lb/ton)				
				PM	PM ₁₀	PM _{2.5}	Lead	Total HAPs
Combination of All Mined Material	2.564% (site-specific)	Unprotected	7.26	0.0027	0.0013	0.00019	2.97E-08	5.10E-07
Combination of All Mined Material (AOS1)	2.564% (site-specific)	Unprotected	7.26	0.0027	0.0013	0.00019	3.16E-08	5.33E-07
Mill Ore	2.564% (site-specific)	Protected	1.30	0.00029	0.00014	0.000021	2.61E-09	6.73E-08
Mill Ore	2.564% (site-specific)	Unprotected	7.26	0.0027	0.0013	0.00019	2.44E-08	6.29E-07
Leach Ore	2.564% (site-specific)	Unprotected	7.26	0.0027	0.0013	0.00019	1.64E-08	2.82E-07
Overburden/Low Grade Ore	2.564% (site-specific)	Unprotected	7.26	0.0027	0.0013	0.00019	3.58E-08	5.02E-07
FMBI Molybdenum Concentrate	8.4% (site-specific)	Protected	1.30	0.000055	0.000026	0.0000039	5.94E-09	1.35E-07
FMBI or Outside Source Molybdenum Concentrate	8.4% (site-specific)	Protected	1.30	0.000055	0.000026	0.0000039	5.94E-09	7.28E-07
FMBI or Outside Source Molybdenum Concentrate	0.1% (site-specific)	Protected	1.30	0.027	0.013	0.0020	2.94E-06	3.60E-04
FMBI or Outside Source Molybdenum Concentrate	0.1% (site-specific)	Unprotected	7.26	0.25	0.12	0.018	2.74E-05	3.36E-03

Table E.15 Emission Factors for the Material Transfer Points Associated with Mined Materials, Concentrate, Nonmetallic Minerals, and Flocculant

Material	Moisture Content (%)	Protected/ Unprotected	Wind Speed (mph)	Emission Factors (lb/ton)				
				PM	PM ₁₀	PM _{2.5}	Lead	Total HAPs
Second Concentrator Molybdenum Concentrate Post-Dryer	3% (site-specific)	Protected	7.26	0.0022	0.0010	0.00016	2.35E-07	5.32E-06
Molybdenum Trioxide	8% (site-specific)	Protected	1.30	0.000059	0.000028	0.0000042	5.30E-09	7.03E-07
Copper Concentrate	9% (site-specific)	Protected	1.30	0.000050	0.000024	0.0000036	1.99E-08	1.62E-07
Copper Concentrate	9% (site-specific)	Unprotected	7.26	0.00047	0.00022	0.000034	1.86E-07	1.52E-06
Nonmetallic Minerals	6.5% (site-specific)	Protected	1.30	0.000079	0.000037	0.0000057	1.04E-09	1.46E-08
Nonmetallic Minerals	6.5% (site-specific)	Unprotected	7.26	0.00074	0.00035	0.000053	9.73E-09	1.37E-07
Copper Decant Material	8% (minimum of the 8% - 10% range)	Unprotected	7.26	0.00055	0.00026	0.000040	1.90E-07	3.13E-06
Flocculant	0.1% (site-specific)	Unprotected	7.26	0.25	0.12	0.018	--	--

Table E.16 Emission Factors for the Material Transfer Points Associated with Soda Ash

Pollutant	Emission Factor	Reference
PM	5.20 lb/ton	AP-42, Table 8.12-3 (07/93), Soda Ash Storage/Loading and Unloading
PM ₁₀	1.82 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}	0.28 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.17 Emission Factors for the Material Transfer Points Associated with Lime

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.18 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.19 Emission Factors for the Screening Operations

Pollutant	Emission Factor (lb/ton)				Reference
	Vibrating Grizzly Feeder – PAS and SPAS	Triple Deck Screen - PAS	Vibrating Screen - SPAS	Bar Grizzly Screen - AOS5	
PM	0.0022 lb/ton	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	0.00074 lb/ton	
PM _{2.5}	0.000050 lb/ton	0.000050 lb/ton	0.000050 lb/ton	0.000050 lb/ton	
Lead	2.06E-08 lb/ton	2.06E-08 lb/ton	2.06E-08 lb/ton	1.41E-08 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the lead in the material
Total HAPs	2.90E-07 lb/ton	2.90E-07 lb/ton	2.90E-07 lb/ton	3.62E-07 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

Table E.20 Emission Factors for the Crushing Operations

Pollutant	Emission Factor (lb/ton)			Reference
	Jaw Crusher - PAS	Cone Crusher - PAS	Cone Crusher - SPAS	
PM	0.0012 lb/ton	0.0012 lb/ton	0.0012 lb/ton	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled)
PM ₁₀	0.00054 lb/ton	0.00054 lb/ton	0.00054 lb/ton	
PM _{2.5}	0.00010 lb/ton	0.00010 lb/ton	0.00010 lb/ton	
Lead	1.50E-08 lb/ton	1.50E-08 lb/ton	1.50E-08 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the lead in the material
Total HAPs	2.11E-07 lb/ton	2.11E-07 lb/ton	2.11E-07 lb/ton	PM ₁₀ emission factor multiplied by the concentration of the HAPs in the material

Table E.21 Emission Factors for Lime Slaking and the Lime Porta Batches

Type of Lime Slaker	Particulate Matter Emission Factors (lb/ton)				Reference
	PM (w/ CPM)	CPM	PM ₁₀	PM _{2.5}	
Lime Slaking Mill	0.0012	0.00020	0.0012	0.0012	Manufacturer's information with a 20% safety factor, Assume PM=PM ₁₀ =PM _{2.5}
Second Concentrator Lime Slaker (AOS1)	0.0012	0.00020	0.0012	0.0012	Manufacturer's information with a 20% safety factor, Assume PM=PM ₁₀ =PM _{2.5}
Lime Porta Batches	0.0076	--	0.0042	0.00080	Pneumatic loading of lime (i.e., not limestone) into enclosed trucks from <i>Characterization of Inhalable Particulate Matter Emissions from a Lime Plant</i> (05/83), 95% emission reduction due to the self-scrubber design

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Primary Crushing and Overland Conveying Operations					
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	Hourly/Annual Process Rate		9.22	acre-yr
		Surface Material Silt Content		4.00	%, worst-case estimate based on site-specific testing
		Type of Material Stored		Mill Ore	
		Emission Factors on an Hourly Basis	PM	0.22	lb/acre-hr
			PM ₁₀	0.11	lb/acre-hr
			PM _{2.5}	0.017	lb/acre-hr
			Lead	2.13E-06	lb/acre-hr
			Total HAPs	5.49E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	1,962.86	lb/acre-yr
			PM ₁₀	981.43	lb/acre-yr
			PM _{2.5}	147.21	lb/acre-yr
			Lead	1.86E-02	lb/acre-yr
			Total HAPs	4.81E-01	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Copper Concentrate Processing and Loading Operations					
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	Hourly/Annual Process Rate		0.50	acre-yr
		Surface Material Silt Content		96.00	%, equivalent to testing completed at a similar Freeport facility
		Type of Material Stored		Copper Concentrate	
		Emission Factors on an Hourly Basis	PM	5.38	lb/acre-hr
			PM ₁₀	2.69	lb/acre-hr
			PM _{2.5}	0.403	lb/acre-hr
			Lead	2.26E-03	lb/acre-hr
			Total HAPs	1.84E-02	lb/acre-hr
		Emission Factors on an Annual Basis	PM	47,108.66	lb/acre-yr
			PM ₁₀	23,554.33	lb/acre-yr
			PM _{2.5}	3,533.15	lb/acre-yr
			Lead	1.98E+01	lb/acre-yr
			Total HAPs	1.61E+02	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information		
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	Hourly/Annual Process Rate		1.80 acre-yr
		Surface Material Silt Content		96.00 % %, equivalent to testing completed at a similar Freeport facility
		Type of Material Stored		Copper Concentrate
		Emission Factors on an Hourly Basis	PM	5.38 lb/acre-hr
			PM ₁₀	2.69 lb/acre-hr
			PM _{2.5}	0.403 lb/acre-hr
			Lead	2.26E-03 lb/acre-hr
			Total HAPs	1.84E-02 lb/acre-hr
		Emission Factors on an Annual Basis	PM	47,108.66 lb/acre-yr
			PM ₁₀	23,554.33 lb/acre-yr
			PM _{2.5}	3,533.15 lb/acre-yr
			Lead	1.98E+01 lb/acre-yr
			Total HAPs	1.61E+02 lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Tailings Operations					
027-3	Wind Erosion of Tailings	Hourly/Annual Process Rate		4,200	acre-yr
		Number of Annual Disturbances		1	disturbances/year
		Type of Material Stored		Tailings	
		Emission Factors on an Hourly Basis	PM	0.024	lb/acre-hr
			PM ₁₀	0.012	lb/acre-hr
			PM _{2.5}	0.0018	lb/acre-hr
			Lead	1.29E-07	lb/acre-hr
			Total HAPs	5.49E-06	lb/acre-hr
		Emission Factors on an Annual Basis	PM	206.11	lb/acre-yr
			PM ₁₀	103.06	lb/acre-yr
			PM _{2.5}	15.46	lb/acre-yr
			Lead	1.13E-03	lb/acre-yr
			Total HAPs	4.81E-02	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Portable Aggregate System					
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	Hourly/Annual Process Rate		0.23	acre-yr
		Surface Material Silt Content		6.50	%, site-specific
		Type of Material Stored		Overburden/Low Grade Ore	
		Emission Factors on an Hourly Basis	PM	0.36	lb/acre-hr
			PM ₁₀	0.18	lb/acre-hr
			PM _{2.5}	0.027	lb/acre-hr
			Lead	5.07E-06	lb/acre-hr
			Total HAPs	7.12E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	3,189.65	lb/acre-yr
			PM ₁₀	1,594.82	lb/acre-yr
			PM _{2.5}	239.22	lb/acre-yr
			Lead	4.44E-02	lb/acre-yr
			Total HAPs	6.24E-01	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Supplemental Portable Aggregate System					
009-38	Wind Erosion of the SPAS Stockpiles	Hourly/Annual Process Rate		3.31	acre-yr
		Surface Material Silt Content		6.50	%, based on testing at the PAS
		Type of Material Stored		Overburden/Low Grade Ore	
		Emission Factors on an Hourly Basis	PM	0.36	lb/acre-hr
			PM ₁₀	0.18	lb/acre-hr
			PM _{2.5}	0.027	lb/acre-hr
			Lead	5.07E-06	lb/acre-hr
			Total HAPs	7.12E-05	lb/acre-hr
			Emission Factors on an Annual Basis	PM	3,189.65
		PM ₁₀		1,594.82	lb/acre-yr
		PM _{2.5}		239.22	lb/acre-yr
		Lead		4.44E-02	lb/acre-yr
		Total HAPs		6.24E-01	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Copper Decant Solids Handling Operations					
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	Hourly/Annual Process Rate		3	acre-yr
		Number of Annual Disturbances		3	disturbances/year
		Type of Material Stored		Copper Decant	
		Emission Factors on an Hourly Basis	PM	0.28	lb/acre-hr
			PM ₁₀	0.14	lb/acre-hr
			PM _{2.5}	0.021	lb/acre-hr
			Lead	1.01E-04	lb/acre-hr
			Total HAPs	1.66E-03	lb/acre-hr
		Emission Factors on an Annual Basis	PM	618.33	lb/acre-yr
			PM ₁₀	309.17	lb/acre-yr
			PM _{2.5}	46.37	lb/acre-yr
			Lead	2.26E-01	lb/acre-yr
Total HAPs	3.71E+00		lb/acre-yr		

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
AOS1: Two Concentrator Operations					
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)					
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	Hourly/Annual Process Rate		6.18	acre-yr
		Surface Material Silt Content		4.00	%, worst-case estimate based on site-specific testing
		Type of Material Stored		Mill Ore	
		Emission Factors on an Hourly Basis	PM	0.22	lb/acre-hr
			PM ₁₀	0.11	lb/acre-hr
			PM _{2.5}	0.017	lb/acre-hr
			Lead	2.13E-06	lb/acre-hr
			Total HAPs	5.49E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	1,962.86	lb/acre-yr
			PM ₁₀	981.43	lb/acre-yr
			PM _{2.5}	147.21	lb/acre-yr
			Lead	1.86E-02	lb/acre-yr
			Total HAPs	4.81E-01	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)					
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	Hourly/Annual Process Rate		3.04	acre-yr
		Surface Material Silt Content		4.00	%, based on testing at the Bagdad Concentrator
		Type of Material Stored		Mill Ore	
		Emission Factors on an Hourly Basis	PM	0.22	lb/acre-hr
			PM ₁₀	0.11	lb/acre-hr
			PM _{2.5}	0.017	lb/acre-hr
			Lead	2.13E-06	lb/acre-hr
			Total HAPs	5.49E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	1,962.86	lb/acre-yr
			PM ₁₀	981.43	lb/acre-yr
			PM _{2.5}	147.21	lb/acre-yr
			Lead	1.86E-02	lb/acre-yr
			Total HAPs	4.81E-01	lb/acre-yr

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
Second Concentrator Concentrate Handling Operations (AOS1)					
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	Hourly/Annual Process Rate		0.30	acre-yr
		Surface Material Silt Content		96.00	%, equivalent to testing completed at a similar Freeport facility
		Type of Material Stored		Copper Concentrate	
		Emission Factors on an Hourly Basis	PM	5.38	lb/acre-hr
			PM ₁₀	2.69	lb/acre-hr
			PM _{2.5}	0.403	lb/acre-hr
			Lead	2.26E-03	lb/acre-hr
			Total HAPs	1.84E-02	lb/acre-hr
		Emission Factors on an Annual Basis	PM	47,108.66	lb/acre-yr
			PM ₁₀	23,554.33	lb/acre-yr
			PM _{2.5}	3,533.15	lb/acre-yr
			Lead	1.98E+01	lb/acre-yr
Total HAPs	1.61E+02		lb/acre-yr		

Table E.22 Process Rate and Emission Factor Information for Stockpiles, Storage Areas, and Tailings

Process Number	Process/Emission Unit Description	Process Rate and Emission Factor Information			
AOS5: Emergency Grizzly Systems					
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	Hourly/Annual Process Rate		1.00	acre-yr
		Surface Material Silt Content		4.00	%, based on testing at the Bagdad Concentrator
		Type of Material Stored		Mill Ore	
		Emission Factors on an Hourly Basis	PM	0.22	lb/acre-hr
			PM ₁₀	0.11	lb/acre-hr
			PM _{2.5}	0.017	lb/acre-hr
			Lead	2.13E-06	lb/acre-hr
			Total HAPs	5.49E-05	lb/acre-hr
		Emission Factors on an Annual Basis	PM	1,962.86	lb/acre-yr
			PM ₁₀	981.43	lb/acre-yr
			PM _{2.5}	147.21	lb/acre-yr
			Lead	1.86E-02	lb/acre-yr
			Total HAPs	4.81E-01	lb/acre-yr

Table E.23 Process Rate and Emission Factor Information for the Cooling Tower

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
Concentrate Leach Plant												
042-11	CLP Cooling Tower	4,000	240	2,102,400	Assume continuous operation (60 min/hr and 8,760 hr/yr).	3,510	0.005	0.0015	0.0014	0.00027	1.40E-11	7.15E-10

Table E.24 Process Rate and Emission Factor Information for External Combustion Equipment

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/yr	Description	
Concentrate Leach Plant							
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Natural Gas	25.00	Equal to the maximum hourly capacity of the Package Boilers (maximum of one operates at any time).	219,000	Equal to the maximum hourly capacity of the Package Boilers at continuous operation.	See Section E.17.2.1
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Natural Gas	5.23	Equal to the maximum capacity of the Natural Gas Steam Generator.	45,814.80	Equal to the maximum hourly capacity of the Natural Gas Steam Generator at continuous operation.	See Section E.17.2.1
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Natural Gas	6.50	Equal to the maximum capacity of the Natural Gas Deoiler Heater.	56,940	Equal to the maximum hourly capacity of the Natural Gas Deoiler Heater at continuous operation.	See Section E.17.2.1
Solution Extraction/Electrowinning Operations							
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Natural Gas	0.40	Equal to the maximum capacity of Natural Gas Hot Water Pressure Washer 3.	3,504	Equal to the maximum hourly capacity of Natural Gas Hot Water Pressure Washer 3 at continuous operation.	See Section E.17.2.1
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Natural Gas	0.40	Equal to the maximum capacity of Natural Gas Hot Water Pressure Washer 4.	3,504	Equal to the maximum hourly capacity of Natural Gas Hot Water Pressure Washer 4 at continuous operation.	See Section E.17.2.1
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Natural Gas	0.34	Equal to the maximum capacity of the Natural Gas SX Pressure Washer.	2,978.40	Equal to the maximum hourly capacity of the Natural Gas SX Pressure Washer at continuous operation.	See Section E.17.2.1
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Natural Gas	6.842	Equal to the maximum capacity of the Natural Gas Hot Water Heater.	59,935.92	Equal to the maximum hourly capacity of the Natural Gas Hot Water Heater at continuous operation.	See Section E.17.2.2

Table E.24 Process Rate and Emission Factor Information for External Combustion Equipment

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/yr	Description	
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Natural Gas	5.44	Equal to the maximum capacity of the Natural Gas Electrolyte Heater.	47,654.40	Equal to the maximum hourly capacity of the Natural Gas Electrolyte Heater at continuous operation.	See Section E.17.2.3
Miscellaneous Fuel Burning Equipment							
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Diesel	0.3429	Equal to the maximum capacity of Diesel Pressure Washer IA35-D.	3,003.80	Equal to the maximum hourly capacity of Diesel Pressure Washer IA35-D at continuous operation.	See Section E.18.2
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Natural Gas	0.49	Equal to the maximum capacity of Natural Gas Mine Shop Pressure Washer 1.	4,292.40	Equal to the maximum hourly capacity of Natural Gas Mine Shop Pressure Washer 1 at continuous operation.	See Section E.17.2.1
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Natural Gas	0.49	Equal to the maximum capacity of Natural Gas Mine Shop Pressure Washer 2.	4,292.40	Equal to the maximum hourly capacity of Natural Gas Mine Shop Pressure Washer 2 at continuous operation.	See Section E.17.2.1
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Natural Gas	9.499	Equal to the maximum capacity of the Natural Gas Small Space Heaters, Furnaces, and Boilers.	83,211.24	Equal to the maximum hourly capacity of the Natural Gas Small Space Heaters, Furnaces, and Boilers at continuous operation.	See Section E.17.2.1 ^a
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Propane	0.95	Equal to the maximum capacity of the Propane Small Space Heaters, Furnaces, and Boilers.	8,322.00	Equal to the maximum hourly capacity of the Propane Small Space Heaters, Furnaces, and Boilers at continuous operation.	See Section E.19.2
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Natural Gas	0.72045	Equal to the maximum capacity of Natural Gas Mill Wash Rack Pressure Washer IA51-NG.	6,311.14	Equal to the maximum hourly capacity of Natural Gas Mill Wash Rack Pressure Washer IA51-NG at continuous operation.	See Section E.17.2.1

Table E.24 Process Rate and Emission Factor Information for External Combustion Equipment

Process Number	Process/Emission Unit Description	Fuel Type	Hourly Process Rate		Annual Process Rate		Emission Factor Reference
			MMBtu/hr	Description	MMBtu/yr	Description	
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Natural Gas	0.499	Equal to the maximum capacity of Natural Gas Shower Facility Hot Water Heater IA52-NG.	4,371.24	Equal to the maximum hourly capacity of Natural Gas Shower Facility Hot Water Heater IA52-NG at continuous operation.	See Section E.17.2.1

^a Although some of the heat input rates of the individual small space heaters, furnaces, and boilers are less than 0.3 MMBtu/hr and could use corresponding the CO and NO_x emission factors from AP-42 Tables 1.4-1, emissions are calculated from the collective group of the small space heaters, furnaces, and boilers using emission factors for maximum heat input rate capacities less than 100 MMBtu/hr but greater than or equal to 0.3 MMBtu/hr as a worst case emission estimate.

**Table E.25 Emission Factors for General Uncontrolled Natural Gas Combustion
 $0.3 \leq \text{MMBtu/hr} < 100$**

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 $0.3 \leq \text{MMBtu/hr} < 100$ (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 Combustion
CH ₄	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N ₂ O	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 Hot Water Heater (6.842 MMBtu/hr)

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	--	0.016 lb/MMBtu	Manufacturer Information
NO _x	--	0.037 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 Combustion
CH ₄	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N ₂ O	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.27 Emission Factors for the Natural Gas Electrolyte Heater (5.44 MMBtu/hr)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	--	0.010 lb/MMBtu	Manufacturer Specifications, Assume PM=PM ₁₀ =PM _{2.5}
PM ₁₀	--	0.010 lb/MMBtu	
PM _{2.5}	--	0.010 lb/MMBtu	
CO	--	0.138 lb/MMBtu	
NO _x	--	0.12 lb/MMBtu	
VOC	--	0.037 lb/MMBtu	
CPM	5.70 lb/MMscf	0.0056 lb/MMBtu	AP-42 Table 1.4-2 for Natural Gas Combustion (07/98)
SO ₂	0.60 lb/MMscf	0.00059 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 Combustion
CH ₄	1.00E-03 kg/MMBtu	0.0022 lb/MMBtu	
N ₂ O	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.28 Emission Factors for General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	3.30 lb/1,000 gal	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/gal
CPM	1.30 lb/1,000 gal	0.0095 lb/MMBtu	
PM ₁₀	2.30 lb/1,000 gal	0.017 lb/MMBtu	
PM _{2.5}	1.54 lb/1,000 gal	0.011 lb/MMBtu	
CO	5 lb/1,000 gal	0.036 lb/MMBtu	
NO _x	20 lb/1,000 gal	0.15 lb/MMBtu	
SO ₂	0.21 lb/1,000 gal	0.0016 lb/MMBtu	
VOC	0.20 lb/1,000 gal	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 ₂ O	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/gal
Total HAPs	varies	5.18E-04 lb/MMBtu	

Table E.29 Emission Factors for General Uncontrolled Propane Combustion in Industrial Boilers

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.70 lb/1,000 gal	0.0077 lb/MMBtu	AP-42 Table 1.5-1 (07/08) for Industrial Propane Boilers, 91.5 MMBtu/10 ³ gal, Propane Sulfur Content of 10 gr/100 scf, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.50 lb/1,000 gal	0.0055 lb/MMBtu	
PM ₁₀	0.70 lb/1,000 gal	0.0077 lb/MMBtu	
PM _{2.5}	0.70 lb/1,000 gal	0.0077 lb/MMBtu	
CO	7.50 lb/1,000 gal	0.082 lb/MMBtu	
NO _x	13.00 lb/1,000 gal	0.14 lb/MMBtu	
SO ₂	1.00 lb/1,000 gal	0.011 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 Propane Heating value of 91.5 MMBtu/10 ³ gal, 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 ₂ O	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 gal, a Natural Gas Heating Value of 1,020 Btu/scf
Total HAPs	1.89 lb/MMscf	1.85E-03 lb/MMBtu	

Table E.30 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/year	Description	
Diesel Emergency ICE							
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Diesel	1,214	Equal to the maximum capacity of the Mammoth Seepage Pond Diesel Emergency Generator.	607,000	Equal to the maximum hourly capacity of the Mammoth Seepage Pond Diesel Emergency Generator at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.6
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Diesel	59	Equal to the maximum capacity of the Diesel Emergency Generator IA04-D.	29,500	Equal to the maximum hourly capacity of the Diesel Emergency Generator IA04-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.1
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Diesel	762	Equal to the maximum capacity of the Diesel Emergency Generator IA24-D.	381,000	Equal to the maximum hourly capacity of the Diesel Emergency Generator IA24-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.7
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Diesel	90	Equal to the maximum capacity of the Diesel Emergency Generator IA25-D.	45,000	Equal to the maximum hourly capacity of the Diesel Emergency Generator IA25-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.8
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Diesel	900	Equal to the maximum capacity of the Diesel Emergency Generator IA28-D.	450,000	Equal to the maximum hourly capacity of the Diesel Emergency Generator IA28-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.9

Table E.30 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/year	Description	
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Diesel	161	Equal to the maximum capacity of the Diesel Emergency Generator IA36-D.	80,500	Equal to the maximum hourly capacity of the Diesel Emergency Generator IA36-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.4
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Diesel	75	Equal to the maximum capacity of the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03.	37,500	Equal to the maximum hourly capacity of the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.10
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Diesel	100	Equal to the maximum capacity of the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04.	50,000	Equal to the maximum hourly capacity of the Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.11
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Diesel	480	Equal to the maximum capacity of the Copper Cleaner Flotation Diesel Emergency Generator IA44-D.	240,000	Equal to the maximum hourly capacity of the Copper Cleaner Flotation Diesel Emergency Generator IA44-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.12
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Diesel	86	Equal to the maximum capacity of the CLP Diesel Emergency Generator IA47-D.	42,900	Equal to the maximum hourly capacity of the CLP Diesel Emergency Generator IA47-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.13

Table E.30 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/year	Description	
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Diesel	398	Equal to the maximum capacity of the Mulholland Seepage Pond Diesel Emergency Generator IA48-D.	199,000	Equal to the maximum hourly capacity of the Mulholland Seepage Pond Diesel Emergency Generator IA48-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.14
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Diesel	34	Equal to the maximum capacity of the Security Gate Diesel Emergency Generator IA49-D.	16,750	Equal to the maximum hourly capacity of the Security Gate Diesel Emergency Generator IA49-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.2
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Diesel	480	Equal to the maximum capacity of the Command Center Diesel Emergency Generator IA54-D.	240,000	Equal to the maximum hourly capacity of the Command Center Diesel Emergency Generator IA54-D at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.15
Propane Emergency ICE							
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Propane	13	Equal to the maximum capacity of the Propane Emergency Generator IA16-P.	6,500	Equal to the maximum hourly capacity of the Propane Emergency Generator IA16-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.1
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Propane	60	Equal to the maximum capacity of the Propane Emergency Generator IA19-P.	30,000	Equal to the maximum hourly capacity of the Propane Emergency Generator IA19-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.2

Table E.30 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/year	Description	
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Propane	80	Equal to the maximum capacity of the Propane Emergency Generator IA21-P.	40,000	Equal to the maximum hourly capacity of the Propane Emergency Generator IA21-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.3
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Propane	31	Equal to the maximum capacity of the Propane Emergency Generator IA31-P.	15,260	Equal to the maximum hourly capacity of the Propane Emergency Generator IA31-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.4
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Propane	32	Equal to the maximum capacity of the Propane Emergency Generator IA32-P.	16,000	Equal to the maximum hourly capacity of the Propane Emergency Generator IA32-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.5
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Propane	113	Equal to the maximum capacity of the Propane Emergency Generator IA37-P.	56,591	Equal to the maximum hourly capacity of the Propane Emergency Generator IA37-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.6
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Propane	113	Equal to the maximum capacity of the Propane Emergency Generator IA38-P.	56,591	Equal to the maximum hourly capacity of the Propane Emergency Generator IA38-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.7

Table E.30 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/year	Description	
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Propane	103	Equal to the maximum capacity of the Sycamore Communication Tower Propane Emergency Generator IA55-P.	51,500	Equal to the maximum hourly capacity of the Sycamore Communication Tower Propane Emergency Generator IA55-P at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.8
Natural Gas Emergency ICE							
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Natural Gas	17	Equal to the maximum capacity of the Natural Gas Emergency Generator IA13-NG.	8,500	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA13-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.1
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Natural Gas	199	Equal to the maximum capacity of the Natural Gas Emergency Generator IA22-NG.	99,500	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA22-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.2
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Natural Gas	192	Equal to the maximum capacity of the Natural Gas Emergency Generator IA23-NG.	96,000	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA23-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.3
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Natural Gas	40	Equal to the maximum capacity of the Natural Gas Emergency Generator IA30-NG.	20,000	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA30-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.4

Table E.30 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/year	Description	
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Natural Gas	32	Equal to the maximum capacity of the Natural Gas Emergency Generator IA33-NG.	15,915	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA33-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.5
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Natural Gas	32	Equal to the maximum capacity of the Natural Gas Emergency Generator IA34-NG.	16,000	Equal to the maximum hourly capacity of the Natural Gas Emergency Generator IA34-NG at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.22.2.6
Diesel Non-Emergency ICE							
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Diesel	128	Equal to the maximum capacity of the Diesel Non-Emergency Generator IA14-DN.	1,121,280	Equal to the maximum hourly capacity of the Diesel Non-Emergency Generator IA14-DN at 8,760 hr/yr (continuous operation).	See Section E.23.2.2
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Diesel	130	Equal to the maximum capacity of the Diesel Non-Emergency Generator IA15-DN.	1,138,800	Equal to the maximum hourly capacity of the Diesel Non-Emergency Generator IA15-DN at 8,760 hr/yr (continuous operation).	See Section E.23.2.3
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Diesel	28	Equal to the maximum capacity of the Copper Creek Flood Basin Diesel Non-Emergency Pump Engine.	247,032	Equal to the maximum hourly capacity of the Copper Creek Flood Basin Diesel Non-Emergency Pump Engine at 8,760 hr/yr (continuous operation).	See Section E.23.2.4
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Diesel	135	Equal to the maximum capacity of the Lime Porta Batch Diesel Non-Emergency Engine.	1,182,600	Equal to the maximum hourly capacity of the Lime Porta Batch Diesel Non-Emergency Engine at 8,760 hr/yr (continuous operation).	See Section E.23.2.1

Table E.30 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/year	Description	
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Diesel	577	Equal to the maximum capacity of the Mill Compressor Diesel Non-Emergency Engine IA53-DN.	5,054,520	Equal to the maximum hourly capacity of the Mill Compressor Diesel Non-Emergency Engine IA53-DN at 8,760 hr/yr (continuous operation).	See Section E.23.2.5
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Diesel	300	Equal to the maximum capacity of the Kimberly Diesel Non-Emergency Pump Engine.	2,628,000	Equal to the maximum hourly capacity of the Kimberly Diesel Non-Emergency Pump Engine at 8,760 hr/yr (continuous operation).	See Section E.23.2.6
Propane Non-Emergency ICE							
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Propane	27	Equal to the maximum capacity of the Propane Non-Emergency Generator IA10-PN.	236,520	Equal to the maximum hourly capacity of the Propane Non-Emergency Generator IA10-PN at 8,760 hr/yr (continuous operation).	See Section E.24.2.1
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Propane	20	Equal to the maximum capacity of the Propane Non-Emergency Generator IA18-PN.	175,200	Equal to the maximum hourly capacity of the Propane Non-Emergency Generator IA18-PN at 8,760 hr/yr (continuous operation).	See Section E.24.2.2
AOS1: Two Concentrator Operations							
<i>Second Concentrator Emergency ICE (AOS1)</i>							
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Diesel	609	Equal to the maximum capacity of the Second Concentrator Diesel Emergency Generator 1.	304,500	Equal to the maximum hourly capacity of the Second Concentrator Diesel Emergency Generator 1 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.5

Table E.30 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/year	Description	
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Diesel	762	Equal to the maximum capacity of the Second Concentrator Diesel Emergency Generator 2.	381,000	Equal to the maximum hourly capacity of the Second Concentrator Diesel Emergency Generator 2 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.20.2.3
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Propane	85	Equal to the maximum capacity of the Second Concentrator Propane Emergency Generator 1.	42,350	Equal to the maximum hourly capacity of the Second Concentrator Propane Emergency Generator 1 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.9
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Propane	85	Equal to the maximum capacity of the Second Concentrator Propane Emergency Generator 2.	42,350	Equal to the maximum hourly capacity of the Second Concentrator Propane Emergency Generator 2 at 500 hr/yr. EPA guidance states 500 hr/yr can be used for emergency engines.	See Section E.21.2.9

Table E.31 Emission Factors for Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
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 Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.32 Emission Factors for 2008+ Diesel Emergency Engines ($19 \leq \text{kW} < 37$)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.30 g/kW-hr	0.00049 lb/hp-hr	Emission Standards from Table 2 of 40 CFR 60 Subpart IIII for Engines Rated $19 \leq \text{kW} < 37$, Assume $\text{PM}=\text{PM}_{10}=\text{PM}_{2.5}$
CPM	11.05% of total PM	0.000054 lb/hp-hr	
PM_{10}	0.30 g/kW-hr	0.00049 lb/hp-hr	
$\text{PM}_{2.5}$	0.30 g/kW-hr	0.00049 lb/hp-hr	
CO	5.50 g/kW-hr	0.0090 lb/hp-hr	
NO_x	7.50 g/kW-hr	0.011 lb/hp-hr	
VOC		0.0013 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	$3.00\text{E-}03$ kg/MMBtu	0.000046 lb/hp-hr	
N_2O	$6.00\text{E-}04$ kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	$3.87\text{E-}03$ lb/MMBtu	$2.71\text{E-}05$ lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.33 Emission Factors for Tier 2 Diesel Emergency Engines (kW > 560)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.20 g/kW-hr	0.00033 lb/hp-hr	Tier 2 Emission Standards from 40 CFR 1039 Appendix I Table 2 for Engines Rated kW > 560, 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	6.40 g/kW-hr	0.0099 lb/hp-hr	
VOC		0.00066 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 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr

Table E.34 Emission Factors for Tier 3 Diesel Emergency Engines ($75 \leq \text{kW} < 130$)

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 $75 \leq \text{kW} < 130$, Assume $\text{PM}=\text{PM}_{10}=\text{PM}_{2.5}$
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	0.0061 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 Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.35 Emission Factors for Tier 3 Diesel Emergency Engines ($450 \leq \text{kW} \leq 560$)

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 $450 \leq \text{kW} < 560$, Assume $\text{PM}=\text{PM}_{10}=\text{PM}_{2.5}$
CPM	11.05% of total PM	0.000036 lb/hp-hr	
PM_{10}	0.20 g/kW-hr	0.00033 lb/hp-hr	
$\text{PM}_{2.5}$	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 Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
CH_4	$3.00\text{E-}03$ kg/MMBtu	0.000046 lb/hp-hr	
N_2O	$6.00\text{E-}04$ kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	$1.57\text{E-}03$ lb/MMBtu	$1.10\text{E-}05$ lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr

Table E.36 Emission Factors for Mammoth Seepage Pond Diesel Emergency Generator (1,214 hp engine)

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 JCPXL18.1NYS, 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	0.80 g/kW-hr	0.0013 lb/hp-hr	
NO _x	5.65 g/kW-hr	0.0093 lb/hp-hr	
VOC	0.12 g/kW-hr	0.00020 lb/hp-hr	
CO ₂	682.70 g/kW-hr	1.12 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr

Table E.37 Emission Factors for Diesel Emergency Generator IA24-D (762 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.09 g/kW-hr	0.00015 lb/hp-hr	Certification Values for EPA Engine Family CCPXL15.2NZS, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000016 lb/hp-hr	
PM ₁₀	0.09 g/kW-hr	0.00015 lb/hp-hr	
PM _{2.5}	0.09 g/kW-hr	0.00015 lb/hp-hr	
CO	1.60 g/kW-hr	0.0026 lb/hp-hr	
NO _x	5.37 g/kW-hr	0.0088 lb/hp-hr	
VOC	0.09 g/kW-hr	0.00015 lb/hp-hr	
CO ₂	671.69 g/kW-hr	1.10 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	1.57E-03 lb/MMBtu	1.10E-05 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96) and 7,000 Btu/hp-hr

Table E.38 Emission Factors for Diesel Emergency Generator IA25-D (90 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.22 g/kW-hr	0.00036 lb/hp-hr	Certification Values for EPA Engine Family DPKXL04.4NH1, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000040 lb/hp-hr	
PM ₁₀	0.22 g/kW-hr	0.00036 lb/hp-hr	
PM _{2.5}	0.22 g/kW-hr	0.00036 lb/hp-hr	
CO	1.80 g/kW-hr	0.0030 lb/hp-hr	
NO _x	4.33 g/kW-hr	0.0071 lb/hp-hr	
VOC	0.23 g/kW-hr	0.00038 lb/hp-hr	
CO ₂	827.36 g/kW-hr	1.36 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.39 Emission Factors for Diesel Emergency Generator IA28-D (900 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.07 g/kW-hr	0.00015 lb/hp-hr	Manufacturer's Information, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000017 lb/hp-hr	
PM ₁₀	0.07 g/kW-hr	0.00015 lb/hp-hr	
PM _{2.5}	0.07 g/kW-hr	0.00015 lb/hp-hr	
CO	0.87 g/kW-hr	0.0019 lb/hp-hr	
NO _x	6.21 g/kW-hr	0.014 lb/hp-hr	
VOC	0.02 g/kW-hr	0.000044 lb/hp-hr	
SO ₂	--	0.000010 lb/hp-hr	Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, a BSFC of 0.332 lb/hp-hr, and 19,300 Btu/lb diesel
CO ₂	73.96 g/kW-hr	1.04 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 Combustion, a BSFC of 0.332 lb/hp-hr, and 19,300 Btu/lb diesel
CH ₄	3.00E-03 kg/MMBtu	0.000042 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000085 lb/hp-hr	
Total HAPs	1.57E-03 lb/MMBtu	1.01E-05 lb/hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96), a BSFC of 0.332 lb/hp-hr, and 19,300 Btu/lb diesel

Table E.40 Emission Factors for Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.27 g/kW-hr	0.00044 lb/hp-hr	Certification Values for EPA Engine Family CJDXL04.5130, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000049 lb/hp-hr	
PM ₁₀	0.27 g/kW-hr	0.00044 lb/hp-hr	
PM _{2.5}	0.27 g/kW-hr	0.00044 lb/hp-hr	
CO	1.20 g/kW-hr	0.0020 lb/hp-hr	
NO _x	4.21 g/kW-hr	0.0069 lb/hp-hr	
VOC	0.39 g/kW-hr	0.00064 lb/hp-hr	
CO ₂	872.37 g/kW-hr	1.43 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.41 Emission Factors for Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.287 g/kW-hr	0.00047 lb/hp-hr	Certification Values for EPA Engine Family 4PKXL04.4RG1, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000052 lb/hp-hr	
PM ₁₀	0.287 g/kW-hr	0.00047 lb/hp-hr	
PM _{2.5}	0.287 g/kW-hr	0.00047 lb/hp-hr	
CO	0.753 g/kW-hr	0.0012 lb/hp-hr	
NO _x	6.58 g/kW-hr	0.010 lb/hp-hr	
VOC		0.00077 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 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.42 Emission Factors for Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.15 g/kW-hr	0.00025 lb/hp-hr	Certification Values for EPA Engine Family LCPXL08.8NZS, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000027 lb/hp-hr	
PM ₁₀	0.15 g/kW-hr	0.00025 lb/hp-hr	
PM _{2.5}	0.15 g/kW-hr	0.00025 lb/hp-hr	
CO	3.30 g/kW-hr	0.0054 lb/hp-hr	
NO _x	3.42 g/kW-hr	0.0056 lb/hp-hr	
VOC	0.27 g/kW-hr	0.00044 lb/hp-hr	
CO ₂	726.69 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.43 Emission Factors for CLP Diesel Emergency Generator IA47-D (85.8 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.28 g/kW-hr	0.00046 lb/hp-hr	Certification Values for EPA Engine Family NPKXL04.4NL1, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000051 lb/hp-hr	
PM ₁₀	0.28 g/kW-hr	0.00046 lb/hp-hr	
PM _{2.5}	0.28 g/kW-hr	0.00046 lb/hp-hr	
CO	1.00 g/kW-hr	0.0016 lb/hp-hr	
NO _x	4.06 g/kW-hr	0.0067 lb/hp-hr	
VOC	0.21 g/kW-hr	0.00035 lb/hp-hr	
CO ₂	820.43 g/kW-hr	1.35 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.44 Emission Factors for Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.16 g/kW-hr	0.00026 lb/hp-hr	Certification Values for EPA Engine Family MCPXL12.5NYS, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000029 lb/hp-hr	
PM ₁₀	0.16 g/kW-hr	0.00026 lb/hp-hr	
PM _{2.5}	0.16 g/kW-hr	0.00026 lb/hp-hr	
CO	2.70 g/kW-hr	0.0044 lb/hp-hr	
NO _x	3.60 g/kW-hr	0.0059 lb/hp-hr	
VOC	0.20 g/kW-hr	0.00033 lb/hp-hr	
CO ₂	724.40 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

**Table E.45 Emission Factors for Command Center Diesel Emergency Generator
IA54-D (480 hp engine)**

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.15 g/kW-hr	0.00025 lb/hp-hr	Certification Values for EPA Engine Family PCPXL08.8NZS, Assume PM=PM ₁₀ =PM _{2.5}
CPM	11.05% of total PM	0.000027 lb/hp-hr	
PM ₁₀	0.15 g/kW-hr	0.00025 lb/hp-hr	
PM _{2.5}	0.15 g/kW-hr	0.00025 lb/hp-hr	
CO	3.30 g/kW-hr	0.0054 lb/hp-hr	
NO _x	3.42 g/kW-hr	0.0056 lb/hp-hr	
VOC	0.27 g/kW-hr	0.00044 lb/hp-hr	
CO ₂	729.49 g/kW-hr	1.20 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.46 Emission Factors for Propane Emergency Generator IA16-P (13 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00019 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 51.6 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.00010 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00019 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00019 lb/hp-hr	
CO	610 g/kW-hr	1.00 lb/hp-hr	Phase 3 Class II Emission Standards from Table 1 of 40 CFR 1054.105
NO _x	8.0 g/kW-hr	0.012 lb/hp-hr	
VOC		0.0014 lb/hp-hr	
SO ₂	--	0.00011 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 51.6 scf/hr
CO ₂	62.87 kg/MMBtu	1.39 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 51.6 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000066 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000013 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.25E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 51.6 scf/hr

Table E.47 Emission Factors for Propane Emergency Generator IA19-P (60 hp engine)

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, 2,520 Btu/scf, Fuel Usage = 240 scf/hr, Assume PM=PM ₁₀ =PM _{2.5} and VOC = VOC-HAP
CPM	0.010 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	3.72 lb/MMBtu	0.04 lb/hp-hr	
NO _x	2.27 lb/MMBtu	0.023 lb/hp-hr	
VOC	0.032 lb/MMBtu	0.0003 lb/hp-hr	
SO ₂	--	0.00011 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 240 scf/hr
CO ₂	62.87 kg/MMBtu	1.40 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 240 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000067 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000013 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.27E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 240 scf/hr

Table E.48 Emission Factors for Propane Emergency Generator IA21-P (80 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00018 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 293.2 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000092 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00018 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00018 lb/hp-hr	
CO	150.2 g/kW-hr	0.25 lb/hp-hr	Certification Values for EPA Engine Family DGNXB05.42NL
NO _x	4.63 g/kW-hr	0.0076 lb/hp-hr	
VOC	1.67 g/kW-hr	0.0027 lb/hp-hr	
SO ₂	--	0.00010 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 293.2 scf/hr
CO ₂	62.87 kg/MMBtu	1.28 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 293.2 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000061 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000012 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.00E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 293.2 scf/hr

Table E.49 Emission Factors for Propane Emergency Generator IA31-P (30.52 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00021 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 130 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.00011 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00021 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00021 lb/hp-hr	
CO	77.6 g/kW-hr	0.13 lb/hp-hr	Certification Values for EPA Engine Family FGNXB.9992SL
NO _x	7.82 g/kW-hr	0.013 lb/hp-hr	
VOC	1.07 g/kW-hr	0.0018 lb/hp-hr	
SO ₂	--	0.00012 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 130 scf/hr
CO ₂	62.87 kg/MMBtu	1.49 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 130 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000071 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.48E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 130 scf/hr

Table E.50 Emission Factors for Propane Emergency Generator IA32-P (32 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00014 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 94 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000073 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00014 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00014 lb/hp-hr	
CO	29.8 g/kW-hr	0.049 lb/hp-hr	Certification Values for EPA Engine Family BGNXB.9992ST
NO _x	6.8 g/kW-hr	0.011 lb/hp-hr	
VOC	1.13 g/kW-hr	0.0019 lb/hp-hr	
SO ₂	--	0.000084 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 94 scf/hr
CO ₂	62.87 kg/MMBtu	1.03 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 94 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000049 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000010 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	2.40E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 94 scf/hr

Table E.51 Emission Factors for Propane Emergency Generator IA37-P (113.18 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00012 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 288 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000064 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00012 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00012 lb/hp-hr	
CO	39.68 g/kW-hr	0.065 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	--	0.000073 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 288 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000042 lb/hp-hr	40 CFR 98 Table C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
N ₂ O	6.00E-04 kg/MMBtu	0.000008 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	2.08E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr

Table E.52 Emission Factors for Propane Emergency Generator IA38-P (113.18 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00012 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 288 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000064 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00012 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00012 lb/hp-hr	
CO	39.68 g/kW-hr	0.065 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	--	0.000073 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 288 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000042 lb/hp-hr	40 CFR 98 Table C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000085 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	2.08E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr

**Table E.53 Emission Factors for Sycamore Communication Tower Propane
Emergency Generator IA55-P (103 hp engine)**

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00016 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 337 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000082 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00016 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00016 lb/hp-hr	
CO	30.40 g/kW-hr	0.050 lb/hp-hr	Certification Values for EPA Engine Family NKHXB06.2NNL
NO _x	6.68 g/kW-hr	0.011 lb/hp-hr	
VOC	1.63 g/kW-hr	0.0027 lb/hp-hr	
CO ₂	891.00 g/kW-hr	1.46 lb/hp-hr	
CH ₄	0.166 g/kW-hr	0.00027 lb/hp-hr	
SO ₂	--	0.000093 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 337 scf/hr
N ₂ O	6.00E-04 kg/MMBtu	0.000011 lb/hp-hr	40 CFR 98 Table C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 337 scf/hr
Total HAPs	3.25E-02 lb/MMBtu	2.68E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 337 scf/hr

Table E.54 Emission Factors for Second Concentrator Propane Emergency Generators

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	0.010 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	120.40 g/kW-hr	0.20 lb/hp-hr	Certification Values for EPA Engine Family PCEXB05.9ARC
NO _x	8.20 g/kW-hr	0.013 lb/hp-hr	
VOC	1.80 g/kW-hr	0.0030 lb/hp-hr	
SO ₂	--	0.00012 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 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 ₂ O	6.00E-04 kg/MMBtu	0.000014 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.41E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, and 10,500 Btu/hp-hr

Table E.55 Emission Factors for Natural Gas Emergency Generator IA13-NG (17 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00026 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, Fuel Usage = 220 scf/hr, Assume PM=PM ₁₀ =PM _{2.5} and VOC = VOC-HAP
CPM	0.010 lb/MMBtu	0.00013 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00026 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00026 lb/hp-hr	
CO	3.72 lb/MMBtu	0.049 lb/hp-hr	
NO _x	2.27 lb/MMBtu	0.030 lb/hp-hr	
VOC	0.032 lb/MMBtu	0.00043 lb/hp-hr	
SO ₂	--	0.0000074 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 1,020 Btu/scf, and Fuel Usage = 220 scf/hr
CO ₂	53.06 kg/MMBtu	1.54 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, and Fuel Usage = 220 scf/hr
CH ₄	1.00E-03 kg/MMBtu	0.000029 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000029 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	4.28E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 220 scf/hr

Table E.56 Emission Factors for Natural Gas Emergency Generator IA22-NG (199 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00014 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, Fuel Usage = 1,400 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000071 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00014 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00014 lb/hp-hr	
CO	4.0 g/hp-hr	0.0088 lb/hp-hr	Emission Standards from Table 1 of 40 CFR 60 Subpart JJJJ for Emergency Engines ≥ 130 hp
NO _x	2.0 g/hp-hr	0.0044 lb/hp-hr	
VOC	1.0 g/hp-hr	0.0022 lb/hp-hr	
SO ₂	--	0.0000040 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr
CO ₂	53.06 kg/MMBtu	0.84 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr
CH ₄	1.00E-03 kg/MMBtu	0.000016 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000016 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	2.33E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr

Table E.57 Emission Factors for Natural Gas Emergency Generator IA23-NG (192 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00018 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, Fuel Usage = 1,786 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000094 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00018 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00018 lb/hp-hr	
CO	1.40 g/kW-hr	0.0023 lb/hp-hr	Certification Values for EPA Engine Family BGNXB06.82C1
NO _x	0.10 g/kW-hr	0.00016 lb/hp-hr	
VOC	0.54 g/kW-hr	0.00089 lb/hp-hr	
SO ₂	--	0.0000053 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 1,020 Btu/scf, and Fuel Usage = 1,786 scf/hr
CO ₂	53.06 kg/MMBtu	1.11 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, and Fuel Usage = 1,786 scf/hr
CH ₄	1.00E-03 kg/MMBtu	0.000021 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000021 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.08E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 1,786 scf/hr

Table E.58 Emission Factors for Natural Gas Emergency Generator IA30-NG (40 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00013 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, Fuel Usage = 259.6 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.000066 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00013 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00013 lb/hp-hr	
CO	24.37 g/hp-hr	0.054 lb/hp-hr	Manufacturer's Information
NO _x	5.70 g/hp-hr	0.013 lb/hp-hr	
VOC	0.14 g/hp-hr	0.00031 lb/hp-hr	
SO ₂	--	0.0000037 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 1,020 Btu/scf, and Fuel Usage = 259.6 scf/hr
CO ₂	53.06 kg/MMBtu	0.77 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, and Fuel Usage = 259.6 scf/hr
CH ₄	1.00E-03 kg/MMBtu	0.000015 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000015 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	2.15E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 259.6 scf/hr

**Table E.59 Emission Factors for Natural Gas Emergency Generator IA33-NG
(31.83 hp engine)**

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00021 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, 23.8 scf/lb, Fuel Usage = 14.27 lb/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.00011 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00021 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00021 lb/hp-hr	
CO	101.28 g/hp-hr	0.22 lb/hp-hr	Manufacturer's Information
NO _x	2.15 g/hp-hr	0.0047 lb/hp-hr	
VOC	2.34 g/hp-hr	0.0052 lb/hp-hr	
SO ₂	--	0.0000061 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 23.8 scf/lb, and Fuel Usage = 14.27 lb/hr
CO ₂	53.06 kg/MMBtu	1.27 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, 23.8 scf/lb, and Fuel Usage = 14.27 lb/hr
CH ₄	1.00E-03 kg/MMBtu	0.000024 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000024 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.53E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, 23.8 scf/lb, and Fuel Usage = 14.27 lb/hr

Table E.60 Emission Factors for Natural Gas Emergency Generator IA34-NG (32 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00021 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, Fuel Usage = 342 scf/hr, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.010 lb/MMBtu	0.00011 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00021 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00021 lb/hp-hr	
CO	101.5 g/kW-hr	0.17 lb/hp-hr	Certification Values for EPA Engine Family GGNXB02.42NN
NO _x	5.28 g/kW-hr	0.0087 lb/hp-hr	
VOC	2.09 g/kW-hr	0.0034 lb/hp-hr	
SO ₂	--	0.0000061 lb/hp-hr	Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 gr/MMscf, 1,020 Btu/scf, and Fuel Usage = 342 scf/hr
CO ₂	53.06 kg/MMBtu	1.28 lb/hp-hr	40 CFR Part 98 Tables C-1 and C-2 for Natural Gas Combustion, 1,020 Btu/scf, and Fuel Usage = 342 scf/hr
CH ₄	1.00E-03 kg/MMBtu	0.000024 lb/hp-hr	
N ₂ O	1.00E-04 kg/MMBtu	0.0000024 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.54E-04 lb/hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 342 scf/hr

Table E.61 Emission Factors for Tier 3 Diesel Non-Emergency 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	0.03 g/kW-hr	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	0.0061 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 Part 98 Tables C-1 and C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.62 Emission Factors for Diesel Non-Emergency Generator IA14-DN (128 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.34 g/hp-hr	0.00075 lb/hp-hr	Manufacturer's Information, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.038 g/hp-hr	0.000083 lb/hp-hr	
PM ₁₀	0.34 g/hp-hr	0.00075 lb/hp-hr	
PM _{2.5}	0.34 g/hp-hr	0.00075 lb/hp-hr	
CO	1.17 g/hp-hr	0.0026 lb/hp-hr	
NO _x	5.26 g/hp-hr	0.012 lb/hp-hr	
VOC	0.47 g/hp-hr	0.0010 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 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.63 Emission Factors for Diesel Non-Emergency Generator IA15-DN (130 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.21 g/kW-hr	0.00034 lb/hp-hr	Certification Values for EPA Engine Family APKXL04.4NJ1, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.023 g/kW-hr	0.000037 lb/hp-hr	
PM ₁₀	0.21 g/kW-hr	0.00034 lb/hp-hr	
PM _{2.5}	0.21 g/kW-hr	0.00034 lb/hp-hr	
CO	1.80 g/kW-hr	0.0030 lb/hp-hr	
NO _x	3.70 g/kW-hr	0.0057 lb/hp-hr	
VOC		0.00041 lb/hp-hr	
CO ₂	765.63 g/kW-hr	1.26 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.64 Emission Factors for Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.23 g/kW-hr	0.00038 lb/hp-hr	Certification Values for EPA Engine Family CH3XL2.00N84, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.025 g/kW-hr	0.000042 lb/hp-hr	
PM ₁₀	0.23 g/kW-hr	0.00038 lb/hp-hr	
PM _{2.5}	0.23 g/kW-hr	0.00038 lb/hp-hr	
CO	1.20 g/kW-hr	0.0020 lb/hp-hr	
NO _x	4.43 g/kW-hr	0.0073 lb/hp-hr	
VOC	0.30 g/kW-hr	0.00049 lb/hp-hr	
CO ₂	926.57 g/kW-hr	1.52 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 Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

**Table E.65 Emission Factors for Mill Compressor Diesel Non-Emergency Engine
IA53-DN (577 hp 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 RCPXL12.5NTF, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.0011 g/kW-hr	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	0.22 g/kW-hr	0.00036 lb/hp-hr	
VOC	0.060 g/kW-hr	0.000099 lb/hp-hr	
CO ₂	699.00 g/kW-hr	1.15 lb/hp-hr	
CH ₄	0.12 g/kW-hr	0.00020 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 ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	40 CFR Part 98 Table C-2 for Distillate Fuel Oil No. 2 Combustion and 7,000 Btu/hp-hr
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.66 Emission Factors for Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.0030 g/kW-hr	0.0000049 lb/hp-hr	Certification Values for EPA Engine Family KJDXL06.8309, Assume PM=PM ₁₀ =PM _{2.5}
CPM	0.00033 g/kW-hr	0.00000054 lb/hp-hr	
PM ₁₀	0.0030 g/kW-hr	0.0000049 lb/hp-hr	
PM _{2.5}	0.0030 g/kW-hr	0.0000049 lb/hp-hr	
CO	0.10 g/kW-hr	0.00016 lb/hp-hr	
NO _x	0.060 g/kW-hr	0.000099 lb/hp-hr	
VOC	0.020 g/kW-hr	0.000033 lb/hp-hr	
SO ₂	0.0066 g/kW-hr	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 Combustion and 7,000 Btu/hp-hr
CH ₄	3.00E-03 kg/MMBtu	0.000046 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.0000093 lb/hp-hr	
Total HAPs	3.87E-03 lb/MMBtu	2.71E-05 lb/hp-hr	AP-42 Table 3.3-2 (10/96) and 7,000 Btu/hp-hr

Table E.67 Emission Factors for Propane Non-Emergency Generator IA10-PN (27 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00023 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 125 scf/hr, Assume PM=PM ₁₀ =PM _{2.5} and VOC = VOC-HAP
CPM	0.010 lb/MMBtu	0.00012 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00023 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00023 lb/hp-hr	
CO	3.72 lb/MMBtu	0.043 lb/hp-hr	
NO _x	2.27 lb/MMBtu	0.026 lb/hp-hr	
VOC	0.032 lb/MMBtu	0.00038 lb/hp-hr	
SO ₂	--	0.00013 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 125 scf/hr
CO ₂	62.87 kg/MMBtu	1.62 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 125 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000077 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000015 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	3.79E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 125 scf/hr

Table E.68 Emission Factors for Propane Non-Emergency Generator IA18-PN (20 hp engine)

Pollutant	Emission Factor		Reference
	As Presented in Reference	Unit Conversion	
PM (w/ CPM)	0.019 lb/MMBtu	0.00027 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, Fuel Usage = 110 scf/hr, Assume PM=PM ₁₀ =PM _{2.5} and VOC = VOC-HAP
CPM	0.010 lb/MMBtu	0.00014 lb/hp-hr	
PM ₁₀	0.019 lb/MMBtu	0.00027 lb/hp-hr	
PM _{2.5}	0.019 lb/MMBtu	0.00027 lb/hp-hr	
CO	3.72 lb/MMBtu	0.052 lb/hp-hr	
NO _x	2.27 lb/MMBtu	0.031 lb/hp-hr	
VOC	0.032 lb/MMBtu	0.00045 lb/hp-hr	
SO ₂	--	0.00016 lb/hp-hr	Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, and Fuel Usage = 110 scf/hr
CO ₂	62.87 kg/MMBtu	1.92 lb/hp-hr	40 CFR 98 Tables C-1 and C-2 for Propane, 2,520 Btu/scf, and Fuel Usage = 110 scf/hr
CH ₄	3.00E-03 kg/MMBtu	0.000092 lb/hp-hr	
N ₂ O	6.00E-04 kg/MMBtu	0.000018 lb/hp-hr	
Total HAPs	3.25E-02 lb/MMBtu	4.50E-04 lb/hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 110 scf/hr

Table E.69 Process Rate and Emission Factor Information for SX, Organic Tanks, and Raffinate Ponds

Process Number	Process/Emission Unit Description	Process Rates			Vessel	Quantity	Total Surface Area (ft²)	Percent Covered	Emission Factors (lb/hr)	
		Hourly (hr/hr)	Annual (hr/yr)	Description					VOC	Total HAPs
Concentrate Leach Plant										
047-8	Solution Extraction - Molybdenum Pressure Leaching	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Mixer Extraction Settlers	2	566.67	100%	0.087	1.91E-02
					Mixer Washer Settlers	1	283.33			
					Mixer Stripper Settlers	2	566.67			
Solution Extraction/Electrowinning Operations										
029-1	Solution Extraction - Main Systems	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Mixers	28	1,407.43	100%	1.49	3.26E-01
					Settlers	28	22,736			
029-2	Raffinate Pond	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	--	--	11,000	0%	2.04	4.46E-01
029-3	Organic Tank TK-22	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Tank	1	693	100%	0.043	9.37E-03
029-4	Organic Mix Tank TK-13	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Tank	1	755	100%	0.047	1.02E-02

Table E.70 Data for Calculation of VOC and HAP Emissions from Solution Extraction - Molybdenum Pressure Leaching

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	112.06	--
V_i	90.68	111.14	131.6	131.6	172.26	172.26	--	--
D_i (cm ² /s)	0.11	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	47.75	161.45	504.67	657.24	1,995.32	788.67	2,375.70	--
C_i^0 (g/m ³)	0.15	0.61	2.19	2.85	9.81	3.88	10.89	--
C_i^H (ppmv)	0.0034	0.0308	0.0205	0.0128	0.1192	0.0207	16.0797	--
C_i^H (g/m ³)	1.10E-05	1.16E-04	8.89E-05	5.54E-05	5.86E-04	1.02E-04	7.37E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/square meter (m ²)-s)	1.73E-06	6.20E-06	2.04E-05	2.66E-05	8.02E-05	3.17E-05	8.38E-05	2.51E-04
$F_{i,UC}$ (lb/ft ² -hr)	1.28E-06	4.57E-06	1.51E-05	1.96E-05	5.91E-05	2.34E-05	6.18E-05	1.85E-04
$F_{i,C}$ (lb/ft ² -hr)	4.25E-07	1.52E-06	5.02E-06	6.54E-06	1.97E-05	7.79E-06	2.06E-05	6.16E-05

Table E.71 Data for Calculation of VOC and HAP Emissions from Solution Extraction - Main Systems

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	112.06	--
V_i	90.68	111.14	131.6	131.6	172.26	172.26	--	--
D_i (cm ² /s)	0.11	0.10	0.09	0.09	0.08	0.08	0.08	--
C_i^0 (ppmv)	47.75	161.45	504.67	657.24	1,995.32	788.67	2,375.70	--
C_i^0 (g/m ³)	0.15	0.61	2.19	2.85	9.81	3.88	10.89	--
C_i^H (ppmv)	0.0034	0.0308	0.0205	0.0128	0.1192	0.020689719	16.0797	--
C_i^H (g/m ³)	1.10E-05	1.16E-04	8.89E-05	5.54E-05	5.86E-04	1.02E-04	7.37E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
$F_{i,UC}$ (g/m ² -s)	1.73E-06	6.20E-06	2.04E-05	2.66E-05	8.02E-05	3.17E-05	8.38E-05	2.51E-04
$F_{i,UC}$ (lb/ft ² -hr)	1.28E-06	4.57E-06	1.51E-05	1.96E-05	5.91E-05	2.34E-05	6.18E-05	1.85E-04
$F_{i,C}$ (lb/ft ² -hr)	4.25E-07	1.52E-06	5.02E-06	6.54E-06	1.97E-05	7.79E-06	2.06E-05	6.16E-05

Table E.72 Data for Calculation of VOC and HAP Emissions from the Solution Extraction - Main Systems 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	112.06	--
V _i	90.68	111.14	131.6	131.6	172.26	172.26	--	--
D _i (cm ² /s)	0.11	0.10	0.09	0.09	0.08	0.08	0.08	--
C _i ⁰ (ppmv)	47.75	161.45	504.67	657.24	1,995.32	788.67	2,375.70	--
C _i ⁰ (g/m ³)	0.15	0.61	2.19	2.85	9.81	3.88	10.89	--
C _i ^H (ppmv)	0.0021	0.0030	0.0004	0.0007	0.0114	0.0021	3.7850	--
C _i ^H (g/m ³)	6.71E-06	1.12E-05	1.57E-06	2.96E-06	5.60E-05	1.04E-05	1.73E-02	--
H (m)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	--
F _{i,UC} (g/m ² -s)	1.73E-06	6.20E-06	2.04E-05	2.66E-05	8.02E-05	3.17E-05	8.42E-05	2.51E-04
F _{i,UC} (lb/ft ² -hr) ^a	1.28E-06	4.57E-06	1.51E-05	1.96E-05	5.92E-05	2.34E-05	6.21E-05	1.85E-04

^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.73 Process Rate and Emission Factor Information for Electrowinning

Process Number	Process/Emission Unit Description	Process Rates			Quantity of Cells	Individual Surface Area (ft²)	Total Surface Area (ft²)	Emission Factors (lb/ft²-hr)				
		Hourly (hr/hr)	Annual (hr/yr)	Description				PM	PM ₁₀	PM _{2.5}	H ₂ SO ₄	Cobalt Compounds
Solution Extraction/Electrowinning Operations												
011-1	Electrowinning - Main System	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	56 ^a	46.06	2,579.50	0.83	0.83	0.83	0.83	1.24E-04
					52 ^a	51.65	2,685.58					

^a The FMBI facility contains 108 electrowinning cells. 56 of the cells are associated with the old tankhouse and are all currently inactive. The remaining 52 cells are associated with the new tankhouse and 44 of the cells are currently active. Emissions are calculated assuming all 108 cells are active as a worst-case emission estimate and to avoid operating limitations.

Table E.74 Process Rate and Emission Factor Information for the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning

Process Number	Process/Emission Unit Description	Process Rates			EPA TANKS Program, Version 4.09B Input		Emission Factors	
		Hourly (hr/hr)	Annual (hr/yr)	Description	Orientation	Contents	VOC	Total HAPs
Concentrate Leach Plant								
047-7	Settling Tank	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Distillate Fuel Oil No. 2	0.00065	5.61E-05
Storage Tanks and Parts Cleaning								
033-3	Gasoline Storage Tank 150 (GDF1)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 10)	0.59	1.80E-02
033-2	Gasoline Storage Tank FT-3 (GDF2)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 10)	0.59	1.80E-02
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 10)	0.56	1.69E-02
033-5	Gasoline Storage Tank Mine Operations (GDF4)	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Horizontal	Gasoline (RVP 10)	0.56	1.69E-02
030-6	Parts Cleaning Equipment	1	8,760	Assume operation of 60 min/hr and 8,760 hr/yr.	Vertical	Butanol-(1)	0.20 ^a	--

^a The emission factor includes VOC emissions from the use of the cleaning tanks (i.e., breathing and working losses) as well as the assumption that 5% of the total annual solvent usage is lost (i.e., VOC emissions) from parts dipping (density = 6.7 lb/gal).

Table E.75 EPA TANKS Program Input Information for the Gasoline Storage Tanks, Settling Tank, and Parts Cleaning

Process Number	Process/Emission Unit Description	EPA TANKS Program, Version 4.09B Input						
		Dimensions	Working Volume (gal)	Net Throughput (gal/yr)	Turnovers Per Year	Maximum Liquid Height (ft)	Average Liquid Height (ft)	Shell and Roof Color/ Shade
Concentrate Leach Plant								
047-7	Settling Tank	6'H x 16'D	3,293.88	13,175.50	4.00	2.19	2.19	Gray/Medium
Storage Tanks and Parts Cleaning								
033-3	Gasoline Storage Tank 150 (GDF1)	8'D x 32'L	12,000	288,000	24.00	--	--	White/White
033-2	Gasoline Storage Tank FT-3 (GDF2)	8'D x 32'L	12,000	288,000	24.00	--	--	White/White
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	10'D x 20.5'L	12,000	288,000	24.00	--	--	White/White
033-5	Gasoline Storage Tank Mine Operations (GDF4)	10'D x 20.5'L	12,000	288,000	24.00	--	--	White/White
030-6	Parts Cleaning Equipment	5'H x 5'D	571	5,139	9.00	3.89	2	Gray/Medium

Table E.76 Process Rate and Emission Factor Information for the Bulk and Molybdenum Flotation Equipment

Process Number	Process/Emission Unit Description	Process Rates			Emission Factors (lb/ton)		
		Hourly (tph)	Annual (tpy)	Description	VOC	H ₂ S	Total HAPs
Bulk and Molybdenum Flotation Operations							
044-1	Bulk and Molybdenum Flotation Equipment	255.50	2,238,180	Quantity of concentrate processed in the bulk flotation operations (sum of the copper and molybdenum concentrate production rates).	0.0046	0.0084	4.02E-04
AOS1: Two Concentrator Operations							
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)							
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	59.10	517,716	Quantity of concentrate processed in the bulk flotation operations (sum of the copper and molybdenum concentrate production rates).	0.0046	0.0084	4.02E-04

Table E.77 Process Rate and Emission Factor Information for the Xanthate Mixing and Storage Tanks

Process Number	Process/Emission Unit Description	Process Rates			Molecular Weight (lb/lb-mol)	Xanthate Decomposition Rate (% per day)	Xanthate Holding Time (days)	Emission Factors (lb/ton)		
		Hourly (tph)	Annual (tpy)	Description				VOC	Greatest Single HAP	Total HAPs
Storage Tanks and Parts Cleaning										
053-1	Xanthate Mixing and Storage Tanks	0.24	1,231.88	Equal to the xanthate needed for the Primary Operating Scenario based on maximum processing rates.	144.19	0.779%	3	12.34	12.34	1.23E+01
AOS1: Two Concentrator Operations										
Second Concentrator Lime and Other Regent Operations (AOS1)										
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	0.04	213.11	Equal to the additional xanthate/test reagent needed for the Second Concentrator based on maximum processing rates.	144.19	0.779%	3	12.34	12.34	1.23E+01

Table E.78 HAP Concentration of the Process Material

Process Material	HAP Concentration (ppm) ^a											
	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Total
Overburden/Low Grade Ore	6.60	14.75	1.20	0.47	35.32	16.34	27.87	262.49	0.18	23.91	2.22	391.35
Mill Ore	30.06	44.50	1.05	0.77	30.87	59.50	19.00	283.25	0.44	17.64	2.78	489.86
Leach Ore	--	1.20	2.76	--	4.80	8.60	12.80	182.60	0.18	7.00	--	219.94
Copper Concentrate	2,050.00	3,403.33	10.00	37.50	21.00	131.67	840.83	65.00	33.92	95.00	165.00	6,853.25
Bagdad Molybdenum Concentrate	2,050.00	2,235.92	10.00	37.50	21.00	131.67	227.84	65.00	33.92	95.00	255.00	5,162.84
Outside Source Molybdenum Concentrate	2,050.00	25,000.00	10.00	37.50	21.00	131.67	227.84	65.00	33.92	95.00	255.00	27,926.92
Molybdenum Trioxide	--	25,000.00	--	--	--	--	190.00	--	--	--	11.41	25,201.41
Tailings	6.00	7.96	2.00	2.00	50.00	59.20	11.00	286.50	0.01	40.00	2.20	466.86

Table E.78 HAP Concentration of the Process Material

Process Material	HAP Concentration (ppm) ^a											
	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Total
CLP Cooling Tower	--	--	--	--	0.004	--	0.01	0.50	--	--	--	0.51
Copper Decant	3,850.00	6,740.00	10.00	60.00	65.00	120.00	730.00	110.00	58.41	95.00	165.00	12,003.41
Combination of All Mined Material	12.69	21.77	1.37	0.50	29.83	28.15	23.17	257.77	0.26	19.73	2.08	397.33
Maximum of the Bagdad or Outside Source Molybdenum Concentrate	2,050.00	25,000.00	10.00	37.50	21.00	131.67	227.84	65.00	33.92	95.00	255.00	27,926.92
Maximum of All Material Associated with the CLP	2,050.00	25,000.00	10.00	37.50	21.00	131.67	227.84	65.00	33.92	95.00	255.00	27,926.92
Combination of All Mined Material (AOS1)	13.46	23.26	1.21	0.54	32.87	29.11	24.64	265.87	0.26	21.40	2.31	414.93

^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.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Mining Operations					
026-3	Drilling	Best Operating Practices	--	0%	--
026-2	Blasting	Best Operating Practices	--	0%	--
022-1	Haul Truck Travel Inside the Pit	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
022-2	Haul Truck Travel Outside the Pit	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
023-3	Other Vehicle Travel	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
023-1	Dozer Operation	Best Operating Practices	--	0%	--
023-2	Road Grader Operation	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
021-1	Loading Mined Material into Haul Trucks	Best Operating Practices	--	0%	--
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
045-3	Unloading Ore to Leaching Areas	Best Operating Practices	--	0%	--
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Primary Crushing and Overland Conveying Operations					
001-1	Processes Controlled by Scrubber C18	Scrubber	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-5	Processes Controlled by Dust Collector C51	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-8	Overland Conveyor 3 to Overland Conveyor 4	Best Operating Practices	--	0%	--
001-9	Overland Conveyor 4 to Radial Stacker 5	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	Best Operating Practices	--	0%	--
Milling Operations					
002-1	Processes Controlled by GL1 Dust Collector C1	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-2	Processes Controlled by GL2 Dust Collector C2	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-3	Processes Controlled by GL3 Dust Collector DC3	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-4	Processes Controlled by GL4 Dust Collector DC4	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-6	Processes Controlled by GL5 Dust Collector DC5	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
Bulk and Molybdenum Flotation Operations					
044-1	Bulk and Molybdenum Flotation Equipment	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Copper Concentrate Processing and Loading Operations					
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	3-Sided Enclosure	PM, PM ₁₀ , PM _{2.5} , HAPs	75%	South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	Best Operating Practices	--	0%	--
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	Best Operating Practices	--	0%	--
006-7	All Copper Concentrate Stockpiles to Trucks	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Molybdenum Concentrate Processing and Bagging Operations					
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
Tailings Operations					
027-3	Wind Erosion of Tailings	Using 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	0%	Control Efficiency Incorporated into the Process Rate and Emission Factor
Concentrate Leach Plant					
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	Best Operating Practices	--	0%	--
042-11	CLP Cooling Tower	Mist Eliminators	--	0%	Control Efficiency Incorporated into the Emission Factor
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Scrubber	PM, PM ₁₀ , PM _{2.5} , HAPs, VOC, H ₂ SO ₄	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	Best Operating Practices	--	0%	--
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	Best Operating Practices	--	0%	--
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Scrubber and Flare	PM, PM ₁₀ , PM _{2.5} , HAPs, VOC	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
047-11	MoO ₃ Inclined Screw Conveyor to MoO ₃ Bags	Reduced Wind Speed	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	Soda Ash Storage Bin Bin Vent	PM, PM ₁₀ , PM _{2.5}	100%	Manufacturer's Information
047-7	Settling Tank	Best Operating Practices	--	0%	--
047-8	Solution Extraction - Molybdenum Pressure Leaching	Covers (100% covered)	VOC, HAPs	67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	Best Operating Practices	--	0%	--
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	Best Operating Practices	--	0%	--
Solution Extraction/Electrowinning Operations					
029-1	Solution Extraction - Main Systems	Covers (100% covered)	VOC, HAPs	67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
011-1	Electrowinning - Main System	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	PM, PM ₁₀ , PM _{2.5} , H ₂ SO ₄ , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
029-2	Raffinate Pond	Best Operating Practices	--	0%	--
029-3	Organic Tank TK-22	Cover (100% covered)	VOC, HAPs	67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas
029-4	Organic Mix Tank TK-13	Cover (100% covered)	VOC, HAPs	67%	Control Efficiency Incorporated into the Emission Factor for the Covered Areas

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	Best Operating Practices	--	0%	--
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	Best Operating Practices	--	0%	--
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	Best Operating Practices	--	0%	--
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Best Operating Practices	--	0%	--
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Best Operating Practices	--	0%	--
Lime Storage and Handling Operations					
007-3	Transfer of Lime to Lime Storage Bin 1	Lime Storage Bin 1 Bin Vent	PM, PM ₁₀ , PM _{2.5}	100%	Manufacturer's Information
007-5	Lime Porta Batches	Best Operating Practices	--	0%	--
007-8	Lime Slaking Mill 1	Lime Slaking Scrubber 1	PM, PM ₁₀ , PM _{2.5}	0%	Control Efficiency Incorporated into Emission Factor
007-9	Lime Slaking Mill 2	Lime Slaking Scrubber 2	PM, PM ₁₀ , PM _{2.5}	0%	Control Efficiency Incorporated into Emission Factor
Ammonium Nitrate Prill Delivery and Handling Operations					
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	Best Operating Practices	--	0%	--
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	Best Operating Practices	--	0%	--
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	Best Operating Practices	--	0%	--
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	Best Operating Practices	--	0%	--
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	Best Operating Practices	--	0%	--
Portable Aggregate System					
009-9	Aggregate to Hopper (via front-end loader)	Best Operating Practices	--	0%	--
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	Best Operating Practices	--	0%	--
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	Best Operating Practices	--	0%	--
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	Best Operating Practices	--	0%	--
Supplemental Portable Aggregate System					
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	Best Operating Practices	--	0%	--
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	Best Operating Practices	--	0%	--
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	Best Operating Practices	--	0%	--
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	Best Operating Practices	--	0%	--
009-38	SPAS Stockpiles to Trucks	Best Operating Practices	--	0%	--
009-39	Wind Erosion of the SPAS Stockpiles	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Storage Tanks and Parts Cleaning					
033-3	Gasoline Storage Tank 150 (GDF1)	Best Operating Practices	--	0%	--
033-2	Gasoline Storage Tank FT-3 (GDF2)	Best Operating Practices	--	0%	--
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	Best Operating Practices	--	0%	--
033-5	Gasoline Storage Tank Mine Operations (GDF4)	Best Operating Practices	--	0%	--
030-6	Parts Cleaning Equipment	Best Operating Practices	--	0%	--
053-1	Xanthate Mixing and Storage Tanks	Best Operating Practices	--	0%	--
Diesel Emergency ICE					
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Best Operating Practices	--	0%	--
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	Best Operating Practices	--	0%	--
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	Best Operating Practices	--	0%	--
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	Best Operating Practices	--	0%	--
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Best Operating Practices	--	0%	--
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Best Operating Practices	--	0%	--
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Best Operating Practices	--	0%	--
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Best Operating Practices	--	0%	--
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Best Operating Practices	--	0%	--
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Best Operating Practices	--	0%	--
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Best Operating Practices	--	0%	--
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Best Operating Practices	--	0%	--
Propane Emergency ICE					
049-17	Propane Emergency Generator IA16-P (13 hp engine)	Best Operating Practices	--	0%	--
049-20	Propane Emergency Generator IA19-P (60 hp engine)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
049-30	Propane Emergency Generator IA21-P (80 hp engine)	Best Operating Practices	--	0%	--
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	Best Operating Practices	--	0%	--
049-39	Propane Emergency Generator IA32-P (32 hp engine)	Best Operating Practices	--	0%	--
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	Best Operating Practices	--	0%	--
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	Best Operating Practices	--	0%	--
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	Best Operating Practices	--	0%	--
Natural Gas Emergency ICE					
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	Best Operating Practices	--	0%	--
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	Best Operating Practices	--	0%	--
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	Best Operating Practices	--	0%	--
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	Best Operating Practices	--	0%	--
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	Best Operating Practices	--	0%	--
Diesel Non-Emergency ICE					
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Best Operating Practices	--	0%	--
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Best Operating Practices	--	0%	--
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Best Operating Practices	--	0%	--
049-56	Lime Porta Batch Diesel Non- Emergency Engine (135 hp engine)	Best Operating Practices	--	0%	--
049-67	Mill Compressor Diesel Non- Emergency Engine IA53-DN (577 hp engine)	Best Operating Practices	--	0%	--
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Best Operating Practices	--	0%	--
Propane Non-Emergency ICE					
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	Best Operating Practices	--	0%	--
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
Miscellaneous Fuel Burning Equipment					
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	Best Operating Practices	--	0%	--
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	Best Operating Practices	--	0%	--
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	Best Operating Practices	--	0%	--
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	Best Operating Practices	--	0%	--
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	Best Operating Practices	--	0%	--
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	Best Operating Practices	--	0%	--
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	Best Operating Practices	--	0%	--
Copper Decant Solids Handling Operations					
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	Best Operating Practices	--	0%	--
AOS1: Two Concentrator Operations					
<i>Mining Operations (AOS1)</i>					
026-3 (AOS1)	Drilling (AOS1)	Best Operating Practices	--	0%	--
026-2 (AOS1)	Blasting (AOS1)	Best Operating Practices	--	0%	--
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
023-3 (AOS1)	Other Vehicle Travel (AOS1)	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
023-1 (AOS1)	Dozer Operation (AOS1)	Best Operating Practices	--	0%	--
023-2 (AOS1)	Road Grader Operation (AOS1)	Unpaved Road Watering and/or Chemical Dust Suppression Use	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Control of Open Fugitive Dust Sources (09/88), pages 3-6 through 3-16
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Best Operating Practices	--	0%	--
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Best Operating Practices	--	0%	--
<i>Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)</i>					
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Dry Fogging Suppression System	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Manufacturer's Information (Dust Solutions Incorporated)
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Dry Fogging Suppression System	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Manufacturer's Information (Dust Solutions Incorporated)
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Dry Fogging Suppression System	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	Manufacturer's Information (Dust Solutions Incorporated)
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	Best Operating Practices	--	0%	--
<i>Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)</i>					
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	Best Operating Practices	--	0%	--
<i>Second Concentrator Milling Operations (AOS1)</i>					
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	Dust Collector	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
<i>Second Concentrator Concentrate Handling Operations (AOS1)</i>					
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	Best Operating Practices	--	0%	--
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	Best Operating Practices	--	0%	--
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	Best Operating Practices	--	0%	--
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	3-Sided Enclosure	PM, PM ₁₀ , PM _{2.5} , HAPs	75%	South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	Scrubber	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	Best Operating Practices	--	0%	--
<i>Second Concentrator Lime and Other Regent Operations (AOS1)</i>					
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	Second Concentrator Lime Silo Baghouse (AOS1)	PM, PM ₁₀ , PM _{2.5}	99%	Minimum value from AP-42 Table B.2-3 (09/90)
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	Second Concentrator Lime System Scrubber (AOS1)	PM, PM ₁₀ , PM _{2.5}	0%	Control Efficiency Incorporated into Emission Factor
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	Best Operating Practices	--	0%	--
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	Best Operating Practices	--	0%	--
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	--		N/A	--
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	NaHS System Scrubber	H ₂ S	N/A	Control Efficiency Incorporated into Emission Factor
<i>Second Concentrator Prill Handling Operations (AOS1)</i>					
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	Best Operating Practices	--	0%	--
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	Best Operating Practices	--	0%	--

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
<i>Second Concentrator Emergency ICE (AOS1)</i>					
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Best Operating Practices	--	0%	--
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Best Operating Practices	--	0%	--
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	Best Operating Practices	--	0%	--
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	Best Operating Practices	--	0%	--
AOS5: Emergency Grizzly Systems					
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	Water Spray/Wet Suppression/Inherent Moisture	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Water Spray/Wet Suppression	PM, PM ₁₀ , PM _{2.5} , HAPs	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	Best Operating Practices	--	0%	--
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Water Spray/Wet Suppression When Necessary	PM, PM ₁₀ , PM _{2.5} , HAPs	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)

Table E.79 Control Methods and Corresponding Control Efficiencies for All Emission Units

Process Number	Process/Emission Unit Description	Control Method	Pollutants Controlled	Control Efficiency	Reference/Explanation
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Best Operating Practices	--	0%	--
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Best Operating Practices	--	0%	--
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Best Operating Practices	--	0%	--

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	3,800	feet	Elevation of the FMBI facility (for calculation of ambient pressure)
--	Meteorological Information	41.25	days	Number of days with precipitation ≥ 0.01 inches (based on 2020-2023 onsite meteorological data)
		66.30	°F	Average ambient temperature (based on 2020-2023 onsite meteorological data)
		7.26	mph	Mean ambient wind speed at the FMBI facility (based on 2020-2023 onsite meteorological data)
		12.92	%	Percentage of time with mean wind speed greater than 12 mph at mean stockpile heights (based on 2020-2023 onsite meteorological data)
		16.63	m/s	Fastest mile at anemometer height of 10 m (maximum average hourly wind speed recorded by 2020-2023 onsite meteorological data, multiplied by 1.2 to convert to fastest mile)
--	Silt Content Information	4.60	%	Silt content of unpaved roads (equivalent to testing completed at a similar Freeport facility)
		4.00	%	Silt content of material being bulldozed (worst-case estimate based on testing completed on crushed ore on Overland Conveyor 4, most bulldozed material is not crushed)
		4.00	%	Silt content of the material in Coarse Ore Stockpiles 1/5 (worst-case estimate based on testing completed on crushed ore on Overland Conveyor 4)
		96	%	Silt content of the copper concentrate in the Outdoor Copper Concentrate Stockpile (equivalent to testing completed at a similar Freeport facility)
		96	%	Silt content of the copper concentrate in the Indoor Copper Concentrate Stockpile (equivalent to testing completed at a similar Freeport facility)
		6.50	%	Silt content of the material in the Stockpiles associated with the Portable Aggregate System and the Supplemental Portable Aggregate System (based on the average value from testing completed on the Coarse and Fine Aggregate Stockpiles)
		4.00	%	Silt content of the material in Coarse Ore Stockpiles 1/5 (AOS1) (worst-case estimate based on testing completed on crushed ore on Overland Conveyor 4, assumed to be similar for AOS1)
		4.00	%	Silt content of the material in Coarse Ore Stockpile 6 (AOS1) (worst-case estimate based on testing completed on crushed ore on Overland Conveyor 4, assumed to be similar for AOS1)
		96	%	Silt content of the copper concentrate in the Copper Concentrate Filter Drop Loadout Storage (AOS1) (equivalent to testing completed at a similar Freeport facility)
		4.00	%	Silt content of the material in the Temporary Oversize Stockpile (worst-case estimate based on testing completed on crushed ore on Overland Conveyor 4, assumed to be a worst-case estimate since the Temporary Oversize Stockpile will only store non-crushed ore)
--	Moisture Content Information	2.564	%	Moisture content of the mined material (site-specific)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
-- (cont'd)	Moisture Content Information (cont'd)	8.40	%	Moisture content of the molybdenum concentrate (site-specific)
		0.10	%	Moisture content of the low moisture molybdenum concentrate (site-specific)
		3.00	%	Moisture content of the Second Concentrator molybdenum concentrate post-dryer (site-specific)
		8.00	%	Moisture content of the molybdenum trioxide (site-specific worst-case)
		9.00	%	Moisture content of the copper concentrate (site-specific)
		6.50	%	Moisture content of the nonmetallic minerals processed by the Portable Aggregate System and the Supplemental Portable Aggregate System (estimated value)
		8.00	%	Moisture content of the material processed by the copper decant solids handling operations (8 - 10%, use the minimum value as a worst-case emission estimate)
		0.10	%	Moisture content of flocculant (minimum expected value)
--	Metal HAP Content of the Overburden/Low Grade Ore	6.60	ppm	Concentration of antimony
		14.75	ppm	Concentration of arsenic
		1.20	ppm	Concentration of beryllium
		0.47	ppm	Concentration of cadmium
		35.32	ppm	Concentration of chromium
		16.34	ppm	Concentration of cobalt
		27.87	ppm	Concentration of lead
		262.49	ppm	Concentration of manganese
		0.18	ppm	Concentration of mercury
		23.91	ppm	Concentration of nickel
		2.22	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 Mill Ore	30.06	ppm	Concentration of antimony
		44.50	ppm	Concentration of arsenic
		1.05	ppm	Concentration of beryllium
		0.77	ppm	Concentration of cadmium
		30.87	ppm	Concentration of chromium
		59.50	ppm	Concentration of cobalt
		19.00	ppm	Concentration of lead
		283.25	ppm	Concentration of manganese
		0.44	ppm	Concentration of mercury
		17.64	ppm	Concentration of nickel
		2.78	ppm	Concentration of selenium
--	Metal HAP Content of the Leach Ore	0	ppm	Concentration of antimony
		1.20	ppm	Concentration of arsenic
		2.76	ppm	Concentration of beryllium
		0	ppm	Concentration of cadmium
		4.80	ppm	Concentration of chromium
		8.60	ppm	Concentration of cobalt
		12.80	ppm	Concentration of lead
		182.60	ppm	Concentration of manganese

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 Leach Ore (cont'd)	0.18	ppm	Concentration of mercury
		7.00	ppm	Concentration of nickel
		0	ppm	Concentration of selenium
--	Metal HAP Content of the Copper Concentrate	2,050.00	ppm	Concentration of antimony
		3,403.33	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		37.50	ppm	Concentration of cadmium
		21.00	ppm	Concentration of chromium
		131.67	ppm	Concentration of cobalt
		840.83	ppm	Concentration of lead
		65.00	ppm	Concentration of manganese
		33.92	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		165.00	ppm	Concentration of selenium
--	Metal HAP Content of the Bagdad Molybdenum Concentrate	2,050.00	ppm	Concentration of antimony
		2,235.92	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		37.50	ppm	Concentration of cadmium
		21.00	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 Bagdad Molybdenum Concentrate (cont'd)	131.67	ppm	Concentration of cobalt
		227.84	ppm	Concentration of lead
		65.00	ppm	Concentration of manganese
		33.92	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		255.00	ppm	Concentration of selenium
--	Metal HAP Content of the Outside Source Molybdenum Concentrate	2,050.00	ppm	Concentration of antimony
		25,000	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		37.50	ppm	Concentration of cadmium
		21.00	ppm	Concentration of chromium
		131.67	ppm	Concentration of cobalt
		227.84	ppm	Concentration of lead
		65.00	ppm	Concentration of manganese
		33.92	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		255.00	ppm	Concentration of selenium
--	Metal HAP Content of the Molybdenum Trioxide	0	ppm	Concentration of antimony
		25,000	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 Molybdenum Trioxide (cont'd)	0	ppm	Concentration of beryllium
		0	ppm	Concentration of cadmium
		0	ppm	Concentration of chromium
		0	ppm	Concentration of cobalt
		190.00	ppm	Concentration of lead
		0	ppm	Concentration of manganese
		0	ppm	Concentration of mercury
		0	ppm	Concentration of nickel
		11.41	ppm	Concentration of selenium
--	Metal HAP Content of the Tailings	6.00	ppm	Concentration of antimony
		7.96	ppm	Concentration of arsenic
		2.00	ppm	Concentration of beryllium
		2.00	ppm	Concentration of cadmium
		50.00	ppm	Concentration of chromium
		59.20	ppm	Concentration of cobalt
		11.00	ppm	Concentration of lead
		286.50	ppm	Concentration of manganese
		0.005	ppm	Concentration of mercury
		40.00	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 Tailings (cont'd)	2.20	ppm	Concentration of selenium
--	Metal HAP Content of the CLP Cooling Tower	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
		0.495	ppm	Concentration of manganese
		0	ppm	Concentration of mercury
		0	ppm	Concentration of nickel
		0	ppm	Concentration of selenium
--	Metal HAP Content of the Copper Decant	3,850	ppm	Concentration of antimony
		6,740	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		60.00	ppm	Concentration of cadmium
		65.00	ppm	Concentration of chromium
		120.00	ppm	Concentration of cobalt
		730.00	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 Copper Decant (cont'd)	110.00	ppm	Concentration of manganese
		58.41	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		165.00	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of All Mined Material	12.69	ppm	Concentration of antimony
		21.77	ppm	Concentration of arsenic
		1.37	ppm	Concentration of beryllium
		0.50	ppm	Concentration of cadmium
		29.83	ppm	Concentration of chromium
		28.15	ppm	Concentration of cobalt
		23.17	ppm	Concentration of lead
		257.77	ppm	Concentration of manganese
		0.26	ppm	Concentration of mercury
		19.73	ppm	Concentration of nickel
		2.08	ppm	Concentration of selenium
--	Metal HAP Content of the Maximum of the Bagdad or Outside Source Molybdenum Concentrate	2,050.00	ppm	Concentration of antimony
		25,000	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		37.50	ppm	Concentration of cadmium

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 Maximum of the Bagdad or Outside Source Molybdenum Concentrate (cont'd)	21.00	ppm	Concentration of chromium
		131.67	ppm	Concentration of cobalt
		227.84	ppm	Concentration of lead
		65.00	ppm	Concentration of manganese
		33.92	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		255.00	ppm	Concentration of selenium
--	Metal HAP Content of the Maximum of All Material Associated with the CLP	2,050.00	ppm	Concentration of antimony
		25,000.00	ppm	Concentration of arsenic
		10.00	ppm	Concentration of beryllium
		37.50	ppm	Concentration of cadmium
		21.00	ppm	Concentration of chromium
		131.67	ppm	Concentration of cobalt
		227.84	ppm	Concentration of lead
		65.00	ppm	Concentration of manganese
		33.92	ppm	Concentration of mercury
		95.00	ppm	Concentration of nickel
		255.00	ppm	Concentration of selenium
--	Metal HAP Content of the Combination of All Mined Material (AOS1)	13.46	ppm	Concentration of antimony

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 All Mined Material (AOS1) (cont'd)	23.26	ppm	Concentration of arsenic
		1.21	ppm	Concentration of beryllium
		0.54	ppm	Concentration of cadmium
		32.87	ppm	Concentration of chromium
		29.11	ppm	Concentration of cobalt
		24.64	ppm	Concentration of lead
		265.87	ppm	Concentration of manganese
		0.26	ppm	Concentration of mercury
		21.40	ppm	Concentration of nickel
		2.31	ppm	Concentration of selenium
Mining Operations				
026-3	Drilling	90,000	holes/year	Annual quantity of holes drilled (calculated assuming an average of 150 holes/blast)
		200	holes/hour	Hourly quantity of holes drilled (assumed maximum of 200 holes/blast)
026-2	Blasting	600	blasts/year	Annual quantity of blasts
		1	blasts/hour	Hourly quantity of blasts
		55,800,000	ft²	Annual total area of all blasts (calculated based on an average area of 93,000 ft²)
		200,000	ft²	Hourly total area of all blasts (assumed maximum area of 200,000 ft²)
		1,984	tons/year	Annual quantity of diesel used in traditional ANFO (based on historic data scaled up according to the maximum ANFO usage rate)
		7.50	lb/gal	Density of diesel fuel (based on lb and gallon information)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
026-2 (cont'd)	Blasting (cont'd)	912	tons/year	Annual quantity of Mixed Fuel used in ANFO emulsions (based on historic data scaled up according to the maximum ANFO usage rate)
		2.03	tons/hour	Hourly quantity of Mixed Fuel used in ANFO emulsions (based on historic data scaled up according to the maximum ANFO usage rate)
		78.50	%	Percent of diesel fuel in the Mixed Fuel (from James Rogers at Southwest Energy)
		21.5	%	Percent of animal fat in the Mixed Fuel (from James Rogers at Southwest Energy)
		7.34	lb/gal	Density of animal fat (based on <i>A Demonstration of Fat and Grease as an Industrial Boiler Fuel</i>)
		2,700	tons/year	Annual total quantity of diesel fuel used during blasting (sum of diesel information sources)
		720,000	gallons/year	Annual total quantity of diesel fuel used during blasting (calculated based on diesel fuel information sources and density)
		1,600	gallons/hour	Hourly total quantity of diesel fuel used during blasting (based on the annual quantity and scaled using the number of holes drilled)
		31,219	tons/year	Annual quantity of ammonium nitrate prill used (based on historic data scaled up according to the maximum ANFO usage rate)
		99.8	%	Percent of Ammonium Nitrate in the ammonium nitrate prill
		14,286	tons/year	Annual quantity of ammonium nitrate solution used (based on historic data scaled up according to the maximum ANFO usage rate)
		78	%	Percent of Ammonium Nitrate in the ammonium nitrate solution
		42,300	tons/year	Annual total quantity of ammonium nitrate used during blasting (sum of ammonium nitrate information sources)
		45,000	tons/year	Annual total quantity of ANFO used (sum of AN and FO references)
		100	tons/hour	Hourly total quantity of ANFO used (based on the annual quantity and scaled using the number of holes drilled)
		94	%	Percent of Ammonium Nitrate in ANFO (calculated value)
		6	%	Percent of Fuel Oil in ANFO (calculated value)
--	Vehicle Travel on Unpaved Roads	68.72	tons	Mean vehicle weight on an annual basis (calculated value)
		85.32	tons	Mean vehicle weight on an hourly basis (calculated value)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
022-1	Haul Truck Travel Inside the Pit	2,513,372	VMT/year	Annual quantity of total miles traveled (assume 75% inside the pit)
		472.50	VMT/hour	Hourly quantity of total miles traveled (assume 75% inside the pit)
022-2	Haul Truck Travel Outside the Pit	837,791	VMT/year	Annual quantity of total miles traveled (assume 25% outside the pit)
		157.50	VMT/hour	Hourly quantity of total miles traveled (assume 25% outside the pit)
023-3	Other Vehicle Travel	613,763	VMT/year	Annual quantity of miles traveled by the shipment/delivery trucks
		84.08	VMT/hour	Hourly quantity of miles traveled by the shipment/delivery trucks
		11,058,850	VMT/year	Annual quantity of miles traveled by the small support/employee vehicles
		1,514.91	VMT/hour	Hourly quantity of miles traveled by the small support/employee vehicles
		898,114	VMT/year	Annual quantity of miles traveled by all other vehicles (water trucks, loaders, drills, low boys, compactors, excavators/trackhoes, backhoes, cable reel trucks, dump trucks)
		278.45	VMT/hour	Hourly quantity of miles traveled by all other vehicles (water trucks, loaders, drills, low boys, compactors, excavators/trackhoes, backhoes, cable reel trucks, dump trucks)
		12,570,727	total VMT/year	Annual quantity of total miles traveled (sum of all other vehicle types)
		1,877.44	total VMT/hour	Hourly quantity of total miles traveled (sum of all other vehicle types)
023-1	Dozer Operation	78,046	hours/year	Annual hours of operation
		16	hours/hour	Hourly hours of operation
023-2	Road Grader Operation	118,587	VMT/year	Annual quantity of total miles traveled
		30	VMT/hour	Hourly quantity of total miles traveled
		6	mph	Mean speed
021-1	Loading Mined Material into Haul Trucks	220,314,000	tons/year	Annual quantity of material mined (assume 180,000 tpd of sulfide ore, 82,400 tpd of oxide ore, 341,200 tpd of overburden/low grade ore, and continuous operation)
		30,515	tons/hour	Hourly quantity of material mined (assume continuous operation for the oxide ore and overburden/low grade ore and equal to the maximum capacities of the primary crushers for sulfide ore)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
021-1 (cont'd)	Loading Mined Material into Haul Trucks (cont'd)	29.82	%	Percent of all material mined that is mill ore (annual basis)
		13.65	%	Percent of all material mined that is leach ore (annual basis)
		56.53	%	Percent of all material mined that is overburden/low grade ore (annual basis)
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	65,700,000	tons/year	Annual quantity of ore processed by Primary Crushers 1 and 2 (assume equal to the maximum sulfide ore mining rate)
		12,865	tons/hour	Hourly quantity of ore processed by Primary Crushers 1 and 2 (assume equal to the combined maximum capacities)
045-3	Unloading Ore to Leaching Areas	30,076,000	tons/year	Annual quantity of ore leached (assume equal to the maximum oxide ore mining rate)
		3,433	tons/hour	Hourly quantity of ore leached (assume continuous operation)
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	124,538,000	tons/year	Annual quantity of overburden/low grade ore stored (assume equal to the maximum oxide ore mining rate)
		14,217	tons/hour	Hourly quantity of overburden/low grade ore stored (assume continuous operation)
Primary Crushing and Overland Conveying Operations				
001-1	Processes Controlled by Scrubber C18	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		11,000	dscfm	Exhaust flow rate
		0.0135	gr/dscf	PM Emission Limit
		0.0135	gr/dscf	PM ₁₀ Emission Limit
001-5	Processes Controlled by Dust Collector C51	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate
		0.0135	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
001-5 (cont'd)	Processes Controlled by Dust Collector C51 (cont'd)	0.0135	gr/dscf	PM ₁₀ Emission Limit
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	65,700,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum sulfide ore mining rate)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-8	Overland Conveyor 3 to Overland Conveyor 4	65,700,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum sulfide ore mining rate)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-9	Overland Conveyor 4 to Radial Stacker 5	65,700,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum sulfide ore mining rate)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	52,560,000	tons/year	Annual quantity of ore transferred (assume equal to 4/5 the maximum sulfide ore mining rate)
		0	tons/hour	Hourly quantity of ore transferred (worst-case emissions assume all ore is transferred to Free-Standing Stacker 6)
001-10	Radial Stacker 5 to Free-Standing Stacker 6	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to 1/5 the maximum sulfide ore mining rate)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	13,140,000	tons/year	Annual quantity of ore transferred (assume equal to 1/5 the maximum sulfide ore mining rate)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	9.22	acres	Area of Coarse Ore Stockpiles 1/5
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Milling Operations				
002-1	Processes Controlled by GL1 Dust Collector C1	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
002-1 (cont'd)	Processes Controlled by GL1 Dust Collector C1 (cont'd)	15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0124	gr/dscf	PM Emission Limit
		0.0124	gr/dscf	PM ₁₀ Emission Limit
002-2	Processes Controlled by GL2 Dust Collector C2	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0124	gr/dscf	PM Emission Limit
		0.0124	gr/dscf	PM ₁₀ Emission Limit
002-3	Processes Controlled by GL3 Dust Collector DC3	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0124	gr/dscf	PM Emission Limit
		0.0124	gr/dscf	PM ₁₀ Emission Limit
002-4	Processes Controlled by GL4 Dust Collector DC4	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0124	gr/dscf	PM Emission Limit
		0.0124	gr/dscf	PM ₁₀ Emission Limit
002-6	Processes Controlled by GL5 Dust Collector DC5	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
002-6 (cont'd)	Processes Controlled by GL5 Dust Collector DC5 (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.004	gr/dscf	PM Emission Limit
		0.004	gr/dscf	PM ₁₀ Emission Limit
Bulk and Molybdenum Flotation Operations				
044-1	Bulk and Molybdenum Flotation Equipment	2,238,180	tons/year	Annual quantity of concentrate processed in the Bulk Flotation Operations (sum of copper and molybdenum concentrate processing and the CLP)
		255.50	tons/hour	Hourly quantity of concentrate processed in the Bulk Flotation Operations (sum of copper and molybdenum concentrate processing and the CLP)
Copper Concentrate Processing and Loading Operations				
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	0.50	acres	Area of the Indoor Copper Concentrate Stockpile
		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
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	1.80	acres	Area of the Outdoor Copper Concentrate Stockpile
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
006-7	All Copper Concentrate Stockpiles to Trucks	2,102,400	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations at continuous operation)
		240	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum capacity of the copper concentrate processing operations)
Molybdenum Concentrate Processing and Bagging Operations				
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	43,800	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of the molybdenum bagging operations at continuous operation)
		5.00	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of the molybdenum bagging operations)
Tailings Operations				
027-3	Wind Erosion of Tailings	4,200	acres	Acreage of the active tailings susceptible to wind erosion (i.e., drying area)
		1	disturbances/year	Annual disturbances of the tailings material
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Concentrate Leach Plant				
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	219,000	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		25	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
042-11	CLP Cooling Tower	2,102,400	1,000 gallons/year	Annual quantity of water circulated (assume equal to the maximum capacity of the water circulation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
042-11 (cont'd)	CLP Cooling Tower (cont'd)	240	1,000 gallons/hour	Hourly quantity of water circulated (assume equal to the maximum capacity of the water circulation)
		3,510	ppm	Maximum total dissolved solids (TDS)
		0.005	%	Maximum liquid drift rate
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2.75	lb/hour	PM emission limit
		2.75	lb/hour	PM ₁₀ emission limit
		91,980	tons/year	Annual amount of concentrate processed by the Pressure Leach Vessel (maximum hourly capacity of the PLV and continuous operation)
		10.50	tons/hour	Hourly amount of concentrate processed by the Pressure Leach Vessel (maximum hourly capacity of the PLV)
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	35,040	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler at continuous operation)
		4.00	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler)
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	35,040	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler at continuous operation)
		4.00	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler)
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	35,040	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler at continuous operation)
		4.00	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of molybdenum concentrate processing in the Deoiler)
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		500	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.022	gr/dscf	PM Emission Standard

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	45,814.80	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		5.23	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	56,940	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		6.50	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		0.13	lb/hour	PM emission standard converted to lb/hour
		1.36	lb/hour	VOC Emission Limit
		13,578	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		1.55	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		900	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.022	gr/dscf	PM Emission Standard
047-11	MoO ₃ Inclined Screw Conveyor to MoO ₃ Bags	61,320	tons/year	Annual quantity of molybdenum trioxide transferred (assume equal to the maximum amount of molybdenum trioxide produced in the Concentrate Leach Plant at continuous operation)
		7.00	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum amount of molybdenum trioxide produced in the Concentrate Leach Plant)
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	6,000	tons/year	Annual quantity of soda ash transferred (assume equal to the maximum usage rate corresponding to the maximum amount of molybdenum concentrate processed in the Concentrate Leach Plant)
		25	tons/hour	Hourly quantity of soda ash transferred (assume equal to the maximum delivery rate)
047-7	Settling Tank	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
047-7 (cont'd)	Settling Tank (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		13,175.50	gallons/year	Maximum annual throughput
		6'H x 16'D	--	Dimensions
		3,293.88	gallons	Tank Capacity
		4.00	turnovers/year	Maximum annual turnovers (calculated)
		5.66	lb/year	EPA TANKS Program Output for VOC
		0.011	lb/year	EPA TANKS Program Output for Benzene
		0.018	lb/year	EPA TANKS Program Output for Ethylbenzene
		0.0023	lb/year	EPA TANKS Program Output for n-Hexane
		0.13	lb/year	EPA TANKS Program Output for Toluene
		0.33	lb/year	EPA TANKS Program Output for m-Xylene
047-8	Solution Extraction - Molybdenum Pressure Leaching	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		2	mixer extrac. settlers	Number of mixer extraction settlers operating
		283.33	ft ²	Surface area of each mixer extraction settler
		1	mixer washer settlers	Number of mixer washer settlers operating
		283.33	ft ²	Surface area of each mixer washer settler
		2	mixer strip. settlers	Number of mixer stripper settlers operating
		283.33	ft ²	Surface area of each mixer stripper settler

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
047-8 (cont'd)	Solution Extraction - Molybdenum Pressure Leaching (cont'd)	1,416.67	ft ²	Total surface area of active mixers and settlers (calculated based on number of mixers and settlers and area of each mixer/settler)
		100	%	Percent of the mixer extraction settlers that are covered
		100	%	Percent of the mixer washer settlers that are covered
		100	%	Percent of the mixer stripper settler that are covered
		100	overall %	Overall percent of the SX mixers and settlers that are covered
		Worst-Case Diluent	--	Name of the diluent used in the SX system (diluent that results in a worst-case emission estimate)
		Worst-Case Extractant	--	Name of the extractant used in the SX system (extractant that results in a worst-case emission estimate)
		5.00	%	Percentage of the SX organic solution that is extractant (5% used as a worst-case estimate)
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	600	tons/year	Annual quantity of molybdenum concentrate transferred (conservative maximum for a single year based on 1.5 ton bags being stored for multiple years before re-bagging all at once)
		37.50	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of the Molybdenum Concentrate Re-Bagger)
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	600	tons/year	Annual quantity of molybdenum concentrate transferred (conservative maximum for a single year based on 1.5 ton bags being stored for multiple years before re-bagging all at once)
		37.50	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum capacity of the Molybdenum Concentrate Re-Bagger)
Solution Extraction/Electrowinning Operations				
029-1	Solution Extraction - Main Systems	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		28	mixers	Number of mixers operating
		50.27	ft ²	Surface area of each mixer
		28	settlers	Number of settlers operating
		812	ft ²	Surface area of each settler

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
029-1 (cont'd)	Solution Extraction - Main Systems (cont'd)	24,143.43	ft ²	Total surface area of active mixers and settlers (calculated based on number of mixers and settlers and area of each mixer/settler)
		100	%	Percent of the SX mixers that are covered
		100	%	Percent of the SX settlers that are covered
		100	overall %	Overall percent of the SX mixers and settlers that are covered
		Worst-Case Diluent	--	Name of the diluent used in the SX system (diluent that results in a worst-case emission estimate)
		Worst-Case Extractant	--	Name of the extractant used in the SX system (extractant that results in a worst-case emission estimate)
		5.00	%	Percentage of the SX organic solution that is extractant (5% used as a worst-case estimate)
011-1	Electrowinning - Main System	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		56	cells	Number of 2'9"W x 16'9"L cells (old tankhouse)
		46.06	ft ²	Surface area of each 2'9"W x 16'9"L cell (old tankhouse)
		52	cells	Number of 3'1"W x 16'9"L cells (new tankhouse)
		51.65	ft ²	Surface area of each 3'1"W x 16'9"L cell (new tankhouse)
		5,265.08	total ft ²	Total surface area of active electrowinning cells (calculated based on number of cells and area of each cell)
029-2	Raffinate Pond	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		11,000	ft ²	Surface area of the pond (100 ft x 110 ft)
029-3	Organic Tank TK-22	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
029-3 (cont'd)	Organic Tank TK-22 (cont'd)	693	ft ²	Surface area of the tank
		100	overall %	Percent of the tank that is covered
029-4	Organic Mix Tank TK-13	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		755	ft ²	Surface area of the tank
		100	overall %	Percent of the tank that is covered
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	3,504	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.40	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	3,504	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.40	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	2,978.40	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.34	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	59,935.92	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		6.842	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	47,654.40	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		5.44	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
Lime Storage and Handling Operations				
007-3	Transfer of Lime to Lime Storage Bin 1	525,600	tons/year	Annual quantity of lime transferred (assume equal to the maximum capacity of the transfer at continuous operation)
		60	tons/hour	Hourly quantity of lime transferred (assume equal to the maximum capacity of the transfer, 2 unloading stations at 30 tph each)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
007-5	Lime Porta Batches	84,096	tons/year	Annual quantity of lime processed (assume equal to the maximum capacity at continuous operation)
		9.60	tons/hour	Hourly quantity of lime processed (assume equal to the maximum capacity - a maximum 48 ton batch is completed in 5 hours)
007-8	Lime Slaking Mill 1	192,720	tons/year	Annual quantity of lime processed (assume equal to the maximum process rate of Lime Slaking Mill 1 at continuous operation)
		22.00	tons/hour	Hourly quantity of lime processed (assume equal to the maximum process rate of Lime Slaking Mill 1)
007-9	Lime Slaking Mill 2	192,720	tons/year	Annual quantity of lime processed (assume equal to the maximum process rate of Lime Slaking Mill 2 at continuous operation)
		22.00	tons/hour	Hourly quantity of lime processed (assume equal to the maximum process rate of Lime Slaking Mill 2)
Ammonium Nitrate Prill Delivery and Handling Operations				
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	6,244	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to 1/5 of the maximum prill usage rate)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	6,244	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to 1/5 of the maximum prill usage rate)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	6,244	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to 1/5 of the maximum prill usage rate)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	6,244	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to 1/5 of the maximum prill usage rate)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	6,244	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to 1/5 of the maximum prill usage rate)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	31,219	tons/year	Annual quantity of ammonium nitrate prill transferred (assume equal to the maximum prill usage rate)
		255	tons/hour	Hourly quantity of ammonium nitrate prill transferred (based on 17 tons transferred to a truck and five trucks can be loaded at a time, assume no single truck is loaded more than three times per hour)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
Portable Aggregate System				
009-9	Aggregate to Hopper (via front-end loader)	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	2,500,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the Portable Aggregate System)
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	2,500,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the Portable Aggregate System)
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	2,500,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the Portable Aggregate System)
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsized), or Triple Deck Screen Discharge Conveyor (Undersize)	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	2,500,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the Portable Aggregate System)
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	2,500,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		850	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the Portable Aggregate System)
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	0.23	acres	Area of the Coarse and Fine Aggregate Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Supplemental Portable Aggregate System				
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	4,400,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the grizzly)
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	4,400,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the crusher)
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	4,400,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the crusher)
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	6,400,000	tons/year	Annual quantity of nonmetallic minerals processed (assume equal to the voluntary throughput limitation)
		990	tons/hour	Hourly quantity of nonmetallic minerals processed (assume equal to the maximum capacity of the screen)
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	6,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-26 (cont'd)	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen (cont'd)	990	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		450	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-38	SPAS Stockpiles to Trucks	4,400,000	tons/year	Annual quantity of nonmetallic minerals transferred (assume equal to the voluntary throughput limitation)
		540	tons/hour	Hourly quantity of nonmetallic minerals transferred (assume equal to the maximum capacity of the conveyor)
009-39	Wind Erosion of the SPAS Stockpiles	3.31	acres	Area of the Stockpiles
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Storage Tanks and Parts Cleaning				
033-3	Gasoline Storage Tank 150 (GDF1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		288,000	gallons/year	Maximum annual throughput
		8'D x 32'L	--	Dimensions
		12,000	gallons	Tank Capacity
		24.00	turnovers/year	Maximum annual turnovers (calculated)
		5,209.48	lb/year	EPA TANKS Program Output for VOC
		39.99	lb/year	EPA TANKS Program Output for Benzene
		1.82	lb/year	EPA TANKS Program Output for Ethylbenzene

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
033-3 (cont'd)	Gasoline Storage Tank 150 (GDF1) (cont'd)	60.55	lb/year	EPA TANKS Program Output for n-Hexane
		0.01	lb/year	EPA TANKS Program Output for Naphthalene
		1.28	lb/year	EPA TANKS Program Output for Cumene
		47.05	lb/year	EPA TANKS Program Output for Toluene
		7.28	lb/year	EPA TANKS Program Output for m-Xylene
033-2	Gasoline Storage Tank FT-3 (GDF2)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		288,000	gallons/year	Maximum annual throughput
		8'D x 32'L	--	Dimensions
		12,000	gallons	Tank Capacity
		24.00	turnovers/year	Maximum annual turnovers (calculated)
		5,209.48	lb/year	EPA TANKS Program Output for VOC
		39.99	lb/year	EPA TANKS Program Output for Benzene
		1.82	lb/year	EPA TANKS Program Output for Ethylbenzene
		60.55	lb/year	EPA TANKS Program Output for n-Hexane
		0.01	lb/year	EPA TANKS Program Output for Naphthalene
		1.28	lb/year	EPA TANKS Program Output for Cumene
		47.05	lb/year	EPA TANKS Program Output for Toluene
		7.28	lb/year	EPA TANKS Program Output for m-Xylene

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		288,000	gallons/year	Maximum annual throughput
		10'D x 20.5'L	--	Dimensions
		12,000	gallons	Tank Capacity
		24.00	turnovers/year	Maximum annual turnovers (calculated)
		4,874.59	lb/year	EPA TANKS Program Output for VOC
		37.42	lb/year	EPA TANKS Program Output for Benzene
		1.71	lb/year	EPA TANKS Program Output for Ethylbenzene
		56.66	lb/year	EPA TANKS Program Output for n-Hexane
		0.009	lb/year	EPA TANKS Program Output for Naphthalene
		1.20	lb/year	EPA TANKS Program Output for Cumene
		44.03	lb/year	EPA TANKS Program Output for Toluene
		6.81	lb/year	EPA TANKS Program Output for m-Xylene
033-5	Gasoline Storage Tank Mine Operations (GDF4)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		288,000	gallons/year	Maximum annual throughput
		10'D x 20.5'L	--	Dimensions
		12,000	gallons	Tank Capacity

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
033-5 (cont'd)	Gasoline Storage Tank Mine Operations (GDF4) (cont'd)	24.00	turnovers/year	Maximum annual turnovers (calculated)
		4,874.59	lb/year	EPA TANKS Program Output for VOC
		37.42	lb/year	EPA TANKS Program Output for Benzene
		1.71	lb/year	EPA TANKS Program Output for Ethylbenzene
		56.66	lb/year	EPA TANKS Program Output for n-Hexane
		0.009	lb/year	EPA TANKS Program Output for Naphthalene
		1.20	lb/year	EPA TANKS Program Output for Cumene
		44.03	lb/year	EPA TANKS Program Output for Toluene
		6.81	lb/year	EPA TANKS Program Output for m-Xylene
030-6	Parts Cleaning Equipment	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		5,139	gallons/year	Maximum annual throughput
		5'H x 5'D	--	Dimensions
		571	gallons	Tank Capacity
		9.00	turnovers/year	Maximum annual turnovers (calculated)
		3.01	lb/year	EPA TANKS Program Output for VOC
053-1	Xanthate Mixing and Storage Tanks	1,231.88	tons/year	Annual xanthate usage rate (based on a usage rate of 0.0375 lb/ton of material processed)
		0.24	tons/hour	Hourly xanthate usage rate (based on a usage rate of 0.0375 lb/ton of material processed)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
Diesel Emergency ICE				
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 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)
		1,214	hp	Rated horsepower of the engine
049-8	Diesel Emergency Generator IA04-D (59 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)
		59	hp	Rated horsepower of the engine
049-28	Diesel Emergency Generator IA24-D (762 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)
		762	hp	Rated horsepower of the engine
049-29	Diesel Emergency Generator IA25-D (90 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)
		90	hp	Rated horsepower of the engine
049-31	Diesel Emergency Generator IA28-D (900 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)
		900	hp	Rated horsepower of the engine
049-42	Diesel Emergency Generator IA36-D (161 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)
		161	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
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 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)
		75	hp	Rated horsepower of the engine
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 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)
		100	hp	Rated horsepower of the engine
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 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)
		480	hp	Rated horsepower of the engine
049-57	CLP Diesel Emergency Generator IA47-D (85.8 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)
		85.80	hp	Rated horsepower of the engine
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 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)
		398	hp	Rated horsepower of the engine
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 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)
		33.50	hp	Rated horsepower of the engine
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
049-68 (cont'd)	Command Center Diesel Emergency Generator IA54-D (480 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		480	hp	Rated horsepower of the engine
Propane Emergency ICE				
049-17	Propane Emergency Generator IA16-P (13 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)
		13	hp	Rated horsepower of the engine
049-20	Propane Emergency Generator IA19-P (60 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)
		60	hp	Rated horsepower of the engine
049-30	Propane Emergency Generator IA21-P (80 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)
		80	hp	Rated horsepower of the engine
049-34	Propane Emergency Generator IA31-P (30.52 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)
		30.52	hp	Rated horsepower of the engine
049-39	Propane Emergency Generator IA32-P (32 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)
		32	hp	Rated horsepower of the engine
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
049-43 (cont'd)	Propane Emergency Generator IA37-P (113.18 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		113.18	hp	Rated horsepower of the engine
049-44	Propane Emergency Generator IA38-P (113.18 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)
		113.18	hp	Rated horsepower of the engine
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 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)
		103	hp	Rated horsepower of the engine
Natural Gas Emergency ICE				
049-23	Natural Gas Emergency Generator IA13-NG (17 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)
		17	hp	Rated horsepower of the engine
049-15	Natural Gas Emergency Generator IA22-NG (199 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)
		199	hp	Rated horsepower of the engine
049-16	Natural Gas Emergency Generator IA23-NG (192 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)
		192	hp	Rated horsepower of the engine
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
049-33 (cont'd)	Natural Gas Emergency Generator IA30-NG (40 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		40	hp	Rated horsepower of the engine
049-36	Natural Gas Emergency Generator IA33-NG (31.83 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)
		31.83	hp	Rated horsepower of the engine
049-40	Natural Gas Emergency Generator IA34-NG (32 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)
		32	hp	Rated horsepower of the engine
Diesel Non-Emergency ICE				
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		128	hp	Rated horsepower of the engine
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		130	hp	Rated horsepower of the engine
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		28.20	hp	Rated horsepower of the engine
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 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
049-56 (cont'd)	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		135	hp	Rated horsepower of the engine
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		577	hp	Rated horsepower of the engine
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		300	hp	Rated horsepower of the engine
Propane Non-Emergency ICE				
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		27	hp	Rated horsepower of the engine
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		20	hp	Rated horsepower of the engine
Miscellaneous Fuel Burning Equipment				
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	3,003.80	MMBtu/year	Annual diesel usage (assume equal to the maximum capacity at continuous operation)
		0.3429	MMBtu/hour	Hourly diesel usage (assume equal to the maximum capacity)
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	4,292.40	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
049-46 (cont'd)	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr) (cont'd)	0.49	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	4,292.40	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.49	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	83,211	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		9.499	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	8,322	MMBtu/year	Annual propane usage (assume equal to the maximum capacity at continuous operation)
		0.95	MMBtu/hour	Hourly propane usage (assume equal to the maximum capacity)
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	6,311	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.72045	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	4,371	MMBtu/year	Annual natural gas usage (assume equal to the maximum capacity at continuous operation)
		0.499	MMBtu/hour	Hourly natural gas usage (assume equal to the maximum capacity)
Copper Decant Solids Handling Operations				
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	3.00	acres	Area of the drying and storage pad
		3	disturbances/year	Annual disturbances of the material on the drying/storage pad
		93	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	18,000	tons/year	Annual quantity of material transferred (maximum of 3 decant operations per year, each operation is approximately 6,000 tons)
		6,000	tons/hour	Hourly quantity of material transferred (all material from one decant operation can be transferred in one hour)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
AOS1: Two Concentrator Operations				
<i>Mining Operations (AOS1)</i>				
026-3 (AOS1)	Drilling (AOS1)	106,219	holes/year	Annual quantity of holes drilled (maximum expected value based on the mining process rates)
		490	holes/hour	Hourly quantity of holes drilled (estimated at 20% greater than the average holes/blast)
026-2 (AOS1)	Blasting (AOS1)	260	blasts/year	Annual quantity of blasts (maximum expected value based on the mining process rates)
		1	blasts/hour	Hourly quantity of blasts
		107,890,420	ft ²	Annual total area of all blasts (average blast size tonnage from the based on the mining process rates converted to ft ² using a 50 ft bench height and 105 lb/ft ³ density)
		497,956	ft ²	Hourly total area of all blasts (estimated at 20% greater than the average blast size)
		3,600	tons/year	Annual quantity of diesel used in traditional ANFO (assume 6% of ANFO is FO and FO in traditional ANFO is typically 68.5% of all FO used)
		7.5	lb/gal	Density of diesel fuel (based on lb and gallon information - see 04/18/2016 email)
		1,656	tons/year	Annual quantity of Mixed Fuel used in ANFO emulsions (assume mixed fuel is 31.5% of all FO used)
		7.64	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)
		21.5	%	Percent of animal fat in the Mixed Fuel (from James Rogers at Southwest Energy)
		7.34	lb/gal	Density of animal fat (based on <i>A Demonstration of Fat and Grease as an Industrial Boiler Fuel</i>)
		4,900	tons/year	Annual total quantity of diesel fuel used during blasting (sum of diesel information sources)
		1,306,667	gallons/year	Annual total quantity of diesel fuel used during blasting (calculated based on diesel fuel information sources and density)
		6,031	gallons/hour	Hourly total quantity of diesel fuel used during blasting (based on the annual quantity and scaled using the number of holes drilled)
		56,584	tons/year	Annual quantity of ammonium nitrate prill used (assume 6% of ANFO is AN and AN in traditional ANFO is typically 68.5% of all AN used)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
026-2 (AOS1) (cont'd)	Blasting (AOS1) (cont'd)	99.8	%	Percent of Ammonium Nitrate in the ammonium nitrate prill
		26,020	tons/year	Annual quantity of ammonium nitrate solution used (assume AN solution is 31.5% of all AN used)
		78	%	Percent of Ammonium Nitrate in the ammonium nitrate solution
		76,767	tons/year	Annual total quantity of ammonium nitrate used during blasting (sum of ammonium nitrate information sources)
		81,667	tons/year	Annual total quantity of ANFO used (maximum expected value based on the mining process rates)
		377	tons/hour	Hourly total quantity of ANFO used (based on the annual quantity and scaled using the number of holes drilled)
		94	%	Percent of Ammonium Nitrate in ANFO (assumed typical value)
		6	%	Percent of Fuel Oil in ANFO (assumed typical value)
--	Vehicle Travel on Unpaved Roads (AOS1)	122.97	tons	Mean vehicle weight on an annual basis (calculated value)
		177.61	tons	Mean vehicle weight on an hourly basis (calculated value)
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	7,099,653	VMt/year	Annual quantity of total miles traveled (assume 75% inside the pit)
		2,238.75	VMt/hour	Hourly quantity of total miles traveled (assume 75% inside the pit)
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	2,366,551	VMt/year	Annual quantity of total miles traveled (assume 25% outside the pit)
		746.25	VMt/hour	Hourly quantity of total miles traveled (assume 25% outside the pit)
023-3 (AOS1)	Other Vehicle Travel (AOS1)	14,070,600	VMt/year	Annual quantity of total miles traveled
		2,141.53	VMt/hour	Hourly quantity of total miles traveled
023-1 (AOS1)	Dozer Operation (AOS1)	133,221	hours/year	Annual hours of operation (maximum expected value based on the mining process rates)
		22.00	hours/hour	Hourly hours of operation (quantity of dozers and operation 60 min/hr)
023-2 (AOS1)	Road Grader Operation (AOS1)	420,480	VMt/year	Annual quantity of total miles traveled (maximum expected value based on the mining process rates)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
023-2 (AOS1) (cont'd)	Road Grader Operation (AOS1) (cont'd)	48.00	VMT/hour	Hourly quantity of total miles traveled (maximum expected value based on the mining process rates)
		6	mph	Mean speed (estimated value)
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	254,833,922	tons/year	Annual quantity of material mined (sum of unloading to crushers, leaching areas, and storage areas)
		39,352	tons/hour	Hourly quantity of material mined (sum of unloading to crushers, leaching areas, and storage areas)
		30.24	%	Percent of all material mined that is mill ore (annual basis)
		3.62	%	Percent of all material mined that is leach ore (annual basis)
		66.14	%	Percent of all material mined that is overburden/low grade ore (annual basis)
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	44,433,881	tons/year	Annual quantity of material unloaded (maximum value based on the overall expected mining rates)
		8,000	tons/hour	Hourly quantity of material unloaded (equal to the maximum hourly capacity of the crusher)
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	32,632,000	tons/year	Annual quantity of material unloaded (maximum value based on the overall expected mining rates)
		7,000	tons/hour	Hourly quantity of material unloaded (equal to the maximum hourly capacity of the crusher)
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	9,230,000	tons/year	Annual quantity of material unloaded (maximum value based on the overall expected mining rates)
		1,264	tons/hour	Hourly quantity of material unloaded (assume continuous operation with a 20% increase over the average rate)
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	168,538,041	tons/year	Annual quantity of material unloaded (maximum value based on the overall expected mining rates)
		23,087	tons/hour	Hourly quantity of material unloaded (assume continuous operation with a 20% increase over the average rate)
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)				
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		15,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
001-5 (AOS1) (cont'd)	Processes Controlled by Dust Collector C51 (AOS1) (cont'd)	0.0135	gr/dscf	PM Emission Limit
		0.0135	gr/dscf	PM ₁₀ Emission Limit
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	66,576,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	66,576,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	66,576,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	53,260,800	tons/year	Annual quantity of ore transferred (assume equal to 4/5 the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	13,315,200	tons/year	Annual quantity of ore transferred (assume equal to 1/5 the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	13,315,200	tons/year	Annual quantity of ore transferred (assume equal to 1/5 the maximum capacity of the transfer at continuous operation)
		7,600	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	6.18	acres	Area of Coarse Ore Stockpiles 1/5 (AOS1)
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)				
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	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
001-12 (AOS1) (cont'd)	Processes Controlled by PC1 Dust Collector 1 (AOS1) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		14,500	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,700	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,700	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		16,700	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	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
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	70,080,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the transfer at continuous operation)
		8,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the transfer)
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	3.04	acres	Area of Coarse Ore Stockpile 6 (AOS1)
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
Second Concentrator Milling Operations (AOS1)				
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		22,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		22,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		23,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
002-9 (AOS1) (cont'd)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1) (cont'd)	0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		27,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		25,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	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 (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	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
002-13 (AOS1) (cont'd)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1) (cont'd)	10,000	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)
		0.0023	gr/dscf	PM Emission Limit
		0.0023	gr/dscf	PM ₁₀ Emission Limit
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)				
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	517,716	tons/year	Annual quantity of concentrate processed in the Second Concentrator Bulk and Molybdenum Flotation Operations (assume equal to the maximum capacity of the concentrate production rate at continuous operation)
		59.10	tons/hour	Hourly quantity of concentrate processed in the Second Concentrator Bulk and Molybdenum Flotation Operations (assume equal to the maximum capacity of the concentrate production rate)
Second Concentrator Concentrate Handling Operations (AOS1)				
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	499,320	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations at continuous operation)
		57	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations)
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	499,320	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations at continuous operation)
		57	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations)
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	499,320	tons/year	Annual quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations at continuous operation)
		57	tons/hour	Hourly quantity of copper concentrate transferred (assume equal to the maximum rate of the copper concentrate handling operations)
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	0.30	acres	Area of all Copper Concentrate Storage
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	8,760	hours/year	Annual hours of operation (assume continuous operation)
		1	hours/hour	Hourly hours of operation (assume continuous operation)
		337	dscfm	Exhaust flow rate (assume dscfm is equal to acfm as a worst-case emission estimate)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
052-2 (AOS1) (cont'd)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1) (cont'd)	0.063	lb/hr	PM emission rate
		0.063	lb/hr	PM ₁₀ emission rate
		1.83	lb/hr	VOC emission rate
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	18,396	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum rate of the Molybdenum Concentrate Dryer at continuous operation)
		2.10	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum rate of the Molybdenum Concentrate Dryer)
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	18,396	tons/year	Annual quantity of molybdenum concentrate transferred (assume equal to the maximum rate of the Molybdenum Bagging System at continuous operation)
		2.10	tons/hour	Hourly quantity of molybdenum concentrate transferred (assume equal to the maximum rate of the Molybdenum Concentrate Bagging System)
Second Concentrator Lime and Other Regent Operations (AOS1)				
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	99,514	tons/year	Annual quantity of lime transferred (equal to the maximum process rate of the lime slaker)
		25	tons/hour	Hourly quantity of lime transferred (based on a delivery rate of 25 tons)
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	99,514	tons/year	Annual quantity of lime processed (assume equal to the maximum process rate of the slaker at continuous operation)
		11.36	tons/hour	Hourly quantity of lime processed (assume equal to the maximum process rate of the slaker)
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	7,227	tons/year	Annual quantity of flocculant transferred (assume equal to the maximum hourly usage rate at continuous operation)
		0.83	tons/hour	Hourly quantity of flocculant transferred (assume equal to the maximum flocculant usage rate)
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	482	tons/year	Annual quantity of flocculant transferred (assume equal to the maximum hourly usage rate at continuous operation)
		0.06	tons/hour	Hourly quantity of flocculant transferred (assume equal to the maximum flocculant usage rate)
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	213	tons/year	Annual quantity of xanthate/test reagent used (equal to the additional xanthate/test reagent needed for the Second Concentrator based on maximum processing rates)
		0.04	tons/hour	Hourly quantity of xanthate/test reagent used (equal to the additional xanthate/test reagent needed for the Second Concentrator based on maximum processing rates)
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	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
055-3 (AOS1) (cont'd)	Second Concentrator NaHS System Scrubber (AOS1) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		735	dscfm	Exhaust flow rate
Second Concentrator Prill Handling Operations (AOS1)				
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	25,365	tons/year	Annual quantity of ammonium nitrate prill transferred (equal to the additional prill needed for the Second Concentrator based on maximum mining rates)
		25.75	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the maximum delivery rate)
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	25,365	tons/year	Annual quantity of ammonium nitrate prill transferred (equal to the additional prill needed for the Second Concentrator based on maximum mining rates)
		50	tons/hour	Hourly quantity of ammonium nitrate prill transferred (assume equal to the ANFO truck capacities, the trucks can only be filled once per hour)
Second Concentrator Emergency ICE (AOS1)				
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 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)
		609	hp	Rated horsepower of the engine
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 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)
		762	hp	Rated horsepower of the engine
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 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)
		84.70	hp	Rated horsepower of the engine
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	500	hours/year	Annual hours of operation (EPA guidance states 500 hours for emergency engines)

Table F.1 Emission Inventory Inputs - Potential Emission Inventory

Process Number	Process/Emission Unit Description	Potential Emissions	Units	Information Description
049-62 (AOS1) (cont'd)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine) (cont'd)	1	hours/hour	Hourly hours of operation (assume continuous operation)
		84.70	hp	Rated horsepower of the engine
AOS5: Emergency Grizzly Systems				
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	43,800,000	tons/year	Annual quantity of ore processed (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore processed (assume equal to the maximum capacity of the Emergency Grizzly Systems)
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	43,800,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems)
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	1.00	acres	Area of the Temporary Oversize Stockpile
		365	days/year	Annual days of operation (assume continuous operation)
		24	hours/day	Daily hours of operation (assume continuous operation)
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	43,800,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems)
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	43,800,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems)
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	43,800,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems)
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	43,800,000	tons/year	Annual quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems at continuous operation)
		5,000	tons/hour	Hourly quantity of ore transferred (assume equal to the maximum capacity of the Emergency Grizzly Systems)

Emission Inventory Tables for Potential Emission Calculations
October 2025

Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs *												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* (m/s)
Pollution Control Devices																					
C18	Processes Controlled by Scrubber C18	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
C51	Processes Controlled by Dust Collector C51	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
C1	Processes Controlled by GL1 Dust Collector C1	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
C2	Processes Controlled by GL2 Dust Collector C2	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
DC3	Processes Controlled by GL3 Dust Collector DC3	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
DC4	Processes Controlled by GL4 Dust Collector DC4	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
DC5	Processes Controlled by GL5 Dust Collector DC5	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
CH-02/03	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	2.75	2.75	2.75	2.75	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Test Results Indicating 100% Condensables, Assume PM=PM10=PM2.5	
NGF	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	0.13	0.10	0.13	0.13	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	Emission standard converted to lb/hour, Condensables Similar to Natural Gas Combustion, Assume PM=PM10=PM2.5	
MCDC1	Processes Controlled by Molybdenum Concentrate Dust Collector 1	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Standards, Assume PM=PM10=PM2.5	
MCDC2	Processes Controlled by Molybdenum Concentrate Dust Collector 2	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Standards, Assume PM=PM10=PM2.5	
C51 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC1 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC2 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC3 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC4 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC5 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC6 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC7 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC8 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	
SDC9 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5	

Emission Inventory Tables for Potential Emission Calculations
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Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs *												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)
SDC10 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
SDC11 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	dscf	--	--	--	--	--	--	--	--	--	--	--	--	--	Emission Limits, Assume PM=PM10=PM2.5
MDWSS (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	0.063	0.049	0.063	0.063	lb/hr	hours	--	--	--	--	--	--	--	--	--	--	--	--	--	Estimated emission rates based on the NSPS Subpart LL emission standard, CPM based on test results from a similar scrubber, Assume PM=PM10=PM2.5
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 11.19.2-2 and Figure 11.19-4 (08/04), Tertiary Crushing (controlled)
Drilling (AOS1)	Drilling (AOS1)	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 11.19.2-2 and Figure 11.19-4 (08/04), Tertiary Crushing (controlled)
ABlasting	Blasting (annual basis)	397.06	0	206.47	11.91	lb/blast	blasts	1	0.52	0.03	--	--	--	--	--	--	93,000	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
HBlasting	Blasting (hourly basis)	1,252.20	0	651.14	37.57	lb/blast	blasts	1	0.52	0.03	--	--	--	--	--	--	200,000	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
ABlasting (AOS1)	Blasting (AOS1) (annual basis)	3,742.33	0	1,946.01	112.27	lb/blast	blasts	1	0.52	0.03	--	--	--	--	--	--	414,963	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
HBlasting (AOS1)	Blasting (AOS1) (hourly basis)	4,919.42	0	2,558.10	147.58	lb/blast	blasts	1	0.52	0.03	--	--	--	--	--	--	497,956	--	--	--	AP-42 Table 11.9-1 (10/98), Blasting Overburden
Vehicle Operations																					
ATravel	Vehicle Travel on Unpaved Roads (annual basis)	9.09	0	2.30	0.23	lb/VMT	VMT	4.9	1.5	0.15	--	--	4.6	--	--	41	--	68.72	--	--	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
HTravel	Vehicle Travel on Unpaved Roads (hourly basis)	11.30	0	2.85	0.29	lb/VMT	VMT	4.9	1.5	0.15	--	--	4.6	--	--	--	--	85.32	--	--	AP-42 Section 13.2.2, Expression 1a (11/06)
ATravel (AOS1)	Vehicle Travel on Unpaved Roads (annual basis) (AOS1)	11.81	0	2.98	0.30	lb/VMT	VMT	4.9	1.5	0.15	--	--	4.6	--	--	41	--	122.97	--	--	AP-42 Section 13.2.2, Expressions 1a and 2 (11/06)
HTravel (AOS1)	Vehicle Travel on Unpaved Roads (hourly basis) (AOS1)	15.71	0	3.97	0.40	lb/VMT	VMT	4.9	1.5	0.15	--	--	4.6	--	--	--	--	177.61	--	--	AP-42 Section 13.2.2, Expression 1a (11/06)
Dozer	Dozer Operation	8.85	0	1.61	0.93	lb/hr	hours	5.7	0.75	0.60	--	2,564	4.0	--	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
Dozer (AOS1)	Dozer Operation (AOS1)	8.85	0	1.61	0.93	lb/hr	hours	5.7	0.75	0.60	--	2,564	4.0	--	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Bulldozing Overburden
Grader	Road Grader Operation	3.53	0	1.10	0.11	lb/VMT	VMT	1	0.60	0.031	--	--	--	6.0	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Grading
Grader (AOS1)	Road Grader Operation (AOS1)	3.53	0	1.10	0.11	lb/VMT	VMT	1	0.60	0.031	--	--	--	6.0	--	--	--	--	--	--	AP-42 Table 11.9-1 (10/98), Grading
Material Transfer Operations																					
Ore1TrUnprt	Material Transfer of the Combination of All Mined Material (unprotected)	0.0027	0	0.0013	0.00019	lb/ton	tons	0.74	0.35	0.053	7.26	2,564	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)
Ore1TrUnprt (AOS1)	Material Transfer of the Combination of All Mined Material (unprotected) (AOS1)	0.0027	0	0.0013	0.00019	lb/ton	tons	0.74	0.35	0.053	7.26	2,564	--	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)

Emission Inventory Tables for Potential Emission Calculations
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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)
Ore2TrPrt	Material Transfer of Mill Ore (protected)	0.00029	0	0.00014	0.000021	lb/ton	tons	0.74	0.35	0.053	1.3	2.564	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
Ore2TrUnprt	Material Transfer of Mill Ore (unprotected)	0.0027	0	0.0013	0.00019	lb/ton	tons	0.74	0.35	0.053	7.26	2.564	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
Ore3TrUnprt	Material Transfer of Leach Ore (unprotected)	0.0027	0	0.0013	0.00019	lb/ton	tons	0.74	0.35	0.053	7.26	2.564	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
Ore4TrUnprt	Material Transfer of Overburden/Low Grade Ore (unprotected)	0.0027	0	0.0013	0.00019	lb/ton	tons	0.74	0.35	0.053	7.26	2.564	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MC1TrPrt	Material Transfer of Bagdad Molybdenum Concentrate (protected)	0.000055	0	0.000026	0.0000039	lb/ton	tons	0.74	0.35	0.053	1.3	8.4	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MC2TrPrt	Material Transfer of Bagdad or High Moisture Outside Source Molybdenum Concentrate (protected)	0.000055	0	0.000026	0.0000039	lb/ton	tons	0.74	0.35	0.053	1.3	8.4	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MC3TrPrt	Material Transfer of Bagdad or Low Moisture Outside Source Molybdenum Concentrate (protected)	0.027	0	0.013	0.0020	lb/ton	tons	0.74	0.35	0.053	1.3	0.10	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MC3TrUnprt	Material Transfer of Bagdad or Low Moisture Outside Source Molybdenum Concentrate (unprotected)	0.25	0	0.12	0.018	lb/ton	tons	0.74	0.35	0.053	7.26	0.10	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MC4TrPrt	Material Transfer of Second Concentrator Molybdenum Concentrate Post-Dryer (protected)	0.0022	0	0.0010	0.00016	lb/ton	tons	0.74	0.35	0.053	7.26	3.0	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
MOTrPrt	Material Transfer of Molybdenum Trioxide (protected)	0.000059	0	0.000028	0.0000042	lb/ton	tons	0.74	0.35	0.053	1.3	8.0	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
CCTrPrt	Material Transfer of Copper Concentrate (protected)	0.000050	0	0.000024	0.0000036	lb/ton	tons	0.74	0.35	0.053	1.3	9.0	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
CCTrUnprt	Material Transfer of Copper Concentrate (unprotected)	0.00047	0	0.00022	0.000034	lb/ton	tons	0.74	0.35	0.053	7.26	9.0	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
NMTTrPrt	Material Transfer of Nonmetallic Minerals Processed by the Portable Aggregate System (protected)	0.000079	0	0.000037	0.0000057	lb/ton	tons	0.74	0.35	0.053	1.3	6.5	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
NMTTrUnprt	Material Transfer of Nonmetallic Minerals Processed by the Portable Aggregate System (unprotected)	0.00074	0	0.00035	0.000053	lb/ton	tons	0.74	0.35	0.053	7.26	6.5	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
DSH1TrUnprt	Material Transfer of Copper Decant Material Processed by the Copper Decant Solids Handling Operations (unprotected)	0.00055	0	0.00026	0.000040	lb/ton	tons	0.74	0.35	0.053	7.26	8.0	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
SALd	Soda Ash Loading	5.20	0	1.82	0.28	lb/ton	tons	1	0.35	0.053	--	--	--	--	--	--	--	--	--	AP-42, Table 8.12-3 (07/93) for soda ash storage/loading and unloading, 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)	
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)	
FITrUnprt	Material Transfer of Flocculant (unprotected)	0.25	0	0.12	0.018	lb/ton	tons	0.74	0.35	0.053	7.26	0.10	--	--	--	--	--	--	--	AP-42 Section 13.2.4, Expression 1 (11/06)	
Slaking Operations																					
LPB	Lime Porta Batches	0.0076	0	0.0042	0.00080	lb/ton	tons	1	1	1	--	--	--	--	--	--	--	--	--	Characterization of Inhalable Particulate Matter Emissions from a Lime Plant (05/83)	
LSM	Lime Slaking Mill	0.0012	0.00020	0.0012	0.0012	lb/ton	tons	1	1	1	--	--	--	--	--	--	--	--	--	Manufacturer's Information from a similar slaker 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}	

Emission Inventory Tables for Potential Emission Calculations
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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 _s * (m/s)
SLS (AOS1)	Second Concentrator Lime Slaker (AOS1)	0.0012	0.00020	0.0012	0.0012	lb/ton	tons	1	1	1	--	--	--	--	--	--	--	--	--	Manufacturer's Information from a similar slaker 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																					
AWindCOS1/5	Wind Erosion of Coarse Ore Stockpiles 1/5 (annual basis)	1,962.86	0	981.43	147.21	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindCOS1/5	Wind Erosion of Coarse Ore Stockpiles 1/5 (hourly basis)	0.22	0	0.11	0.017	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindOCC	Wind Erosion of Outdoor Copper Concentrate Stockpile (annual basis)	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindOCC	Wind Erosion of Outdoor Copper Concentrate Stockpile (hourly basis)	5.38	0	2.69	0.40	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindICC	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (annual basis)	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindICC	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (hourly basis)	5.38	0	2.69	0.40	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	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)	206.11	0	103.06	15.46	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	0.88	0.43	AP-42 Section 13.2.5 (11/06)
HWindT	Wind Erosion of Tailings (hourly basis)	0.024	0	0.0118	0.00176	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	0.88	0.43	AP-42 Section 13.2.5 (11/06)
AWindPAS	Wind Erosion of Coarse and Fine Aggregate Stockpiles (annual basis)	3,189.65	0	1,594.82	239.22	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	6.5	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindPAS	Wind Erosion of Coarse and Fine Aggregate Stockpiles (hourly basis)	0.36	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	6.5	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindSPAS	Wind Erosion of the SPAS Stockpiles (annual basis)	3,189.65	0	1,594.82	239.22	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	6.5	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindSPAS	Wind Erosion of the SPAS Stockpiles (hourly basis)	0.36	0	0.18	0.027	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	6.5	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindDSH1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (annual basis)	618.33	0	309.17	46.37	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	0.88	0.43	AP-42 Section 13.2.5 (11/06)
HWindDSH1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (hourly basis)	0.28	0	0.139	0.021	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	--	--	--	--	--	--	0.88	0.43	AP-42 Section 13.2.5 (11/06)
AWindCOS1/5 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1) (annual basis)	1,962.86	0	981.43	147.21	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindCOS1/5 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1) (hourly basis)	0.22	0	0.11	0.017	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindCOS6 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1) (annual basis)	1,962.86	0	981.43	147.21	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
HWindCOS6 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1) (hourly basis)	0.22	0	0.11	0.017	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	
AWindSCC (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (annual basis)	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)	

Emission Inventory Tables for Potential Emission Calculations
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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)	
HWindSCC (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (hourly basis)	5.38	0	2.69	0.40	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	96	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
AWindTOS	Wind Erosion of Temporary Oversize Stockpile (AOS5) (annual basis)	1,962.86	0	981.43	147.21	lb/acre-yr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
HWindTOS	Wind Erosion of Temporary Oversize Stockpile (AOS5) (hourly basis)	0.22	0	0.11	0.017	lb/acre-hr	acre-yr	1	0.50	0.075	--	--	4.0	--	12.9	41	--	--	--	4th Edition of AP-42 Section 11.2.3, particle size fractions from AP-42 Section 13.2.5 (11/06)
Screening Operations																				
VGFScreenC	Vibrating Grizzly Feeder Screening in the Portable Aggregate System (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)
TDSScreenC	Triple Deck Screening in the Portable Aggregate System (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)
AgScreenC	Screens in the Supplemental Portable Aggregate System (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)
BGScreenC	Bar Grizzly Screening in the Emergency Grizzly Systems (AOS5) (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)
Crushing Operations																				
JCCrushC	Jaw Crushing in the Portable Aggregate System (moisture content of material processed >1.3%)	0.0012	0	0.00054	0.00010	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled)
CSSCrushC	Cone Crushing in the Portable Aggregate System (moisture content of material processed >1.3%)	0.0012	0	0.00054	0.00010	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled)
AgCrushC	Crushers in the Supplemental Portable Aggregate System (moisture content of material processed >1.3%)	0.0012	0	0.00054	0.00010	lb/ton	tons	--	--	--	--	--	--	--	--	--	--	--	--	AP-42 Table 11.19.2-2 (08/04), Tertiary Crushing (controlled)
Solution Extraction/Electrowinning Operations																				
EWM	Electrowinning - Main System	0.83	0	0.83	0.83	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																				
CLP-CT	CLP Cooling Tower	0.0015	0	0.0014	0.00027	lb/1000 gal	1000 gal	1	0.96	0.18	--	--	--	--	--	--	--	--	--	AP-42 Section 13.4 (01/95), maximum TDS value and liquid drift, and particle size fractions from the Reisman/Frisbie methodology
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
NGHWH	Natural Gas Hot Water Heater (6.842 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
NGEH	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	0.010	0.0056	0.010	0.010	lb/MMBtu	MMBtu	1	1	1	--	--	--	--	--	--	--	--	--	Manufacturer's Information, Assume PM=PM ₁₀ =PM _{2.5}
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

Emission Inventory Tables for Potential Emission Calculations
October 2025

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* ^a (m/s)	
Diesel Emergency ICE																					
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)	
Table2-19/37-D	2008+ Diesel Emergency Engines (19 ≤ kW < 37)	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Emission Standards from Table 2 of 40 CFR 60 Subpart IIII 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)	
Tier2-560-D	Tier 2 Diesel Emergency Engines (kW > 560)	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Tier 2 Emission Standards from 40 CFR 1039 Appendix I Table 2 for Engines Rated kW > 560, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
Tier3-75/130-D	Tier 3 Diesel Emergency 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)	
Tier3-450/560-D	Tier 3 Diesel Emergency Engines (450 ≤ kW ≤ 560)	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 450 ≤ kW < 560, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
C41	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family JCPXL18.1NYS, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA24-D	Diesel Emergency Generator IA24-D (762 hp engine)	0.00015	0.000016	0.00015	0.00015	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family CCPXL15.2NZS, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA25-D	Diesel Emergency Generator IA25-D (90 hp engine)	0.00036	0.000040	0.00036	0.00036	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family DPKXL04.4NH1, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA28-D	Diesel Emergency Generator IA28-D (900 hp engine)	0.00015	0.000017	0.00015	0.00015	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Manufacturer's Information, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA42-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	0.00044	0.000049	0.00044	0.00044	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family CJDXL04.5130, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA43-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	0.00047	0.000052	0.00047	0.00047	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family 4PKXL04.4RG1, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA44-D	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family LCPXL08.8NZS, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA47-D	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	0.00046	0.000051	0.00046	0.00046	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family NPKXL04.4NL1, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA48-D	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	0.00026	0.000029	0.00026	0.00026	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family MCPXL12.5NYS, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA54-D	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family PCPXL08.8NZS, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
Propane Emergency ICE																					
IA16-P	Propane Emergency Generator IA16-P (13 hp engine)	0.00019	0.000099	0.00019	0.00019	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} , 2,520 Btu/scf, and Fuel Usage = 51.6 scf/hr	
IA19-P	Propane Emergency Generator IA19-P (60 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} , 2,520 Btu/scf, and Fuel Usage = 240 scf/hr	
IA21-P	Propane Emergency Generator IA21-P (80 hp engine)	0.00018	0.000092	0.00018	0.00018	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} , 2,520 Btu/scf, and Fuel Usage = 293.2 scf/hr	
IA31-P	Propane Emergency Generator IA31-P (30.52 hp engine)	0.00021	0.00011	0.00021	0.00021	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} , 2,520 Btu/scf, and Fuel Usage = 130 scf/hr	
IA32-P	Propane Emergency Generator IA32-P (32 hp engine)	0.00014	0.000073	0.00014	0.00014	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} , 2,520 Btu/scf, and Fuel Usage = 94 scf/hr	

Emission Inventory Tables for Potential Emission Calculations
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Table F.2 Particulate Matter Emission Factors - Potential Emission Inventory

Process Code	Process Description	Emission Factors					Process Rate Units	Particulate Matter Emission Factor Inputs *												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* (m/s)
IA37-P	Propane Emergency Generator IA37-P (113.18 hp engine)	0.00012	0.000064	0.00012	0.00012	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} , 2,520 Btu/scf, and Fuel Usage = 288 scf/hr	
IA38-P	Propane Emergency Generator IA38-P (113.18 hp engine)	0.00012	0.000064	0.00012	0.00012	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} , 2,520 Btu/scf, and Fuel Usage = 288 scf/hr	
IA55-P	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	0.00016	0.000082	0.00016	0.00016	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} , 2,520 Btu/scf, and Fuel Usage = 337 scf/hr	
SEG-P	Second Concentrator Propane Emergency Generators	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 ICE																					
IA13-NG	Natural Gas Emergency Generator IA13-NG (17 hp engine)	0.00026	0.00013	0.00026	0.00026	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 1,020 Btu/scf, Fuel Usage = 220 scf/hr	
IA22-NG	Natural Gas Emergency Generator IA22-NG (199 hp engine)	0.00014	0.000071	0.00014	0.00014	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 1,020 Btu/scf, Fuel Usage = 1,400 scf/hr	
IA23-NG	Natural Gas Emergency Generator IA23-NG (192 hp engine)	0.00018	0.000094	0.00018	0.00018	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 1,020 Btu/scf, Fuel Usage = 1,786 scf/hr	
IA30-NG	Natural Gas Emergency Generator IA30-NG (40 hp engine)	0.00013	0.000066	0.00013	0.00013	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 1,020 Btu/scf, Fuel Usage = 259.6 scf/hr	
IA33-NG	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	0.00021	0.00011	0.00021	0.00021	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} , 1,020 Btu/scf, 23.8 scf/lb, Fuel Usage = 14.27 lb/hr	
IA34-NG	Natural Gas Emergency Generator IA34-NG (32 hp engine)	0.00021	0.00011	0.00021	0.00021	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 1,020 Btu/scf, and Fuel Usage = 342 scf/hr	
Diesel Non-Emergency ICE																					
Tier3-75/130-DN	Tier 3 Diesel Non-Emergency 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)	
IA14-DN	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	0.00075	0.000083	0.00075	0.00075	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Manufacturer's Information, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA15-DN	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	0.00034	0.000037	0.00034	0.00034	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family APKXL04.4NJ1, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA45-DN	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	0.00038	0.000042	0.00038	0.00038	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family CH3XL2.00N84, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA53-DN	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	0.00016	0.000018	0.00016	0.00016	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family RCPXL12.5NTF, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
IA56-DN	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	0.0000049	0.00000054	0.0000049	0.0000049	lb/hp-hr	hp-hr	1	1	1	--	--	--	--	--	--	--	--	--	Certification Value for EPA Engine Family KJDXL06.8309, Assume PM=PM ₁₀ =PM _{2.5} , CPM assumes the same condensable fraction as AP-42 Table 3.4-2 (10/96)	
Propane Non-Emergency ICE																					
IA10-PN	Propane Non-Emergency Generator IA10-PN (27 hp engine)	0.00023	0.00012	0.00023	0.00023	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} , 2,520 Btu/scf, and Fuel Usage = 125 scf/hr	
IA18-PN	Propane Non-Emergency Generator IA18-PN (20 hp engine)	0.00027	0.00014	0.00027	0.00027	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} , 2,520 Btu/scf, and Fuel Usage = 110 scf/hr	

^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%	<i>Control of Open Fugitive Dust Sources</i> (09/88), pages 3-6 through 3-16
BVSoda	Soda Ash Storage Bin Bin Vent	99.9%	Manufacturer's Information
BVLime1	Lime Storage Bin 1 Bin Vent	99.9%	Manufacturer's Information
LSS1	Lime Slaking Scrubber 1	0%	Control Efficiency Incorporated into Emission Factor
LSS2	Lime Slaking Scrubber 2	0%	Control Efficiency Incorporated into Emission Factor
SLimeBH	Second Concentrator Lime Silo Baghouse (AOS1)	99%	Minimum value from AP-42 Table B.2-3 (09/90)
SLSS	Second Concentrator Lime System Scrubber (AOS1)	0%	Control Efficiency Incorporated into Emission Factor
WS	Water Spray/Wet Suppression	90%	AP-42 Section 11.19.1, page 11.19.1-5 (11/95)
Fogging	Dry Fogging Suppression System	90%	Manufacturer's Information (Dust Solutions Incorporated)
SC	Scrubber	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
SCF	Scrubber and Flare	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
DC	Dust Collector	0%	Control Efficiency Incorporated into the Emission Factor (i.e., emissions are calculated without the application of a control efficiency)
WS/BOP	Water Spray/Wet Suppression When Necessary	0%	Control Efficiency Incorporated into the Emission Factor (emissions calculated without the application of a control efficiency)
3Sided	3-Sided Enclosure	75%	South Coast Air Quality Management District Document on Fugitive Dust Mitigation Measures

Table F.3 Particulate Matter Control Efficiencies - Potential Emission Inventory

Control Code	Control Description	Control Efficiency (%)	Reference
IncorpIWS	Reduced Wind Speed	0%	Control Efficiency Incorporated into the Emission Factor
IncorpME	Mist Eliminators	0%	Control Efficiency Incorporated into the Emission Factor
IncorpWS	Water Spray/Wet Suppression/Inherent Moisture	0%	Control Efficiency Incorporated into the Emission Factor
IncorpT	Using 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
IncorpEW	Use of Foam, Blankets, Surfactants, Brushes, or Thermal Retention Balls	0%	Control Efficiency Incorporated into the Emission Factor
BOP	Best Operating Practices	0%	--

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
Mining Operations																				
026-3	Drilling	Drilling	F	90,000	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	58.50	58.50	0	0	35.10	35.10	6.50	6.50
026-2	Blasting	ABlasting	F	600	blasts	397.06	0	206.47	11.91	lb/blast	BOP	0%	119.12	119.12	0	0	61.94	61.94	3.57	3.57
022-1	Haul Truck Travel Inside the Pit	ATravel	F	2,513,372	VMT	9.09	0	2.30	0.23	lb/VMT	UnpvdRd	90%	11,423.94	1,142.39	0	0	2,886.87	288.69	288.69	28.87
022-2	Haul Truck Travel Outside the Pit	ATravel	F	837,791	VMT	9.09	0	2.30	0.23	lb/VMT	UnpvdRd	90%	3,807.98	380.80	0	0	962.29	96.23	96.23	9.62
023-3	Other Vehicle Travel	ATravel	F	12,570,727	VMT	9.09	0	2.30	0.23	lb/VMT	UnpvdRd	90%	57,137.30	5,713.73	0	0	14,438.77	1,443.88	1,443.88	144.39
023-1	Dozer Operation	Dozer	F	78,046	hours	8.85	0	1.61	0.93	lb/hr	BOP	0%	345.20	345.20	0	0	62.66	62.66	36.25	36.25
023-2	Road Grader Operation	Grader	F	118,587	VMT	3.53	0	1.10	0.11	lb/VMT	UnpvdRd	90%	209.14	20.91	0	0	65.32	6.53	6.48	0.65
021-1	Loading Mined Material into Haul Trucks	Ore1TrUnprt	F	220,314,000	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	298.91	298.91	0	0	141.37	141.37	21.41	21.41
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Ore2TrUnprt	F	65,700,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	89.14	89.14	0	0	42.16	42.16	6.38	6.38
045-3	Unloading Ore to Leaching Areas	Ore3TrUnprt	F	30,076,000	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	40.80	40.80	0	0	19.30	19.30	2.92	2.92
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Ore4TrUnprt	F	124,538,000	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	168.96	168.96	0	0	79.92	79.92	12.10	12.10
Total of Non-Fugitive Emissions for Mining Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Mining Operations:													73,699.00	8,378.47	0	0	18,795.69	2,277.77	1,924.41	272.66
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:													73,699.00	8,378.47	0	0	18,795.69	2,277.77	1,924.41	272.66
Primary Crushing and Overland Conveying Operations																				
001-1	Processes Controlled by Scrubber C18	C18	NF	5,781,600,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	SC	0%	5.58	5.58	0	0	5.58	5.58	5.58	5.58
001-5	Processes Controlled by Dust Collector C51	C51	NF	7,884,000,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	DC	0%	7.60	7.60	0	0	7.60	7.60	7.60	7.60
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Ore2TrPrt	NF	65,700,000	tons	0.00029	0	0.00014	0.000021	lb/ton	WS/BOP	0%	9.54	9.54	0	0	4.51	4.51	0.68	0.68
001-8	Overland Conveyor 3 to Overland Conveyor 4	Ore2TrPrt	NF	65,700,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	9.54	9.54	0	0	4.51	4.51	0.68	0.68
001-9	Overland Conveyor 4 to Radial Stacker 5	Ore2TrPrt	NF	65,700,000	tons	0.00029	0	0.00014	0.000021	lb/ton	WS/BOP	0%	9.54	9.54	0	0	4.51	4.51	0.68	0.68
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Ore2TrUnprt	F	52,560,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	71.31	71.31	0	0	33.73	33.73	5.11	5.11
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Ore2TrUnprt	F	13,140,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	17.83	17.83	0	0	8.43	8.43	1.28	1.28
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Ore2TrUnprt	F	13,140,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	17.83	17.83	0	0	8.43	8.43	1.28	1.28
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	AWindCOS1/5	F	9.22	acre-yr	1,962.86	0	981.43	147.21	lb/acre-yr	BOP	0%	9.05	9.05	0	0	4.52	4.52	0.68	0.68
Total of Non-Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													41.78	41.78	0	0	26.71	26.71	15.23	15.23
Total of Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													116.01	116.01	0	0	55.12	55.12	8.34	8.34
Total of Non-Fugitive and Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													157.80	157.80	0	0	81.82	81.82	23.57	23.57
Milling Operations																				
002-1	Processes Controlled by GL1 Dust Collector C1	C1	NF	7,884,000,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	6.98	6.98	0	0	6.98	6.98	6.98	6.98
002-2	Processes Controlled by GL2 Dust Collector C2	C2	NF	7,884,000,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	6.98	6.98	0	0	6.98	6.98	6.98	6.98
002-3	Processes Controlled by GL3 Dust Collector DC3	DC3	NF	7,884,000,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	6.98	6.98	0	0	6.98	6.98	6.98	6.98

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
002-4	Processes Controlled by GL4 Dust Collector DC4	DC4	NF	7,884,000,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	6.98	6.98	0	0	6.98	6.98	6.98	6.98
002-6	Processes Controlled by GL5 Dust Collector DC5	DC5	NF	7,884,000,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	2.25	2.25	0	0	2.25	2.25	2.25	2.25
Total of Non-Fugitive Emissions for Milling Operations:													30.18	30.18	0	0	30.18	30.18	30.18	30.18
Total of Fugitive Emissions for Milling Operations:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Milling Operations:													30.18	30.18	0	0	30.18	30.18	30.18	30.18
Copper Concentrate Processing and Loading Operations																				
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	CCTrPrt	NF	2,102,400	tons	0.000050	0	0.000024	0.0000036	lb/ton	IncorpIWS	0%	0.05	0.05	0	0	0.02	0.02	0.004	0.004
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	CCTrPrt	NF	2,102,400	tons	0.000050	0	0.000024	0.0000036	lb/ton	IncorpIWS	0%	0.05	0.05	0	0	0.02	0.02	0.004	0.004
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	CCTrPrt	F	2,102,400	tons	0.000050	0	0.000024	0.0000036	lb/ton	IncorpIWS	0%	0.05	0.05	0	0	0.02	0.02	0.004	0.004
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	CCTrPrt	F	2,102,400	tons	0.000050	0	0.000024	0.0000036	lb/ton	IncorpIWS	0%	0.05	0.05	0	0	0.02	0.02	0.004	0.004
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	AWindICC	F	0.50	acre-yr	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	3Sided	75%	11.78	2.94	0	0	5.89	1.47	0.88	0.22
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	CCTrUnprt	F	2,102,400	tons	0.00047	0	0.00022	0.000034	lb/ton	BOP	0%	0.49	0.49	0	0	0.23	0.23	0.04	0.04
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	AWindOCC	F	1.80	acre-yr	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	BOP	0%	42.40	42.40	0	0	21.20	21.20	3.18	3.18
006-7	All Copper Concentrate Stockpiles to Trucks	CCTrUnprt	F	2,102,400	tons	0.00047	0	0.00022	0.000034	lb/ton	BOP	0%	0.49	0.49	0	0	0.23	0.23	0.04	0.04
Total of Non-Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													0.11	0.11	0	0	0.05	0.05	0.008	0.008
Total of Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													55.26	46.43	0	0	27.60	23.19	4.14	3.48
Total of Non-Fugitive and Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													55.37	46.54	0	0	27.65	23.24	4.15	3.49
Molybdenum Concentrate Processing and Bagging Operations																				
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	MC1TrPrt	F	43,800	tons	0.000055	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.001	0.001	0	0	0.0006	0.0006	0.00009	0.00009
Total of Non-Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0.001	0.001	0	0	0.0006	0.0006	0.00009	0.00009
Total of Non-Fugitive and Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0.001	0.001	0	0	0.0006	0.0006	0.00009	0.00009
Tailings Operations																				
027-3	Wind Erosion of Tailings	AWindT	F	4,200	acre-yr	206.11	0	103.06	15.46	lb/acre-yr	IncorpT	0%	432.83	432.83	0	0	216.42	216.42	32.46	32.46
Total of Non-Fugitive Emissions for Tailings Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Tailings Operations:													432.83	432.83	0	0	216.42	216.42	32.46	32.46
Total of Non-Fugitive and Fugitive Emissions for Tailings Operations:													432.83	432.83	0	0	216.42	216.42	32.46	32.46
Concentrate Leach Plant																				
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	NGC	NF	219,000	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.82	0.82	0.61	0.61	0.82	0.82	0.82	0.82
042-11	CLP Cooling Tower	CLP-CT	F	2,102,400	1000 gal	0.0015	0	0.0014	0.00027	lb/1000 gal	IncorpME	0%	1.54	1.54	0	0	1.48	1.48	0.28	0.28
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	8,760	hours	2.75	2.75	2.75	2.75	lb/hr	SC	0%	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	MC2TrPrt	NF	35,040	tons	0.000055	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.001	0.001	0	0	0.0005	0.0005	0.00007	0.00007

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	35,040	tons	0.000055	0	0.000026	0.000039	lb/ton	IncorpIWS	0%	0.001	0.001	0	0	0.0005	0.0005	0.00007	0.00007
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	MC3TrPrt	NF	35,040	tons	0.027	0	0.013	0.0020	lb/ton	IncorpIWS	0%	0.48	0.48	0	0	0.23	0.23	0.03	0.03
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	MCDC2	NF	262,800,000	dscf	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	DC	0%	0.41	0.41	0	0	0.41	0.41	0.41	0.41
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	45,815	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.17	0.17	0.13	0.13	0.17	0.17	0.17	0.17
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	NGC	NF	56,940	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.21	0.21	0.16	0.16	0.21	0.21	0.21	0.21
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	8,760	hours	0.13	0.10	0.13	0.13	lb/hr	SCF	0%	0.56	0.56	0.42	0.42	0.56	0.56	0.56	0.56
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	MCDC1	NF	473,040,000	dscf	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	DC	0%	0.74	0.74	0	0	0.74	0.74	0.74	0.74
047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	MOTrPrt	F	61,320	tons	0.000059	0	0.000028	0.000042	lb/ton	IncorpIWS	0%	0.002	0.002	0	0	0.0009	0.0009	0.0001	0.0001
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	SALd	NF	6,000	tons	5.20	0	1.82	0.28	lb/ton	BVSoda	99.9%	15.60	0.02	0	0	5.46	0.005	0.83	0.0008
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	MC3TrUnprt	F	600	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.08	0.08	0	0	0.04	0.04	0.005	0.005
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	MC3TrUnprt	F	600	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.08	0.08	0	0	0.04	0.04	0.005	0.005
Total of Non-Fugitive Emissions for Concentrate Leach Plant:													31.03	15.44	13.36	13.36	20.64	15.18	15.81	14.98
Total of Fugitive Emissions for Concentrate Leach Plant:													1.69	1.69	0	0	1.55	1.55	0.29	0.29
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:													32.72	17.14	13.36	13.36	22.19	16.73	16.10	15.28
Solution Extraction/Electrowinning Operations																				
011-1	Electrowinning - Main System	EWM	F	8,760	hours	0.83	0	0.83	0.83	lb/hr	IncorpEW	0%	3.62	3.62	0	0	3.62	3.62	3.62	3.62
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	2,978.40	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.01	0.01	0.008	0.008	0.01	0.01	0.01	0.01
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	59,935.92	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.22	0.22	0.17	0.17	0.22	0.22	0.22	0.22
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	47,654.40	MMBtu	0.010	0.0056	0.010	0.010	lb/MMBtu	BOP	0%	0.24	0.24	0.13	0.13	0.24	0.24	0.24	0.24
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:													0.50	0.50	0.33	0.33	0.50	0.50	0.50	0.50
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:													3.62	3.62	0	0	3.62	3.62	3.62	3.62
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:													4.12	4.12	0.33	0.33	4.12	4.12	4.12	4.12
Lime Storage and Handling Operations																				
007-3	Transfer of Lime to Lime Storage Bin 1	LimeLd	NF	525,600	tons	0.61	0	0.21	0.032	lb/ton	BVLime1	99.9%	160.31	0.16	0	0	56.11	0.06	8.50	0.008
007-5	Lime Porta Batches	LPB	NF	84,096	tons	0.0076	0	0.0042	0.00080	lb/ton	BOP	0%	0.32	0.32	0	0	0.18	0.18	0.03	0.03
007-8	Lime Slaking Mill 1	LSM	NF	192,720	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSS1	0%	0.12	0.12	0.02	0.02	0.12	0.12	0.12	0.12
007-9	Lime Slaking Mill 2	LSM	NF	192,720	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSS2	0%	0.12	0.12	0.02	0.02	0.12	0.12	0.12	0.12
Total of Non-Fugitive Emissions for Lime Storage and Handling Operations:													160.86	0.71	0.04	0.04	56.52	0.47	8.76	0.27
Total of Fugitive Emissions for Lime Storage and Handling Operations:													0	0	0	0	0	0	0	0

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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 Lime Storage and Handling Operations:													160.86	0.71	0.04	0.04	56.52	0.47	8.76	0.27
Ammonium Nitrate Prill Delivery and Handling Operations																				
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	PBL	NF	6,244	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.06	0.06	0	0	0.02	0.02	0.003	0.003
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	PBL	NF	6,244	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.06	0.06	0	0	0.02	0.02	0.003	0.003
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	PBL	NF	6,244	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.06	0.06	0	0	0.02	0.02	0.003	0.003
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	PBL	NF	6,244	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.06	0.06	0	0	0.02	0.02	0.003	0.003
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	PBL	NF	6,244	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.06	0.06	0	0	0.02	0.02	0.003	0.003
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	PBL	NF	31,219	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.31	0.31	0	0	0.11	0.11	0.02	0.02
Total of Non-Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													0.62	0.62	0	0	0.22	0.22	0.03	0.03
Total of Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													0.62	0.62	0	0	0.22	0.22	0.03	0.03
Portable Aggregate System																				
009-9	Aggregate to Hopper (via front-end loader)	NMTrUnprt	F	2,500,000	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.92	0.92	0	0	0.44	0.44	0.07	0.07
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	VGFScreenC	NF	2,500,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	2.75	2.75	0	0	0.93	0.93	0.06	0.06
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	JCCrushC	NF	2,500,000	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	1.50	1.50	0	0	0.68	0.68	0.13	0.13
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	NMTrPrt	NF	2,500,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.10	0.01	0	0	0.05	0.005	0.007	0.0007
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	NMTrPrt	NF	2,500,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	TDSScreenC	NF	2,500,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	2.75	2.75	0	0	0.93	0.93	0.06	0.06
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	NMTrPrt	NF	2,500,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.10	0.10	0	0	0.05	0.05	0.007	0.007
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	CSSCrushC	NF	2,500,000	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	1.50	1.50	0	0	0.68	0.68	0.13	0.13
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	NMTrPrt	NF	2,500,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.10	0.01	0	0	0.05	0.005	0.007	0.0007
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	NMTrPrt	NF	2,500,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.10	0.01	0	0	0.05	0.005	0.007	0.0007
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	NMTrUnprt	F	2,500,000	tons	0.00074	0	0.00035	0.000053	lb/ton	WS	90%	0.92	0.09	0	0	0.44	0.04	0.07	0.007
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	NMTrUnprt	F	2,500,000	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.92	0.92	0	0	0.44	0.44	0.07	0.07
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	AWindPAS	F	0.23	acre-yr	3,189.65	0	1,594.82	239.22	lb/acre-yr	BOP	0%	0.37	0.37	0	0	0.18	0.18	0.03	0.03
Total of Non-Fugitive Emissions for Portable Aggregate System:													8.99	8.73	0	0	3.43	3.31	0.41	0.39
Total of Fugitive Emissions for Portable Aggregate System:													3.13	2.30	0	0	1.49	1.10	0.23	0.17
Total of Non-Fugitive and Fugitive Emissions for Portable Aggregate System:													12.13	11.03	0	0	4.93	4.41	0.64	0.56
Supplemental Portable Aggregate System																				
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	VGFScreenC	NF	4,400,000	tons	0.0022	0	0.00074	0.000050	lb/ton	BOP	0%	4.84	4.84	0	0	1.63	1.63	0.11	0.11
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	JCCrushC	NF	4,400,000	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	2.64	2.64	0	0	1.19	1.19	0.22	0.22

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x60	NMTTrPrt	NF	6,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.25	0.03	0	0	0.12	0.01	0.02	0.002
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	TDSScreenC	NF	6,400,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	7.04	7.04	0	0	2.37	2.37	0.16	0.16
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.17	0.17	0	0	0.08	0.08	0.01	0.01
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	4,400,000	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	2.64	2.64	0	0	1.19	1.19	0.22	0.22
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-33	Item 3 SPAS Vibrating Screen to Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x40	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.17	0.17	0	0	0.08	0.08	0.01	0.01
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.00
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.17	0.17	0	0	0.08	0.08	0.01	0.01
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	NMTTrPrt	NF	4,400,000	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.17	0.02	0	0	0.08	0.008	0.01	0.001
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	NMTTrUnprt	F	4,400,000	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	1.62	1.62	0	0	0.77	0.77	0.12	0.12
009-38	SPAS Stockpiles to Trucks	NMTTrUnprt	F	4,400,000	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	1.62	1.62	0	0	0.77	0.77	0.12	0.12
009-39	Wind Erosion of the SPAS Stockpiles	AWindSPAS	F	3.31	acre-yr	3,189.65	0	1,594.82	239.22	lb/acre-yr	BOP	0%	5.27	5.27	0	0	2.64	2.64	0.40	0.40
Total of Non-Fugitive Emissions for Supplemental Portable Aggregate System:													19.15	17.83	0	0	7.31	6.69	0.85	0.76
Total of Fugitive Emissions for Supplemental Portable Aggregate System:													8.52	8.52	0	0	4.17	4.17	0.63	0.63
Total of Non-Fugitive and Fugitive Emissions for Supplemental Portable Aggregate System:													27.67	26.35	0	0	11.48	10.86	1.48	1.39
Diesel Emergency ICE																				
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	607,000	hp-hr	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	BOP	0%	0.05	0.05	0.006	0.006	0.05	0.05	0.05	0.05
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	29,500	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	381,000	hp-hr	0.00015	0.000016	0.00015	0.00015	lb/hp-hr	BOP	0%	0.03	0.03	0.003	0.003	0.03	0.03	0.03	0.03
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	45,000	hp-hr	0.00036	0.000040	0.00036	0.00036	lb/hp-hr	BOP	0%	0.008	0.008	0.0009	0.0009	0.008	0.008	0.008	0.008
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	450,000	hp-hr	0.00015	0.000017	0.00015	0.00015	lb/hp-hr	BOP	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	80,500	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	37,500	hp-hr	0.00044	0.000049	0.00044	0.00044	lb/hp-hr	BOP	0%	0.008	0.008	0.0009	0.0009	0.008	0.008	0.008	0.008
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	50,000	hp-hr	0.00047	0.000052	0.00047	0.00047	lb/hp-hr	BOP	0%	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	240,000	hp-hr	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	BOP	0%	0.03	0.03	0.003	0.003	0.03	0.03	0.03	0.03

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	42,900	hp-hr	0.00046	0.000051	0.00046	0.00046	lb/hp-hr	BOP	0%	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	199,000	hp-hr	0.00026	0.000029	0.00026	0.00026	lb/hp-hr	BOP	0%	0.03	0.03	0.003	0.003	0.03	0.03	0.03	0.03
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	16,750	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.004	0.004	0.0005	0.0005	0.004	0.004	0.004	0.004
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	240,000	hp-hr	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	BOP	0%	0.03	0.03	0.003	0.003	0.03	0.03	0.03	0.03
Total of Non-Fugitive Emissions for Diesel Emergency ICE:													0.30	0.30	0.03	0.03	0.30	0.30	0.30	0.30
Total of Fugitive Emissions for Diesel Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:													0.30	0.30	0.03	0.03	0.30	0.30	0.30	0.30
Propane Emergency ICE																				
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	6,500	hp-hr	0.00019	0.00010	0.00019	0.00019	lb/hp-hr	BOP	0%	0.0006	0.0006	0.0003	0.0003	0.0006	0.0006	0.0006	0.0006
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	30,000	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
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	40,000	hp-hr	0.00018	0.000092	0.00018	0.00018	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	IA31-P	NF	15,260	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.002	0.002	0.0008	0.0008	0.002	0.002	0.002	0.002
049-39	Propane Emergency Generator IA32-P (32 hp engine)	IA32-P	NF	16,000	hp-hr	0.00014	0.000073	0.00014	0.00014	lb/hp-hr	BOP	0%	0.001	0.001	0.0006	0.0006	0.001	0.001	0.001	0.001
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	IA37-P	NF	56,591	hp-hr	0.00012	0.000064	0.00012	0.00012	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	56,591	hp-hr	0.00012	0.000064	0.00012	0.00012	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	51,500	hp-hr	0.00016	0.000082	0.00016	0.00016	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
Total of Non-Fugitive Emissions for Propane Emergency ICE:													0.02	0.02	0.011	0.011	0.02	0.02	0.02	0.02
Total of Fugitive Emissions for Propane Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:													0.02	0.02	0.011	0.011	0.02	0.02	0.02	0.02
Natural Gas Emergency ICE																				
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	8,500	hp-hr	0.00026	0.00013	0.00026	0.00026	lb/hp-hr	BOP	0%	0.001	0.001	0.0006	0.0006	0.001	0.001	0.001	0.001
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	99,500	hp-hr	0.00014	0.000071	0.00014	0.00014	lb/hp-hr	BOP	0%	0.007	0.007	0.004	0.004	0.007	0.007	0.007	0.007
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	96,000	hp-hr	0.00018	0.000094	0.00018	0.00018	lb/hp-hr	BOP	0%	0.009	0.009	0.005	0.005	0.009	0.009	0.009	0.009
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	20,000	hp-hr	0.00013	0.000066	0.00013	0.00013	lb/hp-hr	BOP	0%	0.001	0.001	0.0007	0.0007	0.001	0.001	0.001	0.001
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	15,915	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.002	0.002	0.0009	0.0009	0.002	0.002	0.002	0.002
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	16,000	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.002	0.002	0.0009	0.0009	0.002	0.002	0.002	0.002
Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:													0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
Total of Fugitive Emissions for Natural Gas Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:													0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
Diesel Non-Emergency ICE																				
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	1,121,280	hp-hr	0.00075	0.00008	0.00075	0.00075	lb/hp-hr	BOP	0%	0.42	0.42	0.05	0.05	0.42	0.42	0.42	0.42
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	1,138,800	hp-hr	0.00034	0.000037	0.00034	0.00034	lb/hp-hr	BOP	0%	0.19	0.19	0.02	0.02	0.19	0.19	0.19	0.19

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	247,032	hp-hr	0.00038	0.000042	0.00038	0.00038	lb/hp-hr	BOP	0%	0.05	0.05	0.005	0.005	0.05	0.05	0.05	0.05
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	1,182,600	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.29	0.29	0.03	0.03	0.29	0.29	0.29	0.29
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	5,054,520	hp-hr	0.000016	0.0000018	0.000016	0.000016	lb/hp-hr	BOP	0%	0.04	0.04	0.005	0.005	0.04	0.04	0.04	0.04
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	2,628,000	hp-hr	0.0000049	0.00000054	0.0000049	0.0000049	lb/hp-hr	BOP	0%	0.006	0.006	0.0007	0.0007	0.006	0.006	0.006	0.006
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:													1.00	1.00	0.11	0.11	1.00	1.00	1.00	1.00
Total of Fugitive Emissions for Diesel Non-Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:													1.00	1.00	0.11	0.11	1.00	1.00	1.00	1.00
Propane Non-Emergency ICE																				
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	236,520	hp-hr	0.00023	0.00012	0.00023	0.00023	lb/hp-hr	BOP	0%	0.03	0.03	0.01	0.01	0.03	0.03	0.03	0.03
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	175,200	hp-hr	0.00027	0.00014	0.00027	0.00027	lb/hp-hr	BOP	0%	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:													0.05	0.05	0.03	0.03	0.05	0.05	0.05	0.05
Total of Fugitive Emissions for Propane Non-Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:													0.05	0.05	0.03	0.03	0.05	0.05	0.05	0.05
Miscellaneous Fuel Burning Equipment																				
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	3,003.80	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.04	0.04	0.01	0.01	0.03	0.03	0.02	0.02
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	4,292.40	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
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	4,292.40	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
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	83,211	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.31	0.31	0.23	0.23	0.31	0.31	0.31	0.31
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	8,322	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
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	6,311.14	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	4,371.24	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
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0.45	0.45	0.32	0.32	0.44	0.44	0.43	0.43
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0.45	0.45	0.32	0.32	0.44	0.44	0.43	0.43
Copper Decant Solids Handling Operations																				
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	AWindDSH1	F	3.00	acre-yr	618.33	0	309.17	46.37	lb/acre-yr	BOP	0%	0.93	0.93	0	0	0.46	0.46	0.07	0.07
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	DSH1TrUnprt	F	18,000	tons	0.00055	0	0.00026	0.000040	lb/ton	BOP	0%	0.005	0.005	0	0	0.002	0.002	0.0004	0.0004
Total of Non-Fugitive Emissions for Copper Decant Solids Handling Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Copper Decant Solids Handling Operations:													0.93	0.93	0	0	0.47	0.47	0.07	0.07
Total of Non-Fugitive and Fugitive Emissions for Copper Decant Solids Handling Operations:													0.93	0.93	0	0	0.47	0.47	0.07	0.07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
AOS1: Two Concentrator Operations																				
Mining Operations (AOS1)																				
026-3 (AOS1)	Drilling (AOS1)	Drilling (AOS1)	F	106,219	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	69.04	69.04	0	0	41.43	41.43	7.67	7.67
026-2 (AOS1)	Blasting (AOS1)	ABlasting (AOS1)	F	260	blasts	3,742.33	0	1,946.01	112.27	lb/blast	BOP	0%	486.50	486.50	0	0	252.98	252.98	14.60	14.60
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	ATravel (AOS1)	F	7,099,653	VMT	11.81	0	2.98	0.30	lb/VMT	UnpvdRd	90%	41,931.10	4,193.11	0	0	10,596.12	1,059.61	1,059.61	105.96
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	ATravel (AOS1)	F	2,366,551	VMT	11.81	0	2.98	0.30	lb/VMT	UnpvdRd	90%	13,977.03	1,397.70	0	0	3,532.04	353.20	353.20	35.32
023-3 (AOS1)	Other Vehicle Travel (AOS1)	ATravel (AOS1)	F	14,070,600	VMT	11.81	0	2.98	0.30	lb/VMT	UnpvdRd	90%	83,102.05	8,310.20	0	0	21,000.14	2,100.01	2,100.01	210.00
023-1 (AOS1)	Dozer Operation (AOS1)	Dozer (AOS1)	F	133,221	hours	8.85	0	1.61	0.93	lb/hr	BOP	0%	589.25	589.25	0	0	106.96	106.96	61.87	61.87
023-2 (AOS1)	Road Grader Operation (AOS1)	Grader (AOS1)	F	420,480	VMT	3.53	0	1.10	0.11	lb/VMT	UnpvdRd	90%	741.57	74.16	0	0	231.60	23.16	22.99	2.30
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Ore1TrUnprt (AOS1)	F	254,833,922	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	345.74	345.74	0	0	163.53	163.53	24.76	24.76
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Ore2TrUnprt	F	44,433,881	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	60.28	60.28	0	0	28.51	28.51	4.32	4.32
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Ore2TrUnprt	F	32,632,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	44.27	44.27	0	0	20.94	20.94	3.17	3.17
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Ore3TrUnprt	F	9,230,000	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	12.52	12.52	0	0	5.92	5.92	0.90	0.90
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Ore4TrUnprt	F	168,538,041	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	228.66	228.66	0	0	108.15	108.15	16.38	16.38
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)																				
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	C51 (AOS1)	NF	7,884,000,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	DC	0%	7.60	7.60	0	0	7.60	7.60	7.60	7.60
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	9.66	0.97	0	0	4.57	0.46	0.69	0.07
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	9.66	0.97	0	0	4.57	0.46	0.69	0.07
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	9.66	0.97	0	0	4.57	0.46	0.69	0.07
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Ore2TrUnprt	F	53,260,800	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	72.26	72.26	0	0	34.18	34.18	5.18	5.18
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Ore2TrUnprt	F	13,315,200	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	18.07	18.07	0	0	8.54	8.54	1.29	1.29
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Ore2TrUnprt	F	13,315,200	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	18.07	18.07	0	0	8.54	8.54	1.29	1.29
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	AWindCOS1/5 (AOS1)	F	6.18	acre-yr	1,962.86	0	981.43	147.21	lb/acre-yr	BOP	0%	6.07	6.07	0	0	3.03	3.03	0.45	0.45
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)																				
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	SDC1 (AOS1)	NF	7,621,200,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.25	1.25	0	0	1.25	1.25	1.25	1.25
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	SDC2 (AOS1)	NF	8,777,520,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.44	1.44	0	0	1.44	1.44	1.44	1.44
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	SDC3 (AOS1)	NF	8,777,520,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.44	1.44	0	0	1.44	1.44	1.44	1.44
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	SDC4 (AOS1)	NF	8,777,520,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.44	1.44	0	0	1.44	1.44	1.44	1.44
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Ore2TrUnprt	F	70,080,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	95.08	95.08	0	0	44.97	44.97	6.81	6.81
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	AWindCOS6 (AOS1)	F	3.04	acre-yr	1,962.86	0	981.43	147.21	lb/acre-yr	BOP	0%	2.98	2.98	0	0	1.49	1.49	0.22	0.22
Second Concentrator Milling Operations (AOS1)																				
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	SDC5 (AOS1)	NF	11,563,200,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.90	1.90	0	0	1.90	1.90	1.90	1.90

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	SDC6 (AOS1)	NF	11,563,200,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.90	1.90	0	0	1.90	1.90	1.90	1.90
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	SDC7 (AOS1)	NF	12,088,800,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	1.99	1.99	0	0	1.99	1.99	1.99	1.99
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	SDC8 (AOS1)	NF	14,191,200,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	2.33	2.33	0	0	2.33	2.33	2.33	2.33
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	SDC9 (AOS1)	NF	13,140,000,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	2.16	2.16	0	0	2.16	2.16	2.16	2.16
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	SDC10 (AOS1)	NF	5,256,000,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.86	0.86	0	0	0.86	0.86	0.86	0.86
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	SDC11 (AOS1)	NF	5,256,000,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.86	0.86	0	0	0.86	0.86	0.86	0.86
Second Concentrator Concentrate Handling Operations (AOS1)																				
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	CCTrPrt	F	499,320	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	CCTrPrt	F	499,320	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	CCTrPrt	F	499,320	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	AWindSCC (AOS1)	F	0.30	acre-yr	47,108.66	0	23,554.33	3,533.15	lb/acre-yr	3Sided	75%	7.07	1.77	0	0	3.53	0.88	0.53	0.13
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	8,760	hours	0.063	0.049	0.063	0.063	lb/hr	SC	0%	0.28	0.28	0.21	0.21	0.28	0.28	0.28	0.28
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	MC4TrPrt	NF	18,396	tons	0.0022	0	0.0010	0.00016	lb/ton	BOP	0%	0.02	0.02	0	0	0.009	0.009	0.001	0.001
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	MC4TrPrt	F	18,396	tons	0.0022	0	0.0010	0.00016	lb/ton	BOP	0%	0.02	0.02	0	0	0.009	0.009	0.001	0.001
Second Concentrator Lime and Other Regent Operations (AOS1)																				
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	LimeLd	NF	99,514	tons	0.61	0	0.21	0.03	lb/ton	SLimeBH	99%	30.35	0.30	0	0	10.62	0.11	1.61	0.02
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	SLS (AOS1)	NF	99,514	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	SLSS	0%	0.06	0.06	0.01	0.01	0.06	0.06	0.06	0.06
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	FiTrUnprt	NF	7,227	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.92	0.92	0	0	0.44	0.44	0.07	0.07
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	FiTrUnprt	NF	482	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.06	0.06	0	0	0.03	0.03	0.004	0.004
Second Concentrator Prill Handling Operations (AOS1)																				
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	PBL	NF	25,365	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.25	0.25	0	0	0.09	0.09	0.01	0.01
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	PBL	NF	25,365	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.25	0.25	0	0	0.09	0.09	0.01	0.01
Second Concentrator Emergency ICE (AOS1)																				
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	304,500	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.05	0.05	0.006	0.006	0.05	0.05	0.05	0.05
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	381,000	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.06	0.06	0.007	0.007	0.06	0.06	0.06	0.06
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
Total of Non-Fugitive Emissions for AOS1:													86.49	30.35	0.24	0.24	50.63	27.77	29.42	25.96
Total of Fugitive Emissions for AOS1:													141,807.67	16,025.79	0	0	36,192.63	4,366.08	3,685.27	502.63
Total of Non-Fugitive and Fugitive Emissions for AOS1:													141,894.16	16,056.14	0.24	0.24	36,243.26	4,393.85	3,714.69	528.60
AOS5: Emergency Grizzly Systems																				
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	BGScreenC	F	43,800,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	48.18	48.18	0	0	16.21	16.21	1.10	1.10

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Ore2TrUnprt	F	43,800,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS	90%	59.42	5.94	0	0	28.11	2.81	4.26	0.43
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	AWindTOS	F	1.00	acre-yr	1,962.86	0	981.43	147.21	lb/acre-yr	BOP	0%	0.98	0.98	0	0	0.49	0.49	0.07	0.07
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Ore2TrUnprt	F	43,800,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	59.42	59.42	0	0	28.11	28.11	4.26	4.26
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Ore2TrPrt	NF	43,800,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	6.36	6.36	0	0	3.01	3.01	0.46	0.46
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Ore2TrPrt	NF	43,800,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	6.36	6.36	0	0	3.01	3.01	0.46	0.46
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Ore2TrPrt	NF	43,800,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	6.36	6.36	0	0	3.01	3.01	0.46	0.46
Total of Non-Fugitive Emissions for AOS5:													19.07	19.07	0	0	9.02	9.02	1.37	1.37
Total of Fugitive Emissions for AOS5:													168.01	114.53	0	0	72.91	47.61	9.68	5.85
Total of Non-Fugitive and Fugitive Emissions for AOS5:													187.08	133.60	0	0	81.93	56.63	11.05	7.22
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:													295.06	117.75	14.24	14.24	147.39	85.13	73.61	64.18
Total of Fugitive Emissions Under the Primary Operating Scenario:													74,321.01	8,990.81	0	0	19,106.13	2,583.40	1,974.19	321.72
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:													74,616.07	9,108.56	14.24	14.24	19,253.51	2,668.53	2,047.80	385.90
Total of Non-Fugitive Emissions Under AOS1:													339.77	106.31	14.48	14.48	171.30	86.19	87.80	74.92
Total of Fugitive Emissions Under AOS1:													142,313.67	16,522.12	0	0	36,447.95	4,616.59	3,726.71	543.35
Total of Non-Fugitive and Fugitive Emissions Under AOS1:													142,653.43	16,628.44	14.48	14.48	36,619.26	4,702.78	3,814.51	618.27

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
Mining Operations																				
026-3	Drilling	Drilling	F	200	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	260.00	260.00	0	0	156.00	156.00	28.89	28.89
026-2	Blasting	HBlasting	F	1	blasts	1,252.20	0	651.14	37.57	lb/blast	BOP	0%	1,252.20	1,252.20	0	0	651.14	651.14	37.57	37.57
022-1	Haul Truck Travel Inside the Pit	HTravel	F	472.50	VMT	11.30	0	2.85	0.29	lb/VMT	UnpvdRd	90%	5,337.80	533.78	0	0	1,348.88	134.89	134.89	13.49
022-2	Haul Truck Travel Outside the Pit	HTravel	F	157.50	VMT	11.30	0	2.85	0.29	lb/VMT	UnpvdRd	90%	1,779.27	177.93	0	0	449.63	44.96	44.96	4.50
023-3	Other Vehicle Travel	HTravel	F	1,877.44	VMT	11.30	0	2.85	0.29	lb/VMT	UnpvdRd	90%	21,209.28	2,120.93	0	0	5,359.65	535.97	535.97	53.60
023-1	Dozer Operation	Dozer	F	16	hours	8.85	0	1.61	0.93	lb/hr	BOP	0%	141.54	141.54	0	0	25.69	25.69	14.86	14.86
023-2	Road Grader Operation	Grader	F	30	VMT	3.53	0	1.10	0.11	lb/VMT	UnpvdRd	90%	105.82	10.58	0	0	33.05	3.30	3.28	0.33
021-1	Loading Mined Material into Haul Trucks	Ore1TrUnprt	F	30,515	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	82.80	82.80	0	0	39.16	39.16	5.93	5.93
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Ore2TrUnprt	F	12,865	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	34.91	34.91	0	0	16.51	16.51	2.50	2.50
045-3	Unloading Ore to Leaching Areas	Ore3TrUnprt	F	3,433	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	9.32	9.32	0	0	4.41	4.41	0.67	0.67
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Ore4TrUnprt	F	14,217	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	38.58	38.58	0	0	18.25	18.25	2.76	2.76
Total of Non-Fugitive Emissions for Mining Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Mining Operations:													30,251.50	4,662.55	0	0	8,102.36	1,630.28	812.27	165.09
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:													30,251.50	4,662.55	0	0	8,102.36	1,630.28	812.27	165.09
Primary Crushing and Overland Conveying Operations																				
001-1	Processes Controlled by Scrubber C18	C18	NF	660,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	SC	0%	1.27	1.27	0	0	1.27	1.27	1.27	1.27
001-5	Processes Controlled by Dust Collector C51	C51	NF	900,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	DC	0%	1.74	1.74	0	0	1.74	1.74	1.74	1.74
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	WS/BOP	0%	2.21	2.21	0	0	1.04	1.04	0.16	0.16
001-8	Overland Conveyor 3 to Overland Conveyor 4	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	2.21	2.21	0	0	1.04	1.04	0.16	0.16
001-9	Overland Conveyor 4 to Radial Stacker 5	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	WS/BOP	0%	2.21	2.21	0	0	1.04	1.04	0.16	0.16
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Ore2TrUnprt	F	0	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	0	0	0	0	0	0	0	0
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Ore2TrUnprt	F	7,600	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	20.62	20.62	0	0	9.75	9.75	1.48	1.48
001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Ore2TrUnprt	F	7,600	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	20.62	20.62	0	0	9.75	9.75	1.48	1.48
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	HWindCOS1/5	F	9.22	acre-yr	0.22	0	0.11	0.017	lb/acre-hr	BOP	0%	2.07	2.07	0	0	1.03	1.03	0.15	0.15
Total of Non-Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													9.63	9.63	0	0	6.14	6.14	3.48	3.48
Total of Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													43.31	43.31	0	0	20.54	20.54	3.11	3.11
Total of Non-Fugitive and Fugitive Emissions for Primary Crushing and Overland Conveying Operations:													52.94	52.94	0	0	26.68	26.68	6.59	6.59
Milling Operations																				
002-1	Processes Controlled by GL1 Dust Collector C1	C1	NF	900,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	1.59	1.59	0	0	1.59	1.59	1.59	1.59
002-2	Processes Controlled by GL2 Dust Collector C2	C2	NF	900,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	1.59	1.59	0	0	1.59	1.59	1.59	1.59
002-3	Processes Controlled by GL3 Dust Collector DC3	DC3	NF	900,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	1.59	1.59	0	0	1.59	1.59	1.59	1.59

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
002-4	Processes Controlled by GL4 Dust Collector DC4	DC4	NF	900,000	dscf	1.77E-06	0	1.77E-06	1.77E-06	lb/dscf	DC	0%	1.59	1.59	0	0	1.59	1.59	1.59	1.59
002-6	Processes Controlled by GL5 Dust Collector DC5	DC5	NF	900,000	dscf	5.71E-07	0	5.71E-07	5.71E-07	lb/dscf	DC	0%	0.51	0.51	0	0	0.51	0.51	0.51	0.51
Total of Non-Fugitive Emissions for Milling Operations:													6.89	6.89	0	0	6.89	6.89	6.89	6.89
Total of Fugitive Emissions for Milling Operations:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Milling Operations:													6.89	6.89	0	0	6.89	6.89	6.89	6.89
Copper Concentrate Processing and Loading Operations																				
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	CCTrPrt	NF	240	tons	0.000050	0	0.000024	0.000036	lb/ton	IncorpIWS	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	CCTrPrt	NF	240	tons	0.000050	0	0.000024	0.000036	lb/ton	IncorpIWS	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	CCTrPrt	F	240	tons	0.000050	0	0.000024	0.000036	lb/ton	IncorpIWS	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	CCTrPrt	F	240	tons	0.000050	0	0.000024	0.000036	lb/ton	IncorpIWS	0%	0.01	0.01	0	0	0.006	0.006	0.0009	0.0009
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	HWIndICC	F	0.50	acre-yr	5.38	0	2.69	0.40	lb/acre-hr	3Sided	75%	2.69	0.67	0	0	1.34	0.34	0.20	0.05
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	CCTrUnprt	F	240	tons	0.00047	0	0.00022	0.000034	lb/ton	BOP	0%	0.11	0.11	0	0	0.05	0.05	0.008	0.008
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	HWIndOCC	F	1.80	acre-yr	5.38	0	2.69	0.40	lb/acre-hr	BOP	0%	9.68	9.68	0	0	4.84	4.84	0.73	0.73
006-7	All Copper Concentrate Stockpiles to Trucks	CCTrUnprt	F	240	tons	0.00047	0	0.00022	0.000034	lb/ton	BOP	0%	0.11	0.11	0	0	0.05	0.05	0.008	0.008
Total of Non-Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													0.02	0.02	0	0	0.01	0.01	0.002	0.002
Total of Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													12.62	10.60	0	0	6.30	5.29	0.95	0.79
Total of Non-Fugitive and Fugitive Emissions for Copper Concentrate Processing and Loading Operations:													12.64	10.62	0	0	6.31	5.30	0.95	0.80
Molybdenum Concentrate Processing and Bagging Operations																				
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	MC1TrPrt	F	5.00	tons	0.000055	0	0.000026	0.000039	lb/ton	IncorpIWS	0%	0.0003	0.0003	0	0	0.0001	0.0001	0.00002	0.00002
Total of Non-Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0.0003	0.0003	0	0	0.0001	0.0001	0.00002	0.00002
Total of Non-Fugitive and Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:													0.0003	0.0003	0	0	0.0001	0.0001	0.00002	0.00002
Tailings Operations																				
027-3	Wind Erosion of Tailings	HWIndT	F	4,200	acre-yr	0.024	0	0.0118	0.00176	lb/acre-hr	IncorpT	0%	98.82	98.82	0	0	49.41	49.41	7.41	7.41
Total of Non-Fugitive Emissions for Tailings Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Tailings Operations:													98.82	98.82	0	0	49.41	49.41	7.41	7.41
Total of Non-Fugitive and Fugitive Emissions for Tailings Operations:													98.82	98.82	0	0	49.41	49.41	7.41	7.41
Concentrate Leach Plant																				
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	NGC	NF	25.00	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.19	0.19	0.14	0.14	0.19	0.19	0.19	0.19
042-11	CLP Cooling Tower	CLP-CT	F	240	1000 gal	0.0015	0	0.0014	0.00027	lb/1000 gal	IncorpME	0%	0.35	0.35	0	0	0.34	0.34	0.06	0.06
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	1	hours	2.75	2.75	2.75	2.75	lb/hr	SC	0%	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	MC2TrPrt	NF	4.00	tons	0.000055	0	0.000026	0.000039	lb/ton	IncorpIWS	0%	0.0002	0.0002	0	0	0.0001	0.0001	0.00002	0.00002

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	4.00	tons	0.000055	0	0.000026	0.0000039	lb/ton	IncorpIWS	0%	0.0002	0.0002	0	0	0.0001	0.0001	0.00002	0.00002
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	MC3TrPrt	NF	4.00	tons	0.027	0	0.013	0.0020	lb/ton	IncorpIWS	0%	0.11	0.11	0	0	0.05	0.05	0.008	0.008
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	MCD C2	NF	30,000	dscf	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	DC	0%	0.09	0.09	0	0	0.09	0.09	0.09	0.09
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	5.23	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
047-4	Natural Gas Deolier Heater (6.5 MMBtu/hr)	NGC	NF	6.50	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.05
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	1	hours	0.13	0.10	0.13	0.13	lb/hr	SCF	0%	0.13	0.13	0.10	0.10	0.13	0.13	0.13	0.13
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	MCD C1	NF	54,000	dscf	3.12E-06	0	3.12E-06	3.12E-06	lb/dscf	DC	0%	0.17	0.17	0	0	0.17	0.17	0.17	0.17
047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	MOTrPrt	F	7.00	tons	0.000059	0	0.000028	0.0000042	lb/ton	IncorpIWS	0%	0.0004	0.0004	0	0	0.0002	0.0002	0.00003	0.00003
047-9	Transfer of Soda Ash to the Soda Ash Storage Bin	SALd	NF	25	tons	5.20	0	1.82	0.28	lb/ton	BVSoda	99.9%	130.00	0.13	0	0	45.50	0.05	6.89	0.007
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	MC3TrUnprt	F	37.50	tons	0.25	0	0.12	0.018	lb/ton	BOP	0.0%	9.55	9.55	0	0	4.52	4.52	0.68	0.68
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	MC3TrUnprt	F	37.50	tons	0.25	0	0.12	0.018	lb/ton	BOP	0.0%	9.55	9.55	0	0	4.52	4.52	0.68	0.68
Total of Non-Fugitive Emissions for Concentrate Leach Plant:													133.52	3.65	3.05	3.05	48.96	3.51	10.31	3.43
Total of Fugitive Emissions for Concentrate Leach Plant:													19.45	19.45	0	0	9.37	9.37	1.43	1.43
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:													152.98	23.11	3.05	3.05	58.34	12.88	11.74	4.86
Solution Extraction/Electrowinning Operations																				
011-1	Electrowinning - Main System	EWM	F	1	hours	0.83	0	0.83	0.83	lb/hr	IncorpEW	0%	0.83	0.83	0	0	0.83	0.83	0.83	0.83
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.003	0.003	0.002	0.002	0.003	0.003	0.003	0.003
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.003	0.003	0.002	0.002	0.003	0.003	0.003	0.003
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	0.34	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.003	0.003	0.002	0.002	0.003	0.003	0.003	0.003
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	6.842	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.05
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	5.44	MMBtu	0.010	0.0056	0.010	0.010	lb/MMBtu	BOP	0%	0.05	0.05	0.03	0.03	0.05	0.05	0.05	0.05
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:													0.11	0.11	0.08	0.08	0.11	0.11	0.11	0.11
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:													0.83	0.83	0	0	0.83	0.83	0.83	0.83
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:													0.94	0.94	0.08	0.08	0.94	0.94	0.94	0.94
Lime Storage and Handling Operations																				
007-3	Transfer of Lime to Lime Storage Bin 1	LimeLd	NF	60	tons	0.61	0	0.21	0.032	lb/ton	BV Lime1	99.9%	36.60	0.04	0	0	12.81	0.013	1.94	0.0019
007-5	Lime Porta Batches	LPB	NF	9.60	tons	0.0076	0	0.0042	0.00080	lb/ton	BOP	0%	0.07	0.07	0	0	0.04	0.04	0.008	0.008
007-8	Lime Slaking Mill 1	LSM	NF	22	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSS1	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
007-9	Lime Slaking Mill 2	LSM	NF	22	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	LSS2	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
Total of Non-Fugitive Emissions for Lime Storage and Handling Operations:													36.73	0.16	0.009	0.009	12.90	0.11	2.00	0.06
Total of Fugitive Emissions for Lime Storage and Handling Operations:													0	0	0	0	0	0	0	0

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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 Lime Storage and Handling Operations:													36.73	0.16	0.009	0.009	12.90	0.11	2.00	0.06
Ammonium Nitrate Prill Delivery and Handling Operations																				
050-1	Delivery of Ammonium Nitrate Prill to Prill Bin 1	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-2	Delivery of Ammonium Nitrate Prill to Prill Bin 2	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-4	Delivery of Ammonium Nitrate Prill to Prill Bin 3	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-5	Delivery of Ammonium Nitrate Prill to Prill Bin 4	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-6	Delivery of Ammonium Nitrate Prill to Prill Bin 5	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-3	Prill Bins 1/5 to ANFO Trucks for Transfer to Drill Holes	PBL	NF	255	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	5.10	5.10	0	0	1.79	1.79	0.27	0.27
Total of Non-Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													7.68	7.68	0	0	2.69	2.69	0.41	0.41
Total of Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Ammonium Nitrate Prill Delivery and Handling Operations:													7.68	7.68	0	0	2.69	2.69	0.41	0.41
Portable Aggregate System																				
009-9	Aggregate to Hopper (via front-end loader)	NMTrUnprt	F	850	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.63	0.63	0	0	0.30	0.30	0.04	0.04
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	VGFScreenC	NF	850	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	1.87	1.87	0	0	0.63	0.63	0.04	0.04
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	JCCrushC	NF	850	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	1.02	1.02	0	0	0.46	0.46	0.09	0.09
009-21	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	NMTrPrt	NF	850	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.07	0.007	0	0	0.03	0.003	0.005	0.0005
009-12	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	NMTrPrt	NF	850	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.07	0.07	0	0	0.03	0.03	0.005	0.005
009-13	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	TDSScreenC	NF	850	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	1.87	1.87	0	0	0.63	0.63	0.04	0.04
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	NMTrPrt	NF	850	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.07	0.07	0	0	0.03	0.03	0.005	0.005
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	CSSCrushC	NF	850	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	1.02	1.02	0	0	0.46	0.46	0.09	0.09
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	NMTrPrt	NF	850	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.07	0.007	0	0	0.03	0.003	0.005	0.0005
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	NMTrPrt	NF	850	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.07	0.007	0	0	0.03	0.003	0.005	0.0005
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	NMTrUnprt	F	850	tons	0.00074	0	0.00035	0.000053	lb/ton	WS	90%	0.63	0.06	0	0	0.30	0.03	0.04	0.004
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	NMTrUnprt	F	850	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.63	0.63	0	0	0.30	0.30	0.04	0.04
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	HWindPAS	F	0.23	acre-yr	0.36	0	0.18	0.027	lb/acre-hr	BOP	0%	0.08	0.08	0	0	0.04	0.04	0.006	0.006
Total of Non-Fugitive Emissions for Portable Aggregate System:													6.12	5.93	0	0	2.33	2.25	0.28	0.27
Total of Fugitive Emissions for Portable Aggregate System:													1.97	1.40	0	0	0.93	0.66	0.14	0.10
Total of Non-Fugitive and Fugitive Emissions for Portable Aggregate System:													8.08	7.33	0	0	3.27	2.91	0.42	0.37
Supplemental Portable Aggregate System																				
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	VGFScreenC	NF	540	tons	0.0022	0	0.00074	0.000050	lb/ton	BOP	0%	1.19	1.19	0	0	0.40	0.40	0.03	0.03
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	JCCrushC	NF	540	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	0.65	0.65	0	0	0.29	0.29	0.05	0.05

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	NMTrPrt	NF	540	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	NMTrPrt	NF	990	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.08	0.008	0	0	0.04	0.004	0.006	0.0006
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	TDSScreenC	NF	990	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	2.18	2.18	0	0	0.73	0.73	0.05	0.05
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	NMTrPrt	NF	450	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.04	0.04	0	0	0.02	0.02	0.003	0.003
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	NMTrPrt	NF	450	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	NMTrPrt	NF	450	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	NMTrPrt	NF	450	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	450	tons	0.0012	0	0.00054	0.00010	lb/ton	IncorpWS	0%	0.54	0.54	0	0	0.24	0.24	0.05	0.05
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	NMTrPrt	NF	450	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	NMTrPrt	NF	540	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.04	0.04	0	0	0.02	0.02	0.003	0.003
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	NMTrPrt	NF	540	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	NMTrPrt	NF	540	tons	0.000079	0	0.000037	0.0000057	lb/ton	BOP	0%	0.04	0.04	0	0	0.02	0.02	0.003	0.003
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	NMTrPrt	NF	540	tons	0.000079	0	0.000037	0.0000057	lb/ton	WS	90%	0.04	0.004	0	0	0.02	0.002	0.003	0.0003
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	NMTrUnprt	F	540	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.40	0.40	0	0	0.19	0.19	0.03	0.03
009-38	SPAS Stockpiles to Trucks	NMTrUnprt	F	540	tons	0.00074	0	0.00035	0.000053	lb/ton	BOP	0%	0.40	0.40	0	0	0.19	0.19	0.03	0.03
009-39	Wind Erosion of the SPAS Stockpiles	HWindSPAS	F	3.31	acre-yr	0.36	0	0.18	0.027	lb/acre-hr	BOP	0%	1.20	1.20	0	0	0.60	0.60	0.09	0.09
Total of Non-Fugitive Emissions for Supplemental Portable Aggregate System:													5.02	4.71	0	0	1.89	1.74	0.21	0.19
Total of Fugitive Emissions for Supplemental Portable Aggregate System:													2.00	2.00	0	0	0.98	0.98	0.15	0.15
Total of Non-Fugitive and Fugitive Emissions for Supplemental Portable Aggregate System:													7.02	6.71	0	0	2.87	2.72	0.36	0.33
Diesel Emergency ICE																				
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	1,214	hp-hr	0.00018	0.000020	0.00018	0.00018	lb/hp-hr	BOP	0%	0.22	0.22	0.02	0.02	0.22	0.22	0.22	0.22
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	59	hp-hr	0.0022	0.00024	0.0022	0.0022	lb/hp-hr	BOP	0%	0.13	0.13	0.01	0.01	0.13	0.13	0.13	0.13
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	762	hp-hr	0.00015	0.000016	0.00015	0.00015	lb/hp-hr	BOP	0%	0.11	0.11	0.01	0.01	0.11	0.11	0.11	0.11
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	90	hp-hr	0.00036	0.000040	0.00036	0.00036	lb/hp-hr	BOP	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	900	hp-hr	0.00015	0.000017	0.00015	0.00015	lb/hp-hr	BOP	0%	0.14	0.14	0.02	0.02	0.14	0.14	0.14	0.14
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	161	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.08	0.08	0.009	0.009	0.08	0.08	0.08	0.08
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	75	hp-hr	0.00044	0.000049	0.00044	0.00044	lb/hp-hr	BOP	0%	0.03	0.03	0.004	0.004	0.03	0.03	0.03	0.03
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	100	hp-hr	0.00047	0.000052	0.00047	0.00047	lb/hp-hr	BOP	0%	0.05	0.05	0.005	0.005	0.05	0.05	0.05	0.05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	480	hp-hr	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	BOP	0%	0.12	0.12	0.01	0.01	0.12	0.12	0.12	0.12
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	85.80	hp-hr	0.00046	0.000051	0.00046	0.00046	lb/hp-hr	BOP	0%	0.04	0.04	0.004	0.004	0.04	0.04	0.04	0.04
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	398	hp-hr	0.00026	0.000029	0.00026	0.00026	lb/hp-hr	BOP	0%	0.10	0.10	0.01	0.01	0.10	0.10	0.10	0.10
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	33.50	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.02	0.02	0.002	0.002	0.02	0.02	0.02	0.02
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	480	hp-hr	0.00025	0.000027	0.00025	0.00025	lb/hp-hr	BOP	0%	0.12	0.12	0.01	0.01	0.12	0.12	0.12	0.12
Total of Non-Fugitive Emissions for Diesel Emergency ICE:													1.19	1.19	0.13	0.13	1.19	1.19	1.19	1.19
Total of Fugitive Emissions for Diesel Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:													1.19	1.19	0.13	0.13	1.19	1.19	1.19	1.19
Propane Emergency ICE																				
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	13	hp-hr	0.00019	0.00010	0.00019	0.00019	lb/hp-hr	BOP	0%	0.003	0.003	0.001	0.001	0.003	0.003	0.003	0.003
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	60	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.01	0.01	0.006	0.006	0.01	0.01	0.01	0.01
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	80	hp-hr	0.00018	0.000092	0.00018	0.00018	lb/hp-hr	BOP	0%	0.01	0.01	0.007	0.007	0.01	0.01	0.01	0.01
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	IA31-P	NF	30.52	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.006	0.006	0.003	0.003	0.006	0.006	0.006	0.006
049-39	Propane Emergency Generator IA32-P (32 hp engine)	IA32-P	NF	32	hp-hr	0.00014	0.000073	0.00014	0.00014	lb/hp-hr	BOP	0%	0.005	0.005	0.002	0.002	0.005	0.005	0.005	0.005
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	IA37-P	NF	113.18	hp-hr	0.00012	0.000064	0.00012	0.00012	lb/hp-hr	BOP	0%	0.01	0.01	0.007	0.007	0.01	0.01	0.01	0.01
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	113.18	hp-hr	0.00012	0.000064	0.00012	0.00012	lb/hp-hr	BOP	0%	0.01	0.01	0.007	0.007	0.01	0.01	0.01	0.01
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	103	hp-hr	0.00016	0.000082	0.00016	0.00016	lb/hp-hr	BOP	0%	0.02	0.02	0.008	0.008	0.02	0.02	0.02	0.02
Total of Non-Fugitive Emissions for Propane Emergency ICE:													0.08	0.08	0.04	0.04	0.08	0.08	0.08	0.08
Total of Fugitive Emissions for Propane Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:													0.08	0.08	0.04	0.04	0.08	0.08	0.08	0.08
Natural Gas Emergency ICE																				
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	17	hp-hr	0.00026	0.00013	0.00026	0.00026	lb/hp-hr	BOP	0%	0.004	0.004	0.002	0.002	0.004	0.004	0.004	0.004
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	199	hp-hr	0.00014	0.000071	0.00014	0.00014	lb/hp-hr	BOP	0%	0.03	0.03	0.01	0.01	0.03	0.03	0.03	0.03
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	192	hp-hr	0.00018	0.000094	0.00018	0.00018	lb/hp-hr	BOP	0%	0.04	0.04	0.02	0.02	0.04	0.04	0.04	0.04
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	40	hp-hr	0.00013	0.000066	0.00013	0.00013	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	31.83	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.007	0.007	0.003	0.003	0.007	0.007	0.007	0.007
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	32	hp-hr	0.00021	0.00011	0.00021	0.00021	lb/hp-hr	BOP	0%	0.007	0.007	0.003	0.003	0.007	0.007	0.007	0.007
Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:													0.09	0.09	0.04	0.04	0.09	0.09	0.09	0.09
Total of Fugitive Emissions for Natural Gas Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:													0.09	0.09	0.04	0.04	0.09	0.09	0.09	0.09
Diesel Non-Emergency ICE																				
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	128	hp-hr	0.00075	0.00008	0.00075	0.00075	lb/hp-hr	BOP	0%	0.10	0.10	0.01	0.01	0.10	0.10	0.10	0.10

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	Pick-up or Control Eff. (%)	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
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	130	hp-hr	0.00034	0.000037	0.00034	0.00034	lb/hp-hr	BOP	0%	0.04	0.04	0.005	0.005	0.04	0.04	0.04	0.04
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	28.20	hp-hr	0.00038	0.000042	0.00038	0.00038	lb/hp-hr	BOP	0%	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	135	hp-hr	0.00049	0.000054	0.00049	0.00049	lb/hp-hr	BOP	0%	0.07	0.07	0.007	0.007	0.07	0.07	0.07	0.07
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	577	hp-hr	0.000016	0.0000018	0.000016	0.000016	lb/hp-hr	BOP	0%	0.009	0.009	0.001	0.001	0.009	0.009	0.009	0.009
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	300	hp-hr	0.0000049	0.00000054	0.0000049	0.0000049	lb/hp-hr	BOP	0%	0.001	0.001	0.0002	0.0002	0.001	0.001	0.001	0.001
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:													0.23	0.23	0.03	0.03	0.23	0.23	0.23	0.23
Total of Fugitive Emissions for Diesel Non-Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:													0.23	0.23	0.03	0.03	0.23	0.23	0.23	0.23
Propane Non-Emergency ICE																				
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	27	hp-hr	0.00023	0.00012	0.00023	0.00023	lb/hp-hr	BOP	0%	0.006	0.006	0.003	0.003	0.006	0.006	0.006	0.006
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	20	hp-hr	0.00027	0.00014	0.00027	0.00027	lb/hp-hr	BOP	0%	0.005	0.005	0.003	0.003	0.005	0.005	0.005	0.005
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:													0.01	0.01	0.006	0.006	0.01	0.01	0.01	0.01
Total of Fugitive Emissions for Propane Non-Emergency ICE:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:													0.01	0.01	0.006	0.006	0.01	0.01	0.01	0.01
Miscellaneous Fuel Burning Equipment																				
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	0.3429	MMBtu	0.024	0.0095	0.017	0.011	lb/MMBtu	BOP	0%	0.008	0.008	0.003	0.003	0.006	0.006	0.004	0.004
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	0.49	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
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	0.49	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
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	9.499	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.07	0.07	0.05	0.05	0.07	0.07	0.07	0.07
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	0.95	MMBtu	0.0077	0.0055	0.0077	0.0077	lb/MMBtu	BOP	0%	0.007	0.007	0.005	0.005	0.007	0.007	0.007	0.007
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	0.72045	MMBtu	0.0075	0.0056	0.0075	0.0075	lb/MMBtu	BOP	0%	0.005	0.005	0.004	0.004	0.005	0.005	0.005	0.005
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	0.499	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
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0.10	0.10	0.07	0.07	0.10	0.10	0.10	0.10
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:													0.10	0.10	0.07	0.07	0.10	0.10	0.10	0.10
Copper Decant Solids Handling Operations																				
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	HWindDSH1	F	3.00	acre-yr	0.28	0	0.139	0.021	lb/acre-hr	BOP	0%	0.83	0.83	0	0	0.42	0.42	0.06	0.06
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	DSH1TrUnprt	F	6,000	tons	0.00055	0	0.00026	0.000040	lb/ton	BOP	0%	3.31	3.31	0	0	1.57	1.57	0.24	0.24
Total of Non-Fugitive Emissions for Copper Decant Solids Handling Operations:													0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Copper Decant Solids Handling Operations:													4.14	4.14	0	0	1.98	1.98	0.30	0.30
Total of Non-Fugitive and Fugitive Emissions for Copper Decant Solids Handling Operations:													4.14	4.14	0	0	1.98	1.98	0.30	0.30

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
AOS1: Two Concentrator Operations																				
Mining Operations (AOS1)																				
026-3 (AOS1)	Drilling (AOS1)	Drilling (AOS1)	F	490	holes	1.30	0	0.78	0.14	lb/hole	BOP	0%	637.31	637.31	0	0	382.39	382.39	70.81	70.81
026-2 (AOS1)	Blasting (AOS1)	HBlasting (AOS1)	F	1	blasts	4,919.42	0	2,558.10	147.58	lb/blast	BOP	0%	4,919.42	4,919.42	0	0	2,558.10	2,558.10	147.58	147.58
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	HTravel (AOS1)	F	2,238.75	VMT	15.71	0	3.97	0.40	lb/VMT	UnpvdRd	90%	35,176.80	3,517.68	0	0	8,889.29	888.93	888.93	88.89
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	HTravel (AOS1)	F	746.25	VMT	15.71	0	3.97	0.40	lb/VMT	UnpvdRd	90%	11,725.60	1,172.56	0	0	2,963.10	296.31	296.31	29.63
023-3 (AOS1)	Other Vehicle Travel (AOS1)	HTravel (AOS1)	F	2,141.53	VMT	15.71	0	3.97	0.40	lb/VMT	UnpvdRd	90%	33,649.15	3,364.91	0	0	8,503.24	850.32	850.32	85.03
023-1 (AOS1)	Dozer Operation (AOS1)	Dozer (AOS1)	F	22	hours	8.85	0	1.61	0.93	lb/hr	BOP	0%	194.61	194.61	0	0	35.33	35.33	20.43	20.43
023-2 (AOS1)	Road Grader Operation (AOS1)	Grader (AOS1)	F	48	VMT	3.53	0	1.10	0.11	lb/VMT	UnpvdRd	90%	169.31	16.93	0	0	52.88	5.29	5.25	0.52
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Ore1TrUnprt (AOS1)	F	39,352	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	106.78	106.78	0	0	50.50	50.50	7.65	7.65
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Ore2TrUnprt	F	8,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	21.71	21.71	0	0	10.27	10.27	1.55	1.55
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Ore2TrUnprt	F	7,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	18.99	18.99	0	0	8.98	8.98	1.36	1.36
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Ore3TrUnprt	F	1,264	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	3.43	3.43	0	0	1.62	1.62	0.25	0.25
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Ore4TrUnprt	F	23,087	tons	0.0027	0	0.0013	0.00019	lb/ton	BOP	0%	62.65	62.65	0	0	29.63	29.63	4.49	4.49
Primary Crushing and Overland Conveying Operations (to Bagdad Concentrator) (AOS1)																				
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	C51 (AOS1)	NF	900,000	dscf	1.93E-06	0	1.93E-06	1.93E-06	lb/dscf	DC	0%	1.74	1.74	0	0	1.74	1.74	1.74	1.74
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	2.21	0.22	0	0	1.04	0.10	0.16	0.02
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	2.21	0.22	0	0	1.04	0.10	0.16	0.02
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Ore2TrPrt	NF	7,600	tons	0.00029	0	0.00014	0.000021	lb/ton	Fogging	90%	2.21	0.22	0	0	1.04	0.10	0.16	0.02
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Ore2TrUnprt	F	7,600	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	20.62	20.62	0	0	9.75	9.75	1.48	1.48
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Ore2TrUnprt	F	7,600	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	20.62	20.62	0	0	9.75	9.75	1.48	1.48
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Ore2TrUnprt	F	7,600	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	20.62	20.62	0	0	9.75	9.75	1.48	1.48
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	HWIndCOS1/5 (AOS1)	F	6.18	acre-yr	0.22	0	0.11	0.017	lb/acre-hr	BOP	0%	1.38	1.38	0	0	0.69	0.69	0.10	0.10
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)																				
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	SDC1 (AOS1)	NF	870,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.29	0.29	0	0	0.29	0.29	0.29	0.29
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	SDC2 (AOS1)	NF	1,002,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.33	0.33	0	0	0.33	0.33	0.33	0.33
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	SDC3 (AOS1)	NF	1,002,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.33	0.33	0	0	0.33	0.33	0.33	0.33
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	SDC4 (AOS1)	NF	1,002,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.33	0.33	0	0	0.33	0.33	0.33	0.33
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Ore2TrUnprt	F	8,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	21.71	21.71	0	0	10.27	10.27	1.55	1.55
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	HWIndCOS6 (AOS1)	F	3.04	acre-yr	0.22	0	0.11	0.017	lb/acre-hr	BOP	0%	0.68	0.68	0	0	0.34	0.34	0.05	0.05
Second Concentrator Milling Operations (AOS1)																				
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	SDC5 (AOS1)	NF	1,320,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.43	0.43	0	0	0.43	0.43	0.43	0.43

Emission Inventory Tables for Potential Emission Calculations
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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	Pick-up or Control Eff. (%)	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
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	SDC6 (AOS1)	NF	1,320,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.43	0.43	0	0	0.43	0.43	0.43	0.43
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	SDC7 (AOS1)	NF	1,380,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.45	0.45	0	0	0.45	0.45	0.45	0.45
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	SDC8 (AOS1)	NF	1,620,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.53	0.53	0	0	0.53	0.53	0.53	0.53
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	SDC9 (AOS1)	NF	1,500,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.49	0.49	0	0	0.49	0.49	0.49	0.49
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	SDC10 (AOS1)	NF	600,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.20	0.20	0	0	0.20	0.20	0.20	0.20
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	SDC11 (AOS1)	NF	600,000	dscf	3.29E-07	0	3.29E-07	3.29E-07	lb/dscf	DC	0%	0.20	0.20	0	0	0.20	0.20	0.20	0.20
Second Concentrator Concentrate Handling Operations (AOS1)																				
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	CCTrPrt	F	57	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.003	0.003	0	0	0.001	0.001	0.0002	0.0002
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	CCTrPrt	F	57	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.003	0.003	0	0	0.001	0.001	0.0002	0.0002
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	CCTrPrt	F	57	tons	0.000050	0	0.000024	0.000036	lb/ton	BOP	0%	0.003	0.003	0	0	0.001	0.001	0.0002	0.0002
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	HWIndSCC (AOS1)	F	0.30	acre-yr	5.38	0	2.69	0.40	lb/acre-hr	3Sided	75%	1.61	0.40	0	0	0.81	0.20	0.12	0.03
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	1	hours	0.063	0.049	0.063	0.063	lb/hr	SC	0%	0.06	0.06	0.05	0.05	0.06	0.06	0.06	0.06
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	MC4TrPrt	NF	2.10	tons	0.0022	0	0.0010	0.00016	lb/ton	BOP	0%	0.005	0.005	0	0	0.002	0.002	0.0003	0.0003
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	MC4TrPrt	F	2.10	tons	0.0022	0	0.0010	0.00016	lb/ton	BOP	0%	0.005	0.005	0	0	0.002	0.002	0.0003	0.0003
Second Concentrator Lime and Other Regent Operations (AOS1)																				
007-6 (AOS1)	Transfer of Lime to Second Concentrator Lime Silo (AOS1)	LimeLd	NF	25	tons	0.61	0	0.21	0.03	lb/ton	SLimeBH	99%	15.25	0.15	0	0	5.34	0.05	0.81	0.008
007-7 (AOS1)	Second Concentrator Lime Slaker (AOS1)	SLS (AOS1)	NF	11.36	tons	0.0012	0.00020	0.0012	0.0012	lb/ton	SLSS	0%	0.01	0.01	0.002	0.002	0.01	0.01	0.01	0.01
055-1 (AOS1)	Transfer of Flocculant to Tailings Flocculant Bag Breaker Bin (AOS1)	FiTrUnprt	NF	0.83	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.21	0.21	0	0	0.10	0.10	0.02	0.02
055-2 (AOS1)	Transfer of Flocculant to Concentrate Flocculant Bag Breaker Bin (AOS1)	FiTrUnprt	NF	0.06	tons	0.25	0	0.12	0.018	lb/ton	BOP	0%	0.01	0.01	0	0	0.007	0.007	0.001	0.001
Second Concentrator Prill Handling Operations (AOS1)																				
050-7 (AOS1)	Delivery of Ammonium Nitrate Prill to Prill Bin 6 (AOS1)	PBL	NF	25.75	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	0.52	0.52	0	0	0.18	0.18	0.03	0.03
050-8 (AOS1)	Prill Bin 6 (AOS1) to ANFO Trucks for Transfer to Drill Holes	PBL	NF	50	tons	0.020	0	0.0070	0.0011	lb/ton	BOP	0%	1.00	1.00	0	0	0.35	0.35	0.05	0.05
Second Concentrator Emergency ICE (AOS1)																				
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	609	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.20	0.20	0.02	0.02	0.20	0.20	0.20	0.20
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	762	hp-hr	0.00033	0.000036	0.00033	0.00033	lb/hp-hr	BOP	0%	0.25	0.25	0.03	0.03	0.25	0.25	0.25	0.25
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	84.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.009	0.009	0.02	0.02	0.02	0.02
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	84.70	hp-hr	0.00020	0.00010	0.00020	0.00020	lb/hp-hr	BOP	0%	0.02	0.02	0.009	0.009	0.02	0.02	0.02	0.02
Total of Non-Fugitive Emissions for AOS1:													29.92	8.87	0.12	0.12	15.42	7.32	7.69	6.46
Total of Fugitive Emissions for AOS1:													86,773.03	14,123.05	0	0	23,526.69	5,158.44	2,301.20	464.38
Total of Non-Fugitive and Fugitive Emissions for AOS1:													86,802.96	14,131.92	0.12	0.12	23,542.11	5,165.76	2,308.89	470.84
AOS5: Emergency Grizzly Systems																				
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	BGScreenC	F	5,000	tons	0.0022	0	0.00074	0.000050	lb/ton	IncorpWS	0%	11.00	11.00	0	0	3.70	3.70	0.25	0.25

Emission Inventory Tables for Potential Emission Calculations
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Process Number	Process/Emission Unit Description	Process Code	Non-Fug. (NF) / Fug. (F)	Hourly Process Rate	Rate Units	Emission Factors				EF Units	Control Code	Pick-up or Control Eff. (%)	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
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Ore2TrUnprt	F	5,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS	90%	13.57	1.36	0	0	6.42	0.64	0.97	0.10
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	HWindTOS	F	1.00	acre-yr	0.22	0	0.11	0.017	lb/acre-hr	BOP	0%	0.22	0.22	0	0	0.11	0.11	0.02	0.02
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Ore2TrUnprt	F	5,000	tons	0.0027	0	0.0013	0.00019	lb/ton	WS/BOP	0%	13.57	13.57	0	0	6.42	6.42	0.97	0.97
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Ore2TrPrt	NF	5,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	1.45	1.45	0	0	0.69	0.69	0.10	0.10
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Ore2TrPrt	NF	5,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	1.45	1.45	0	0	0.69	0.69	0.10	0.10
048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Ore2TrPrt	NF	5,000	tons	0.00029	0	0.00014	0.000021	lb/ton	BOP	0%	1.45	1.45	0	0	0.69	0.69	0.10	0.10
Total of Non-Fugitive Emissions for AOS5:													4.35	4.35	0	0	2.06	2.06	0.31	0.31
Total of Fugitive Emissions for AOS5:													38.36	26.15	0	0	16.65	10.87	2.21	1.34
Total of Non-Fugitive and Fugitive Emissions for AOS5:													42.71	30.50	0	0	18.71	12.93	2.52	1.65
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:													207.42	40.49	3.46	3.46	83.63	25.15	25.39	16.54
Total of Fugitive Emissions Under the Primary Operating Scenario:													30,434.64	4,843.11	0	0	8,192.70	1,719.35	826.59	179.21
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:													30,642.06	4,883.60	3.46	3.46	8,276.34	1,744.50	851.98	195.75
Total of Non-Fugitive Emissions Under AOS1:													227.72	39.74	3.58	3.58	92.91	26.33	29.60	19.52
Total of Fugitive Emissions Under AOS1:													86,912.86	14,260.30	0	0	23,596.50	5,226.97	2,312.40	475.39
Total of Non-Fugitive and Fugitive Emissions Under AOS1:													87,140.58	14,300.03	3.58	3.58	23,689.41	5,253.29	2,342.01	494.91

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	Units		
Pollution Control Devices													
CH-02/03	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	0	0	0	2.10	0.68	0	0	0	0	lb/hr	hours	Worst case VOC content of 100 ppm, Manufacturer's Guarantee of TDS/TSS/H ₂ SO ₄ with 25% being H ₂ SO ₄ and a 50% safety factor (see additional details in the SPR application for the Concentrate Leach Plant)
NGF	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	0.82	0.13	0.25	1.36	0	0	181.31	0.0034	0.00034	lb/hr	hours	Engineering Test Data (95% confidence interval), Complete Sulfur Conversion Using a Sulfur Content of 0.5% of the total organics (25 lb organic/hour), AP-42, Table 1.4-2 (07/98), Voluntarily Emission Limitation for VOC, 40 CFR 98, Subpart C, Tables C-1 and C-2, and heat input rates of 0.515 MMBtu/hour for the organic material sent to the flare and 1.55 MMBtu/hour for natural gas combustion in the flare
MDWSS (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	0	0	0	1.83	0	0	0	0	0	lb/hr	hours	Test results from a similar scrubber system scaled to FMBI operations and an added 20% safety factor
H2S (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	0	0	0	0	0	0.038	0	0	0	lb/hr	hours	Manufacturer Expected Concentration of 10 ppm
Drilling and Blasting Operations													
ABlasting	Blasting (annual basis)	3,048.30	135.00	0.92	0	0	0	28,549.85	1.11	0.22	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)	4,064.40	180.00	1.23	0	0	0	38,066.47	1.49	0.29	lb/blast	blasts	
ABlasting (AOS1)	Blasting (AOS1) (annual basis)	12,766.38	565.38	3.86	0	0	0	119,571	4.67	0.92	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 (AOS1)	Blasting (AOS1) (hourly basis)	15,319.65	678.46	4.64	0	0	0	143,485	5.60	1.11	lb/blast	blasts	
Bulk and Molybdenum Flotation Operations													
MFE	Bulk and Molybdenum Flotation Equipment	0	0	0	0.0046	0	0.0084	0	0	0	lb/ton	tons	Testing at the Freeport-McMoRan Henderson Mill in 2009, Freeport-McMoRan Technology Center study titled <i>Hydrogen Sulfide and Carbon Dioxide Emissions from Flotation Cell Operations Under Targeted Conditions</i> conducted by Hazen Research Inc. (02/2013), conservative estimate using pH = 9.5 (molybdenum flotation usually operates at a pH = 11+)
Settling Operations													
ST	Settling Tank	0	0	0	0.00065	0	0	0	0	0	lb/hr	hours	EPA TANKS Program
Solution Extraction/Electrowinning Operations													
SXMP	Solution Extraction - Molybdenum Pressure Leaching	0	0	0	0.087	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
SXM	Solution Extraction - Main Systems	0	0	0	1.49	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
EWM	Electrowinning - Main System	0	0	0	0	0.83	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
RP	Raffinate Pond	0	0	0	2.04	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper
TK-22	Organic Tank TK-22	0	0	0	0.043	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	Units		
TK-13	Organic Mix Tank TK-13	0	0	0	0.047	0	0	0	0	0	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
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
NGHWH	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	0.016	0.037	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	Manufacturer's Information for CO and NO _x , 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
NGEH	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	0.14	0.12	0.00059	0.037	0	0	116.98	0.0022	0.00022	lb/MMBtu	MMBtu	Manufacturer's Information for CO, NO _x , and VOC, AP-42 Table 1.4-2 for SO ₂ , 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	0.14	0.011	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 10 gr/100 scf and 40 CFR 98 Tables C-1 and C-2
Diesel Emergency ICE													
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	0.0000093	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
Table2-19/37-D	2008+ Diesel Emergency Engines (19 ≤ kW < 37)	0.0090	0.011	0.000011	0.0013	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Emission Standards from Table 2 of 40 CFR 60 Subpart IIII 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
Tier2-560-D	Tier 2 Diesel Emergency Engines (kW > 560)	0.0058	0.0099	0.000011	0.00066	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Tier 2 Emission Standards from 40 CFR 1039 Appendix I Table 2 for Engines Rated kW > 560, 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
Tier3-75/130-D	Tier 3 Diesel Emergency Engines (75 ≤ kW < 130)	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	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
Tier3-450/560-D	Tier 3 Diesel Emergency Engines (450 ≤ kW ≤ 560)	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Tier 3 Emission Standards from 40 CFR 1039 Appendix I Table 3 for Engines Rated 450 ≤ kW ≤ 560, 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
C41	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	0.0013	0.0093	0.000011	0.00020	0	0	1.12	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family JCPXL18.1NYS, 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
IA24-D	Diesel Emergency Generator IA24-D (762 hp engine)	0.0026	0.0088	0.000011	0.00015	0	0	1.10	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family CCPXL15.2NZS, 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
IA25-D	Diesel Emergency Generator IA25-D (90 hp engine)	0.0030	0.0071	0.000011	0.00038	0	0	1.36	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family DPKXL04.4NH1, 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
IA28-D	Diesel Emergency Generator IA28-D (900 hp engine)	0.0019	0.014	0.0000099	0.000044	0	0	1.04	0.000042	0.0000085	lb/hp-hr	hp-hr	Manufacturer's Information, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Tables C-1 and C-2, a BSFC of 0.332 lb/hp-hr, and 19,300 Btu/lb diesel
IA42-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	0.0020	0.0069	0.000011	0.00064	0	0	1.43	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family CJDXL04.5130, Complete Sulfur Conversion Using a Diesel Sulfur Content of 15 ppm, 40 CFR 98 Table C-2, 7,000 Btu/hp-hr, and 19,300 Btu/lb diesel
IA43-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	0.0012	0.010	0.000011	0.00077	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family 4PKXL04.4RG1, 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
IA44-D	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	0.0054	0.0056	0.000011	0.00044	0	0	1.19	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family LCPXL08.8NZS, 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

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	Units		
IA47-D	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	0.0016	0.0067	0.000011	0.00035	0	0	1.35	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family NPKXL04.4NL1, 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
IA48-D	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	0.0044	0.0059	0.000011	0.00033	0	0	1.19	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family MCPXL12.5NYS, 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
IA54-D	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	0.0054	0.0056	0.000011	0.00044	0	0	1.20	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family PCPXL08.8NZS, 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 ICE													
IA16-P	Propane Emergency Generator IA16-P (13 hp engine)	1.00	0.012	0.00011	0.0014	0	0	1.39	0.000066	0.000013	lb/hp-hr	hp-hr	Phase 3 Class II Emission Standards from Table 1 of 40 CFR 1054.105, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 51.6 scf/hr
IA19-P	Propane Emergency Generator IA19-P (60 hp engine)	0.037	0.023	0.00011	0.00033	0	0	1.40	0.000067	0.000013	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00) for CO, NO _x , and VOC (4-Stroke Rich Burn, VOC = VOC-HAP), Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 240 scf/hr
IA21-P	Propane Emergency Generator IA21-P (80 hp engine)	0.25	0.0076	0.00010	0.0027	0	0	1.28	0.000061	0.000012	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family DGNXB05.42NL, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 293.2 scf/hr
IA31-P	Propane Emergency Generator IA31-P (30.52 hp engine)	0.13	0.013	0.00012	0.0018	0	0	1.49	0.000071	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family FGXB.9992SL, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 130 scf/hr
IA32-P	Propane Emergency Generator IA32-P (32 hp engine)	0.049	0.011	0.000084	0.0019	0	0	1.03	0.000049	0.000010	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family BGNXB.9992ST, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 94 scf/hr
IA37-P	Propane Emergency Generator IA37-P (113.18 hp engine)	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family KPSIB5.702ED, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
IA38-P	Propane Emergency Generator IA38-P (113.18 hp engine)	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family KPSIB5.702ED, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
IA55-P	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	0.050	0.011	0.000093	0.0027	0	0	1.46	0.00027	0.000011	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family NKHXB06.2NNL, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Table C-2, 2,520 Btu/scf, and Fuel Usage = 337 scf/hr
SEG-P	Second Concentrator Propane Emergency Generators	0.20	0.013	0.00012	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family PCEXB05.9ARC, Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and 10,500 Btu/hp-hr
Natural Gas Emergency ICE													
IA13-NG	Natural Gas Emergency Generator IA13-NG (17 hp engine)	0.049	0.030	0.0000074	0.00043	0	0	1.54	0.000029	0.0000029	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00) for CO, NO _x , and VOC (4-Stroke Rich Burn, VOC = VOC-HAP), Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, and Fuel Usage = 220 scf/hr
IA22-NG	Natural Gas Emergency Generator IA22-NG (199 hp engine)	0.0088	0.0044	0.0000040	0.0022	0	0	0.84	0.000016	0.0000016	lb/hp-hr	hp-hr	Emission Standards from Table 1 of 40 CFR 60 Subpart JJJJ for Emergency Engines ≥ 130 hp, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr
IA23-NG	Natural Gas Emergency Generator IA23-NG (192 hp engine)	0.0023	0.00016	0.0000053	0.00089	0	0	1.11	0.000021	0.0000021	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family BGNXB06.82C1, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, and Fuel Usage = 1,786 scf/hr
IA30-NG	Natural Gas Emergency Generator IA30-NG (40 hp engine)	0.054	0.013	0.0000037	0.00031	0	0	0.77	0.000015	0.0000015	lb/hp-hr	hp-hr	Manufacturer's Information for CO, NO _x , and VOC, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, and Fuel Usage = 259.6 scf/hr
IA33-NG	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	0.22	0.0047	0.0000061	0.0052	0	0	1.27	0.000024	0.0000024	lb/hp-hr	hp-hr	Manufacturer's Information for CO, NO _x , and VOC, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, 23.8 scf/lb, Fuel Usage = 14.27 lb/hr
IA34-NG	Natural Gas Emergency Generator IA34-NG (32 hp engine)	0.17	0.0087	0.0000061	0.0034	0	0	1.28	0.000024	0.0000024	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family GGNXB02.42NN, Complete Sulfur Conversion Using a Natural Gas Sulfur Content of 2,000 grains/MMscf, 40 CFR 98 Tables C-1 and C-2, 1,020 Btu/scf, and Fuel Usage = 342 scf/hr

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	Units			
Diesel Non-Emergency ICE														
Tier3-75/130-DN	Tier 3 Diesel Non-Emergency Engines (75 ≤ kW < 130)	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	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	
IA14-DN	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	0.0026	0.012	0.000011	0.0010	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Manufacturer's Information, 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	
IA15-DN	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	0.0030	0.0057	0.000011	0.00041	0	0	1.26	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family APKXL04.4NJ1, 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	
IA45-DN	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	0.0020	0.0073	0.000011	0.00049	0	0	1.52	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family CH3XL2.00N84, 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	
IA53-DN	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	0.000016	0.00036	0.000011	0.000099	0	0	1.15	0.00020	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family RCPXL12.5NTF, 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	
IA56-DN	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	0.00016	0.000099	0.000011	0.000033	0	0	1.14	0.000046	0.0000093	lb/hp-hr	hp-hr	Certification Values for EPA Engine Family KJDXL06.8309, 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	
Propane Non-Emergency ICE														
IA10-PN	Propane Non-Emergency Generator IA10-PN (27 hp engine)	0.043	0.026	0.00013	0.00038	0	0	1.62	0.000077	0.000015	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00) for CO, NO _x , and VOC (4-Stroke Rich Burn, VOC = VOC-HAP), Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 125 scf/hr	
IA18-PN	Propane Non-Emergency Generator IA18-PN (20 hp engine)	0.052	0.031	0.00016	0.00045	0	0	1.92	0.000092	0.000018	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00) for CO, NO _x , and VOC (4-Stroke Rich Burn, VOC = VOC-HAP), Complete Sulfur Conversion Using a Propane Sulfur Content of 10 gr/100 scf, 40 CFR 98 Tables C-1 and C-2, 2,520 Btu/scf, and Fuel Usage = 110 scf/hr	
Storage Tanks and Parts Cleaning														
GST-150	Gasoline Storage Tank 150 (GDF1)	0	0	0	0.59	0	0	0	0	0	lb/hr	hours	EPA TANKS Program	
GST-FT-3	Gasoline Storage Tank FT-3 (GDF2)	0	0	0	0.59	0	0	0	0	0	lb/hr	hours	EPA TANKS Program	
GST-FF	Gasoline Storage Tank Sycamore TSF (GDF3)	0	0	0	0.56	0	0	0	0	0	lb/hr	hours	EPA TANKS Program	
GST-MO	Gasoline Storage Tank Mine Operations (GDF4)	0	0	0	0.56	0	0	0	0	0	lb/hr	hours	EPA TANKS Program	
PCE	Parts Cleaning Equipment	0	0	0	0.20	0	0	0	0	0	lb/hr	hours	EPA TANKS Program plus the assumption that 5% of total annual usage are losses (i.e., VOC emissions) from parts dipping (density = 6.7 lb/gal)	
XMS	Xanthate Mixing and Storage Tanks	0	0	0	12.34	0	0	0	0	0	lb/ton	tons	AERO Xanthate Handbook (1972), assume a 3-day holding period, and assume sodium ethyl xanthate as a worst-case estimate	
SXMS	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	0	0	0	12.34	0	0	0	0	0	lb/ton	tons	AERO Xanthate Handbook (1972) and assume a 3-day holding period	

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		
Mining Operations																										
026-2	Blasting	ABlasting	F	600	blasts	3,048.30	135.00	0.92	0	0	0	28,549.9	1.11	0.22	lb/blast	914.49	40.50	0.28	0	0	0	8,564.96	0.33	0.07		
Total of Non-Fugitive Emissions for Mining Operations:																0	0	0	0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Mining Operations:																914.49	40.50	0.28	0	0	0	8,564.96	0.33	0.07		
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:																914.49	40.50	0.28	0	0	0	8,564.96	0.33	0.07		
Bulk and Molybdenum Flotation Operations																										
044-1	Bulk and Molybdenum Flotation Equipment	MFE	F	2,238,180	tons	0	0	0	0.0046	0	0.0084	0	0	0	lb/ton	0	0	0	5.11	0	9.43	0	0	0		
Total of Non-Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	5.11	0	9.43	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	5.11	0	9.43	0	0	0		
Concentrate Leach Plant																										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G4 (25 MMBtu/hr)	NGC	NF	219,000	MMBtu	0.082	0.098	0.00059	0	0	0	116.98	0.0022	0.00022	lb/MMBtu	9.02	10.74	0.06	0.59	0	0	12,809.01	0.24	0.02		
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	8,760	hours	0	0	0	2.10	0.68	0	0	0	0	lb/hr	0	0	0	9.20	2.98	0	0	0	0		
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	45,815	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	1.89	2.25	0.01	0.12	0	0	2,679.65	0.05	0.005		
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	NGC	NF	56,940	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	2.34	2.79	0.02	0.15	0	0	3,330.34	0.06	0.006		
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	8,760	hours	0.82	0.13	0.25	1.36	0	0	181.31	0.0034	0.00034	lb/hr	3.59	0.57	1.10	5.96	0	0	794.16	0.01	0.001		
047-7	Settling Tank	ST	NF	8,760	hours	0	0	0	0.00065	0	0	0	0	0	lb/hr	0	0	0	0.003	0	0	0	0	0		
047-8	Solution Extraction - Molybdenum Pressure Leaching	SXMPL	F	8,760	hours	0	0	0	0.087	0	0	0	0	0	lb/hr	0	0	0	0.38	0	0	0	0	0		
Total of Non-Fugitive Emissions for Concentrate Leach Plant:																16.84	16.34	1.19	16.03	2.98	0	19,613.16	0.37	0.04		
Total of Fugitive Emissions for Concentrate Leach Plant:																0	0	0	0.38	0	0	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:																16.84	16.34	1.19	16.41	2.98	0	19,613.16	0.37	0.04		
Solution Extraction/Electrowinning Operations																										
029-1	Solution Extraction - Main Systems	SXM	F	8,760	hours	0	0	0	1.49	0	0	0	0	0	lb/hr	0	0	0	6.52	0	0	0	0	0		
011-1	Electrowinning - Main System	EWM	F	8,760	hours	0	0	0	0	0.83	0	0	0	0	lb/hr	0	0	0	0	3.62	0	0	0	0		
029-2	Raffinate Pond	RP	F	8,760	hours	0	0	0	2.04	0	0	0	0	0	lb/hr	0	0	0	8.92	0	0	0	0	0		
029-3	Organic Tank TK-22	TK-22	NF	8,760	hours	0	0	0	0.043	0	0	0	0	0	lb/hr	0	0	0	0.19	0	0	0	0	0		
029-4	Organic Mix Tank TK-13	TK-13	NF	8,760	hours	0	0	0	0.0465	0	0	0	0	0	lb/hr	0	0	0	0.20	0	0	0	0	0		
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.14	0.17	0.001	0.009	0	0	204.94	0.004	0.0004		
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.14	0.17	0.001	0.009	0	0	204.94	0.004	0.0004		
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	2,978.40	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.12	0.15	0.0009	0.008	0	0	174.20	0.003	0.0003		
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	59,935.92	MMBtu	0.016	0.037	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.49	1.09	0.02	0.16	0	0	3,505.57	0.07	0.007		
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	47,654.40	MMBtu	0.14	0.12	0.00059	0.037	0	0	116.98	0.0022	0.00022	lb/MMBtu	3.29	2.86	0.01	0.88	0	0	2,787.24	0.05	0.005		

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:															4.19	4.44	0.03	1.46	0	0	6,876.90	0.13	0.01		
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:															0	0	0	15.44	3.62	0	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:															4.19	4.44	0.03	16.90	3.62	0	6,876.90	0.13	0.01		
Storage Tanks and Parts Cleaning																									
033-3	Gasoline Storage Tank 150 (GDF1)	GST-150	NF	8,760	hours	0	0	0	0.59	0	0	0	0	0	lb/hr	0	0	0	2.60	0	0	0	0	0	
033-2	Gasoline Storage Tank FT-3 (GDF2)	GST-FT-3	NF	8,760	hours	0	0	0	0.59	0	0	0	0	0	lb/hr	0	0	0	2.60	0	0	0	0	0	
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	GST-FF	NF	8,760	hours	0	0	0	0.56	0	0	0	0	0	lb/hr	0	0	0	2.44	0	0	0	0	0	
033-5	Gasoline Storage Tank Mine Operations (GDF4)	GST-MO	NF	8,760	hours	0	0	0	0.56	0	0	0	0	0	lb/hr	0	0	0	2.44	0	0	0	0	0	
030-6	Parts Cleaning Equipment	PCE	F	8,760	hours	0	0	0	0.20	0	0	0	0	0	lb/hr	0	0	0	0.86	0	0	0	0	0	
053-1	Xanthate Mixing and Storage Tanks	XMS	NF	1,232	tons	0	0	0	12.34	0	0	0	0	0	lb/ton	0	0	0	7.60	0	0	0	0	0	
Total of Non-Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	17.69	0	0	0	0	0		
Total of Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	0.86	0	0	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	18.55	0	0	0	0	0		
Diesel Emergency ICE																									
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	607,000	hp-hr	0.0013	0.0093	0.000011	0.00020	0	0	1.12	0.000046	0.0000093	lb/hp-hr	0.40	2.82	0.003	0.06	0	0	340.63	0.01	0.003	
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	29,500	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.10	0.46	0.0002	0.04	0	0	16.84	0.0007	0.0001	
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	381,000	hp-hr	0.0026	0.0088	0.000011	0.00015	0	0	1.10	0.000046	0.0000093	lb/hp-hr	0.50	1.68	0.002	0.03	0	0	210.36	0.009	0.002	
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	45,000	hp-hr	0.0030	0.0071	0.000011	0.00038	0	0	1.36	0.000046	0.0000093	lb/hp-hr	0.07	0.16	0.0002	0.009	0	0	30.60	0.001	0.0002	
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	450,000	hp-hr	0.0019	0.014	0.000010	0.000044	0	0	1.04	0.000042	0.0000085	lb/hp-hr	0.43	3.08	0.002	0.01	0	0	235.08	0.01	0.002	
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	80,500	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.33	0.25	0.0004	0.02	0	0	45.94	0.002	0.0004	
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	37,500	hp-hr	0.0020	0.0069	0.000011	0.00064	0	0	1.43	0.000046	0.0000093	lb/hp-hr	0.04	0.13	0.0002	0.01	0	0	26.89	0.0009	0.0002	
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	50,000	hp-hr	0.0012	0.010	0.000011	0.00077	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.03	0.25	0.0003	0.02	0	0	28.53	0.001	0.0002	
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	240,000	hp-hr	0.0054	0.0056	0.000011	0.00044	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.65	0.67	0.001	0.05	0	0	143.36	0.006	0.001	
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	42,900	hp-hr	0.0016	0.0067	0.000011	0.00035	0	0	1.35	0.000046	0.0000093	lb/hp-hr	0.04	0.14	0.0002	0.007	0	0	28.93	0.001	0.0002	
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	199,000	hp-hr	0.0044	0.0059	0.000011	0.00033	0	0	1.19	0.000046	0.0000093	lb/hp-hr	0.44	0.59	0.001	0.03	0	0	118.49	0.005	0.0009	
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	16,750	hp-hr	0.0090	0.011	0.000011	0.0013	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.08	0.09	0.00009	0.01	0	0	9.56	0.0004	0.00008	
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	240,000	hp-hr	0.0054	0.0056	0.000011	0.00044	0	0	1.20	0.000046	0.0000093	lb/hp-hr	0.65	0.67	0.001	0.05	0	0	143.91	0.006	0.001	
Total of Non-Fugitive Emissions for Diesel Emergency ICE:															3.75	11.00	0.01	0.35	0	0	1,379.13	0.06	0.01		
Total of Fugitive Emissions for Diesel Emergency ICE:															0	0	0	0	0	0	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:															3.75	11.00	0.01	0.35	0	0	1,379.13	0.06	0.01		
Propane Emergency ICE																									
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	6,500	hp-hr	1.00	0.012	0.00011	0.0014	0	0	1.39	0.000066	0.000013	lb/hp-hr	3.26	0.04	0.0004	0.004	0	0	4.51	0.0002	0.00004	
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	30,000	hp-hr	0.037	0.023	0.00011	0.00033	0	0	1.40	0.000067	0.000013	lb/hp-hr	0.56	0.34	0.002	0.005	0	0	20.96	0.001	0.0002	

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄		N ₂ O	CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	40,000	hp-hr	0.25	0.0076	0.00010	0.0027	0	0	1.28	0.000061	0.000012	lb/hp-hr	4.94	0.15	0.002	0.05	0	0	25.60	0.001	0.0002		
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	IA31-P	NF	15,260	hp-hr	0.13	0.013	0.00012	0.0018	0	0	1.49	0.000071	0.000014	lb/hp-hr	0.97	0.10	0.0009	0.01	0	0	11.35	0.0005	0.0001		
049-39	Propane Emergency Generator IA32-P (32 hp engine)	IA32-P	NF	16,000	hp-hr	0.049	0.011	0.000084	0.0019	0	0	1.03	0.000049	0.000010	lb/hp-hr	0.39	0.09	0.0007	0.01	0	0	8.21	0.0004	0.00008		
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	IA37-P	NF	56,591	hp-hr	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	1.85	0.39	0.002	0.08	0	0	42.60	0.001	0.0002		
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	56,591	hp-hr	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	1.85	0.39	0.002	0.08	0	0	42.60	0.001	0.0002		
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	51,500	hp-hr	0.050	0.011	0.000093	0.0027	0	0	1.46	0.00027	0.000011	lb/hp-hr	1.29	0.28	0.002	0.07	0	0	37.72	0.007	0.0003		
Total of Non-Fugitive Emissions for Propane Emergency ICE:															15.10	1.79	0.01	0.32	0	0	193.54	0.01	0.001			
Total of Fugitive Emissions for Propane Emergency ICE:															0	0	0	0	0	0	0	0	0			
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:															15.10	1.79	0.01	0.32	0	0	193.54	0.01	0.001			
Natural Gas Emergency ICE																										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	8,500	hp-hr	0.049	0.030	0.0000074	0.00043	0	0	1.54	0.000029	0.0000029	lb/hp-hr	0.21	0.13	0.00003	0.002	0	0	6.56	0.0001	0.00001		
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	99,500	hp-hr	0.0088	0.0044	0.0000040	0.0022	0	0	0.84	0.000016	0.0000016	lb/hp-hr	0.44	0.22	0.0002	0.11	0	0	41.76	0.0008	0.00008		
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	96,000	hp-hr	0.0023	0.00016	0.0000053	0.00089	0	0	1.11	0.000021	0.0000021	lb/hp-hr	0.11	0.01	0.0003	0.04	0	0	53.27	0.001	0.0001		
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	20,000	hp-hr	0.054	0.013	0.0000037	0.00031	0	0	0.77	0.000015	0.0000015	lb/hp-hr	0.54	0.13	0.00004	0.003	0	0	7.74	0.0001	0.00001		
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	15,915	hp-hr	0.22	0.0047	0.0000061	0.0052	0	0	1.27	0.000024	0.0000024	lb/hp-hr	1.78	0.04	0.00005	0.04	0	0	10.13	0.0002	0.00002		
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	16,000	hp-hr	0.17	0.0087	0.0000061	0.0034	0	0	1.28	0.000024	0.0000024	lb/hp-hr	1.33	0.07	0.00005	0.03	0	0	10.20	0.0002	0.00002		
Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:															4.41	0.59	0.0006	0.23	0	0	129.67	0.002	0.0002			
Total of Fugitive Emissions for Natural Gas Emergency ICE:															0	0	0	0	0	0	0	0	0			
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:															4.41	0.59	0.0006	0.23	0	0	129.67	0.002	0.0002			
Diesel Non-Emergency ICE																										
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	1,121,280	hp-hr	0.0026	0.012	0.000011	0.0010	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.45	6.50	0.006	0.58	0	0	639.90	0.03	0.005		
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	1,138,800	hp-hr	0.0030	0.0057	0.000011	0.00041	0	0	1.26	0.000046	0.0000093	lb/hp-hr	1.68	3.23	0.006	0.23	0	0	716.70	0.03	0.005		
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	247,032	hp-hr	0.0020	0.0073	0.000011	0.00049	0	0	1.52	0.000046	0.0000093	lb/hp-hr	0.24	0.90	0.001	0.06	0	0	188.15	0.006	0.001		
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	1,182,600	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	4.86	3.63	0.006	0.26	0	0	674.90	0.03	0.005		
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	5,054,520	hp-hr	0.000016	0.00036	0.000011	0.000099	0	0	1.15	0.00020	0.0000093	lb/hp-hr	0.04	0.91	0.03	0.25	0	0	2,904.19	0.50	0.02		
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	2,628,000	hp-hr	0.00016	0.000099	0.000011	0.000033	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.22	0.13	0.01	0.04	0	0	1,499.77	0.06	0.01		
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:															8.49	15.31	0.06	1.42	0	0	6,623.60	0.64	0.05			
Total of Fugitive Emissions for Diesel Non-Emergency ICE:															0	0	0	0	0	0	0	0	0			
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:															8.49	15.31	0.06	1.42	0	0	6,623.60	0.64	0.05			
Propane Non-Emergency ICE																										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	236,520	hp-hr	0.043	0.026	0.00013	0.00038	0	0	1.62	0.000077	0.000015	lb/hp-hr	5.13	3.13	0.02	0.04	0	0	191.23	0.009	0.002		
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	175,200	hp-hr	0.052	0.031	0.00016	0.00045	0	0	1.92	0.000092	0.000018	lb/hp-hr	4.52	2.76	0.01	0.04	0	0	168.28	0.008	0.002		
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:															9.65	5.89	0.03	0.08	0	0	359.52	0.02	0.003			

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	
Total of Fugitive Emissions for Propane Non-Emergency ICE:															0	0	0	0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:															9.65	5.89	0.03	0.08	0	0	359.52	0.02	0.003		
Miscellaneous Fuel Burning Equipment																									
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	3,003.80	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.05	0.22	0.002	0.002	0	0	244.89	0.01	0.002	
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	4,292.40	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.18	0.21	0.001	0.01	0	0	251.06	0.005	0.0005	
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	4,292.40	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.18	0.21	0.001	0.01	0	0	251.06	0.005	0.0005	
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	83,211.24	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	3.43	4.08	0.02	0.22	0	0	4,866.91	0.09	0.009	
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	8,322.00	MMBtu	0.082	0.14	0.011	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.34	0.59	0.05	0.02	0	0	576.73	0.03	0.006	
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	6,311.14	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.26	0.31	0.002	0.02	0	0	369.13	0.007	0.0007	
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	4,371.24	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.18	0.21	0.001	0.01	0	0	255.67	0.005	0.0005	
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															4.62	5.83	0.08	0.30	0	0	6,815.45	0.15	0.02		
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															0	0	0	0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															4.62	5.83	0.08	0.30	0	0	6,815.45	0.15	0.02		
AOS1: Two Concentrator Operations																									
Mining Operations (AOS1)																									
026-2 (AOS1)	Blasting (AOS1)	ABlasting (AOS1)	F	260	blasts	12,766.38	565.38	3.86	0	0	0	119,570.7	4.67	0.92	lb/blast	1,659.63	73.50	0.50	0	0	0	15,544.19	0.61	0.12	
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)																									
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	MFE	F	517,716	tons	0	0	0	0.0046	0	0.0084	0	0	0	lb/ton	0	0	0	1.18	0	2.18	0	0	0	
Second Concentrator Concentrate Handling Operations (AOS1)																									
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	8,760	hours	0	0	0	1.83	0	0	0	0	0	lb/hr	0	0	0	8.02	0	0	0	0	0	
Second Concentrator Lime and Other Regent Operations (AOS1)																									
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	SXMS	NF	213	tons	0	0	0	12.34	0	0	0	0	0	lb/ton	0	0	0	1.31	0	0	0	0	0	
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	H2S (AOS1)	NF	8,760	hours	0	0	0	0	0	0.038	0	0	0	lb/hr	0	0	0	0	0	0.17	0	0	0	
Second Concentrator Emergency ICE (AOS1)																									
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	304,500	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.88	0.93	0.002	0.07	0	0	173.77	0.007	0.001	
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	381,000	hp-hr	0.0058	0.010	0.000011	0.00066	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.10	1.88	0.002	0.13	0	0	217.43	0.009	0.002	
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	0.20	0.013	0.00012	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	4.19	0.29	0.003	0.06	0	0	30.82	0.001	0.0003	
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	0.20	0.013	0.00012	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	4.19	0.29	0.003	0.06	0	0	30.82	0.001	0.0003	
Total of Non-Fugitive Emissions for AOS1:															10.35	3.38	0.01	9.65	0	0.17	452.84	0.02	0.00		
Total of Fugitive Emissions for AOS1:															1,659.63	73.50	0.50	1.18	0	2.18	15,544.19	0.61	0.12		
Total of Non-Fugitive and Fugitive Emissions for AOS1:															1,669.98	76.88	0.51	10.83	0	2.35	15,997.03	0.63	0.12		
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:															67.05	61.19	1.42	37.87	2.98	0	41,990.98	1.38	0.14		

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄		N ₂ O	CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂
Total of Fugitive Emissions Under the Primary Operating Scenario:													914.49	40.50	0.28	21.79	3.62	9.43	8,564.96	0.33	0.07	
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:													981.54	101.69	1.70	59.66	6.60	9.43	50,555.93	1.72	0.20	
Total of Non-Fugitive Emissions Under AOS1:													77.40	64.58	1.43	47.52	2.98	0.17	42,443.82	1.40	0.14	
Total of Fugitive Emissions Under AOS1:													1,659.63	73.50	0.50	22.97	3.62	11.61	15,544.19	0.61	0.12	
Total of Non-Fugitive and Fugitive Emissions Under AOS1:													1,737.03	138.08	1.93	70.49	6.60	11.78	57,988.01	2.01	0.26	

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O
Mining Operations																								
026-2	Blasting	HBlasting	F	1	blasts	4,064.40	180.00	1.23	0	0	0	38,066.5	1.49	0.29	lb/blast	4,064.40	180.00	1.23	0	0	0	38,066.47	1.49	0.29
Total of Non-Fugitive Emissions for Mining Operations:																0	0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Mining Operations:																4,064.40	180.00	1.23	0	0	0	38,066.47	1.49	0.29
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:																4,064.40	180.00	1.23	0	0	0	38,066.47	1.49	0.29
Bulk and Molybdenum Flotation Operations																								
044-1	Bulk and Molybdenum Flotation Equipment	MFE	F	255.50	tons	0	0	0	0.0046	0	0.0084	0	0	0	lb/ton	0	0	0	1.17	0	2.15	0	0	0
Total of Non-Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	0	0	0	0	0	0
Total of Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	1.17	0	2.15	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Bulk and Molybdenum Flotation Operations:																0	0	0	1.17	0	2.15	0	0	0
Concentrate Leach Plant																								
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G4 (25 MMBtu/hr)	NGC	NF	25	MMBtu	0.08	0.098	0.00059	0	0	0	116.98	0.0022	0.00022	lb/MMBtu	2.06	2.45	0.01	0	0	0	2,924.43	0.06	0.006
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	1	hours	0	0	0	2.10	0.68	0	0	0	0	lb/hr	0	0	0	2.10	0.68	0	0	0	0
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	5.23	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.43	0.51	0.003	0.03	0	0	611.79	0.01	0.001
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	NGC	NF	6.50	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.54	0.64	0.004	0.04	0	0	760.35	0.01	0.001
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	1	hours	0.82	0.13	0.25	1.36	0	0	181.31	0.0034	0.00034	lb/hr	0.82	0.13	0.25	1.36	0	0	181.31	0.003	0.0003
047-7	Settling Tank	ST	NF	1	hours	0	0	0	0.00065	0	0	0	0	0	lb/hr	0	0	0	0.0006	0	0	0	0	0
047-8	Solution Extraction - Molybdenum Pressure Leaching	SXMPL	F	1	hours	0	0	0	0.087	0	0	0	0	0	lb/hr	0	0	0	0.09	0	0	0	0	0
Total of Non-Fugitive Emissions for Concentrate Leach Plant:																3.84	3.73	0.27	3.66	0.68	0	4,477.89	0.08	0.008
Total of Fugitive Emissions for Concentrate Leach Plant:																0	0	0	0.09	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:																3.84	3.73	0.27	3.75	0.68	0	4,477.89	0.08	0.008
Solution Extraction/Electrowinning Operations																								
029-1	Solution Extraction - Main Systems	SXM	F	1	hours	0	0	0	1.49	0	0	0	0	0	lb/hr	0	0	0	1.49	0	0	0	0	0
011-1	Electrowinning - Main System	EWM	F	1	hours	0	0	0	0	0.83	0	0	0	0	lb/hr	0	0	0	0	0.83	0	0	0	0
029-2	Raffinate Pond	RP	F	1	hours	0	0	0	2.04	0	0	0	0	0	lb/hr	0	0	0	2.04	0	0	0	0	0
029-3	Organic Tank TK-22	TK-22	NF	1	hours	0	0	0	0.043	0	0	0	0	0	lb/hr	0	0	0	0.04	0	0	0	0	0
029-4	Organic Mix Tank TK-13	TK-13	NF	1	hours	0	0	0	0.0465	0	0	0	0	0	lb/hr	0	0	0	0.047	0	0	0	0	0
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.03	0.04	0.0002	0.002	0	0	46.79	0.0009	0.00009
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.03	0.04	0.0002	0.002	0	0	46.79	0.0009	0.00009
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	0.34	MMBtu	0.082	0.10	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.03	0.03	0.0002	0.002	0	0	39.77	0.0007	0.00007
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	6.842	MMBtu	0.016	0.037	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.11	0.25	0.004	0.04	0	0	800.36	0.02	0.002
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	5.44	MMBtu	0.14	0.12	0.00059	0.037	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.75	0.65	0.003	0.20	0	0	636.36	0.01	0.001

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:															0.96	1.01	0.008	0.33	0	0	1,570.07	0.03	0.003	
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:															0	0	0	3.52	0.83	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:															0.96	1.01	0.008	3.86	0.83	0	1,570.07	0.03	0.003	
Storage Tanks and Parts Cleaning																								
033-3	Gasoline Storage Tank 150 (GDF1)	GST-150	NF	1	hours	0	0	0	0.59	0	0	0	0	0	lb/hr	0	0	0	0.59	0	0	0	0	0
033-2	Gasoline Storage Tank FT-3 (GDF2)	GST-FT-3	NF	1	hours	0	0	0	0.59	0	0	0	0	0	lb/hr	0	0	0	0.59	0	0	0	0	0
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	GST-FF	NF	1	hours	0	0	0	0.56	0	0	0	0	0	lb/hr	0	0	0	0.56	0	0	0	0	0
033-5	Gasoline Storage Tank Mine Operations (GDF4)	GST-MO	NF	1	hours	0	0	0	0.56	0	0	0	0	0	lb/hr	0	0	0	0.56	0	0	0	0	0
030-6	Parts Cleaning Equipment	PCE	F	1	hours	0	0	0	0.20	0	0	0	0	0	lb/hr	0	0	0	0.20	0	0	0	0	0
053-1	Xanthate Mixing and Storage Tanks	XMS	NF	0.24	tons	0	0	0	12.34	0	0	0	0	0	lb/ton	0	0	0	2.98	0	0	0	0	0
Total of Non-Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	5.28	0	0	0	0	0	
Total of Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	0.20	0	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Storage Tanks and Parts Cleaning:															0	0	0	5.48	0	0	0	0	0	
Diesel Emergency ICE																								
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	1,214	hp-hr	0.0013	0.0093	0.000011	0.00020	0	0	1.12	0.000046	0.0000093	lb/hp-hr	1.60	11.28	0.01	0.24	0	0	1,362.53	0.06	0.01
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	59	hp-hr	0.0067	0.031	0.000011	0.0025	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.39	1.83	0.0006	0.15	0	0	67.34	0.003	0.0005
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	762	hp-hr	0.0026	0.0088	0.000011	0.00015	0	0	1.10	0.000046	0.0000093	lb/hp-hr	2.00	6.73	0.008	0.11	0	0	841.44	0.04	0.007
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	90	hp-hr	0.0030	0.0071	0.000011	0.00038	0	0	1.36	0.000046	0.0000093	lb/hp-hr	0.27	0.64	0.001	0.03	0	0	122.42	0.004	0.0008
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	900	hp-hr	0.0019	0.014	0.000010	0.000044	0	0	1.04	0.000042	0.0000085	lb/hp-hr	1.73	12.32	0.009	0.04	0	0	940.31	0.04	0.008
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	161	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.32	0.99	0.002	0.07	0	0	183.76	0.007	0.001
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	75	hp-hr	0.0020	0.0069	0.000011	0.00064	0	0	1.43	0.000046	0.0000093	lb/hp-hr	0.15	0.52	0.0008	0.05	0	0	107.56	0.003	0.0007
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	100	hp-hr	0.0012	0.010	0.000011	0.00077	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.12	1.00	0.0011	0.08	0	0	114.14	0.005	0.0009
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	480	hp-hr	0.0054	0.0056	0.000011	0.00044	0	0	1.19	0.000046	0.0000093	lb/hp-hr	2.60	2.70	0.005	0.21	0	0	573.44	0.02	0.004
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	85.80	hp-hr	0.0016	0.0067	0.000011	0.00035	0	0	1.35	0.000046	0.0000093	lb/hp-hr	0.14	0.57	0.0009	0.03	0	0	115.73	0.004	0.0008
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	398	hp-hr	0.0044	0.0059	0.000011	0.00033	0	0	1.19	0.000046	0.0000093	lb/hp-hr	1.77	2.36	0.004	0.13	0	0	473.98	0.02	0.004
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	33.50	hp-hr	0.0090	0.011	0.000011	0.0013	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.30	0.37	0.0004	0.04	0	0	38.24	0.002	0.0003
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	480.00	hp-hr	0.0054	0.0056	0.000011	0.00044	0	0	1.20	0.000046	0.0000093	lb/hp-hr	2.60	2.70	0.005	0.21	0	0	575.65	0.02	0.004
Total of Non-Fugitive Emissions for Diesel Emergency ICE:															15.00	44.00	0.05	1.40	0	0	5,516.53	0.22	0.04	
Total of Fugitive Emissions for Diesel Emergency ICE:															0	0	0	0	0	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:															15.00	44.00	0.05	1.40	0	0	5,516.53	0.22	0.04	
Propane Emergency ICE																								
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	13	hp-hr	1.00	0.012	0.00011	0.0014	0	0	1.39	0.000066	0.000013	lb/hp-hr	13.04	0.15	0.001	0.02	0	0	18.02	0.0009	0.0002
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	60	hp-hr	0.037	0.023	0.00011	0.00033	0	0	1.40	0.000067	0.000013	lb/hp-hr	2.25	1.37	0.007	0.02	0	0	83.83	0.004	0.0008

Emission Inventory Tables for Potential Emission Calculations
October 2025

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄		N ₂ O	CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	80	hp-hr	0.25	0.0076	0.00010	0.0027	0	0	1.28	0.000061	0.000012	lb/hp-hr	19.75	0.61	0.008	0.22	0	0	102.41	0.005	0.001
049-34	Propane Emergency Generator IA31-P (30.52 hp engine)	IA31-P	NF	30.52	hp-hr	0.13	0.013	0.00012	0.0018	0	0	1.49	0.000071	0.000014	lb/hp-hr	3.89	0.39	0.004	0.05	0	0	45.41	0.002	0.0004
049-39	Propane Emergency Generator IA32-P (32 hp engine)	IA32-P	NF	32	hp-hr	0.049	0.011	0.000084	0.0019	0	0	1.03	0.000049	0.000010	lb/hp-hr	1.57	0.36	0.003	0.06	0	0	32.83	0.002	0.0003
049-43	Propane Emergency Generator IA37-P (113.18 hp engine)	IA37-P	NF	113.18	hp-hr	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	7.38	1.57	0.008	0.31	0	0	170.39	0.005	0.001
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	113.18	hp-hr	0.065	0.014	0.000073	0.0027	0	0	1.51	0.000042	0.0000085	lb/hp-hr	7.38	1.57	0.008	0.31	0	0	170.39	0.005	0.001
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	103	hp-hr	0.050	0.011	0.000093	0.0027	0	0	1.46	0.00027	0.000011	lb/hp-hr	5.15	1.13	0.01	0.28	0	0	150.87	0.03	0.001
Total of Non-Fugitive Emissions for Propane Emergency ICE:															60.42	7.16	0.05	1.26	0	0	774.16	0.05	0.006	
Total of Fugitive Emissions for Propane Emergency ICE:															0	0	0	0	0	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:															60.42	7.16	0.05	1.26	0	0	774.16	0.05	0.006	
Natural Gas Emergency ICE																								
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	17	hp-hr	0.049	0.030	0.0000074	0.00043	0	0	1.54	0.000029	0.0000029	lb/hp-hr	0.83	0.51	0.0001	0.007	0	0	26.25	0.0005	0.00005
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	199	hp-hr	0.0088	0.0044	0.0000040	0.0022	0	0	0.84	0.000016	0.0000016	lb/hp-hr	1.75	0.88	0.0008	0.44	0	0	167.04	0.003	0.0003
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	192	hp-hr	0.0023	0.00016	0.0000053	0.00089	0	0	1.11	0.000021	0.0000021	lb/hp-hr	0.44	0.03	0.001	0.17	0	0	213.10	0.004	0.0004
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	40	hp-hr	0.054	0.013	0.0000037	0.00031	0	0	0.77	0.000015	0.0000015	lb/hp-hr	2.15	0.50	0.0001	0.01	0	0	30.97	0.0006	0.00006
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	31.83	hp-hr	0.22	0.0047	0.0000061	0.0052	0	0	1.27	0.000024	0.0000024	lb/hp-hr	7.11	0.15	0.0002	0.16	0	0	40.52	0.0008	0.00008
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	32	hp-hr	0.17	0.0087	0.0000061	0.0034	0	0	1.28	0.000024	0.0000024	lb/hp-hr	5.34	0.28	0.0002	0.11	0	0	40.81	0.0008	0.00008
Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:															17.63	2.35	0.002	0.90	0	0	518.70	0.01	0.001	
Total of Fugitive Emissions for Natural Gas Emergency ICE:															0	0	0	0	0	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:															17.63	2.35	0.002	0.90	0	0	518.70	0.01	0.001	
Diesel Non-Emergency ICE																								
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	128	hp-hr	0.0026	0.012	0.000011	0.0010	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.33	1.48	0.001	0.13	0	0	146.10	0.006	0.001
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	130	hp-hr	0.0030	0.0057	0.000011	0.00041	0	0	1.26	0.000046	0.0000093	lb/hp-hr	0.38	0.74	0.001	0.05	0	0	163.63	0.006	0.001
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	28.20	hp-hr	0.0020	0.0073	0.000011	0.00049	0	0	1.52	0.000046	0.0000093	lb/hp-hr	0.06	0.21	0.0003	0.01	0	0	42.96	0.001	0.0003
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	135	hp-hr	0.0082	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	1.11	0.83	0.001	0.06	0	0	154.09	0.006	0.001
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	577	hp-hr	0.000016	0.00036	0.000011	0.000099	0	0	1.15	0.00020	0.0000093	lb/hp-hr	0.009	0.21	0.006	0.06	0	0	663.06	0.11	0.005
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	300	hp-hr	0.00016	0.00010	0.000011	0.000033	0	0	1.14	0.000046	0.0000093	lb/hp-hr	0.05	0.03	0.003	0.01	0	0	342.41	0.01	0.003
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:															1.94	3.49	0.01	0.33	0	0	1,512.24	0.15	0.01	
Total of Fugitive Emissions for Diesel Non-Emergency ICE:															0	0	0	0	0	0	0	0	0	
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:															1.94	3.49	0.01	0.33	0	0	1,512.24	0.15	0.01	
Propane Non-Emergency ICE																								
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	27	hp-hr	0.043	0.026	0.00013	0.00038	0	0	1.62	0.000077	0.000015	lb/hp-hr	1.17	0.72	0.004	0.01	0	0	43.66	0.002	0.0004
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	20	hp-hr	0.052	0.031	0.00016	0.00045	0	0	1.92	0.000092	0.000018	lb/hp-hr	1.03	0.63	0.003	0.009	0	0	38.42	0.002	0.0004
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:															2.20	1.34	0.007	0.02	0	0	82.08	0.004	0.0008	

Emission Inventory Tables for Potential Emission Calculations
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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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O	
Total of Fugitive Emissions for Propane Non-Emergency ICE:															0	0	0	0	0	0	0	0	0	0	0
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:															2.20	1.34	0.007	0.02	0	0	82.08	0.004	0.008		
Miscellaneous Fuel Burning Equipment																									
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	0.3429	MMBtu	0.036	0.15	0.0016	0.0015	0	0	163.05	0.0066	0.0013	lb/MMBtu	0.01	0.05	0.0005	0.0005	0	0	55.91	0.002	0.0005	
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	0.49	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.04	0.05	0.0003	0.003	0	0	57.32	0.001	0.0001	
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	0.49	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.04	0.05	0.0003	0.003	0	0	57.32	0.001	0.0001	
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	9.499	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.78	0.93	0.006	0.05	0	0	1,111.17	0.02	0.002	
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	0.95	MMBtu	0.082	0.14	0.011	0.0054	0	0	138.60	0.0066	0.0013	lb/MMBtu	0.08	0.13	0.01	0.005	0	0	131.67	0.006	0.001	
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	0.72045	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.06	0.07	0.0004	0.004	0	0	84.28	0.002	0.0002	
049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	0.499	MMBtu	0.082	0.098	0.00059	0.0054	0	0	116.98	0.0022	0.00022	lb/MMBtu	0.04	0.05	0.0003	0.003	0	0	58.37	0.001	0.0001	
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															1.05	1.33	0.02	0.07	0	0	1,556.04	0.03	0.004		
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															0	0	0	0	0	0	0	0	0		
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:															1.05	1.33	0.02	0.07	0	0	1,556.04	0.03	0.004		
AOS1: Two Concentrator Operations																									
Mining Operations (AOS1)																									
026-2 (AOS1)	Blasting (AOS1)	HBlasting (AOS1)	F	1	blasts	15,319.65	678.46	4.64	0	0	0	143,484.8	5.60	1.11	lb/blast	15,319.65	678.46	4.64	0	0	0	143,484.81	5.60	1.11	
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)																									
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	MFE	F	59.10	tons	0	0	0	0.0046	0	0.0084	0	0	0	lb/ton	0	0	0	0.27	0	0.50	0	0	0	
Second Concentrator Concentrate Handling Operations (AOS1)																									
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	1	hours	0	0	0	1.83	0	0	0	0	0	lb/hr	0	0	0	1.83	0	0	0	0	0	
Second Concentrator Lime and Other Regent Operations (AOS1)																									
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	SXMS	NF	0.04	tons	0	0	0	12.34	0	0	0	0	0	lb/ton	0	0	0	0.49	0	0	0	0	0	
055-3 (AOS1)	Second Concentrator NaHS System Scrubber (AOS1)	H2S (AOS1)	NF	1	hours	0	0	0	0	0	0.038	0	0	0	lb/hr	0	0	0	0	0	0.04	0	0	0	
Second Concentrator Emergency ICE (AOS1)																									
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	609	hp-hr	0.0058	0.0061	0.000011	0.00044	0	0	1.14	0.000046	0.0000093	lb/hp-hr	3.50	3.74	0.007	0.27	0	0	695.10	0.03	0.006	
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	762	hp-hr	0.0058	0.010	0.000011	0.00066	0	0	1.14	0.000046	0.0000093	lb/hp-hr	4.38	7.52	0.008	0.50	0	0	869.73	0.04	0.007	
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	84.70	hp-hr	0.20	0.013	0.00012	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	16.77	1.14	0.01	0.25	0	0	123.27	0.006	0.001	
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	84.70	hp-hr	0.20	0.013	0.00012	0.0030	0	0	1.46	0.000069	0.000014	lb/hp-hr	16.77	1.14	0.01	0.3	0	0	123.27	0.006	0.001	
Total of Non-Fugitive Emissions for AOS1:															41.42	13.54	0.04	3.59	0	0.04	1,811.36	0.08	0.02		
Total of Fugitive Emissions for AOS1:															15,319.65	678.46	4.64	0.27	0	0.50	143,484.81	5.60	1.11		
Total of Non-Fugitive and Fugitive Emissions for AOS1:															15,361.07	692.00	4.67	3.86	0	0.54	145,296.17	5.68	1.12		
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:															103.04	64.43	0.42	13.25	0.68	0	16,007.70	0.58	0.08		

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 ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O		CO	NO _x	SO ₂	VOC	H ₂ SO ₄	H ₂ S	CO ₂	CH ₄	N ₂ O
Total of Fugitive Emissions Under the Primary Operating Scenario:															4,064.40	180.00	1.23	4.97	0.83	2.15	38,066.47	1.49	0.29	
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:															4,167.44	244.43	1.65	18.22	1.51	2.15	54,074.17	2.07	0.37	
Total of Non-Fugitive Emissions Under AOS1:															144.46	77.97	0.46	16.84	0.68	0.04	17,819.07	0.66	0.09	
Total of Fugitive Emissions Under AOS1:															15,319.65	678.46	4.64	5.24	0.83	2.65	143,484.81	5.60	1.11	
Total of Non-Fugitive and Fugitive Emissions Under AOS1:															15,464.12	756.43	5.10	22.09	1.51	2.69	161,303.87	6.26	1.20	

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Pollution Control Devices						
C18	Processes Controlled by Scrubber C18	Antimony	5.80E-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	8.58E-11	lb/dscf		
		Beryllium	2.03E-12	lb/dscf		
		Cadmium	1.49E-12	lb/dscf		
		Chromium	5.95E-11	lb/dscf		
		Cobalt	1.15E-10	lb/dscf		
		Lead	3.66E-11	lb/dscf		
		Manganese	5.46E-10	lb/dscf		
		Mercury	8.49E-13	lb/dscf		
		Nickel	3.40E-11	lb/dscf		
		Selenium	5.36E-12	lb/dscf		
		Total HAPs	9.45E-10	lb/dscf		
C51	Processes Controlled by Dust Collector C51	Antimony	5.80E-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	8.58E-11	lb/dscf		
		Beryllium	2.03E-12	lb/dscf		
		Cadmium	1.49E-12	lb/dscf		
		Chromium	5.95E-11	lb/dscf		
		Cobalt	1.15E-10	lb/dscf		
		Lead	3.66E-11	lb/dscf		
		Manganese	5.46E-10	lb/dscf		
		Mercury	8.49E-13	lb/dscf		
		Nickel	3.40E-11	lb/dscf		
		Selenium	5.36E-12	lb/dscf		
		Total HAPs	9.45E-10	lb/dscf		
C1	Processes Controlled by GL1 Dust Collector C1	Antimony	5.32E-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	7.88E-11	lb/dscf		
		Beryllium	1.86E-12	lb/dscf		
		Cadmium	1.36E-12	lb/dscf		
		Chromium	5.47E-11	lb/dscf		
		Cobalt	1.05E-10	lb/dscf		
		Lead	3.37E-11	lb/dscf		
		Manganese	5.02E-10	lb/dscf		
		Mercury	7.79E-13	lb/dscf		
		Nickel	3.12E-11	lb/dscf		
		Selenium	4.92E-12	lb/dscf		
		Total HAPs	8.68E-10	lb/dscf		
C2	Processes Controlled by GL2 Dust Collector C2	Antimony	5.32E-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	7.88E-11	lb/dscf		
		Beryllium	1.86E-12	lb/dscf		
		Cadmium	1.36E-12	lb/dscf		
		Chromium	5.47E-11	lb/dscf		
		Cobalt	1.05E-10	lb/dscf		
		Lead	3.37E-11	lb/dscf		
		Manganese	5.02E-10	lb/dscf		
		Mercury	7.79E-13	lb/dscf		
		Nickel	3.12E-11	lb/dscf		
		Selenium	4.92E-12	lb/dscf		
		Total HAPs	8.68E-10	lb/dscf		
DC3	Processes Controlled by GL3 Dust Collector DC3	Antimony	5.32E-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	7.88E-11	lb/dscf		
		Beryllium	1.86E-12	lb/dscf		
		Cadmium	1.36E-12	lb/dscf		
		Chromium	5.47E-11	lb/dscf		
		Cobalt	1.05E-10	lb/dscf		
		Lead	3.37E-11	lb/dscf		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
DC3 (cont'd)	Processes Controlled by GL3 Dust Collector DC3 (cont'd)	Manganese	5.02E-10	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	7.79E-13	lb/dscf		
		Nickel	3.12E-11	lb/dscf		
		Selenium	4.92E-12	lb/dscf		
		Total HAPs	8.68E-10	lb/dscf		
DC4	Processes Controlled by GL4 Dust Collector DC4	Antimony	5.32E-11	lb/dscf	dscf	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)
		Arsenic	7.88E-11	lb/dscf		
		Beryllium	1.86E-12	lb/dscf		
		Cadmium	1.36E-12	lb/dscf		
		Chromium	5.47E-11	lb/dscf		
		Cobalt	1.05E-10	lb/dscf		
		Lead	3.37E-11	lb/dscf		
		Manganese	5.02E-10	lb/dscf		
		Mercury	7.79E-13	lb/dscf		
		Nickel	3.12E-11	lb/dscf		
		Selenium	4.92E-12	lb/dscf		
		Total HAPs	8.68E-10	lb/dscf		
DC5	Processes Controlled by GL5 Dust Collector DC5	Antimony	1.72E-11	lb/dscf	dscf	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)
		Arsenic	2.54E-11	lb/dscf		
		Beryllium	6.00E-13	lb/dscf		
		Cadmium	4.40E-13	lb/dscf		
		Chromium	1.76E-11	lb/dscf		
		Cobalt	3.40E-11	lb/dscf		
		Lead	1.09E-11	lb/dscf		
		Manganese	1.62E-10	lb/dscf		
		Mercury	2.51E-13	lb/dscf		
		Nickel	1.01E-11	lb/dscf		
		Selenium	1.59E-12	lb/dscf		
		Total HAPs	2.80E-10	lb/dscf		
CH-02/03	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	Chloromethane	7.83E-05	lb/hr	hours	Laboratory Analysis (see additional details in the SPR application for the Concentrate Leach Plant), 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)
		Chloroethane	1.17E-05	lb/hr		
		Methyl Iodide	1.56E-04	lb/hr		
		Methylene Chloride	7.83E-05	lb/hr		
		Carbon Disulfide	2.88E-02	lb/hr		
		Benzene	3.00E-04	lb/hr		
		Methyl Isobutyl Ketone	3.23E-04	lb/hr		
		Toluene	3.17E-04	lb/hr		
		1,1,2-Trichloroethane	2.25E-05	lb/hr		
		Ethylbenzene	1.05E-04	lb/hr		
		Xylenes	4.16E-04	lb/hr		
		Antimony	5.64E-03	lb/hr		
		Arsenic	6.88E-02	lb/hr		
		Beryllium	2.75E-05	lb/hr		
		Cadmium	1.03E-04	lb/hr		
		Chromium	5.78E-05	lb/hr		
		Cobalt	3.62E-04	lb/hr		
		Lead	6.27E-04	lb/hr		
		Manganese	1.79E-04	lb/hr		
		Mercury	9.33E-05	lb/hr		
		Nickel	2.61E-04	lb/hr		
		Selenium	7.01E-04	lb/hr		
		Total HAPs	1.07E-01	lb/hr		
NGF	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	Lead	2.97E-05	lb/hr	hours	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf, 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)
		2-Methylnaphthalene	3.65E-08	lb/hr		
		3-Methylchloranthrene	2.74E-09	lb/hr		
		7,12-Dimethylbenz(a)anthracene	2.43E-08	lb/hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
NGF (cont'd)	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare (cont'd)	Acenaphthene	2.74E-09	lb/hr	hours (cont'd)	AP-42 Tables 1.4-2, 1.4-3, and 1.4-4 (07/98) and 1,020 Btu/scf, 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)
		Acenaphthylene	2.74E-09	lb/hr		
		Anthracene	3.65E-09	lb/hr		
		Benz(a)anthracene	2.74E-09	lb/hr		
		Benzene	3.19E-06	lb/hr		
		Benzo(a)pyrene	1.82E-09	lb/hr		
		Benzo(b)fluoranthene	2.74E-09	lb/hr		
		Benzo(g,h,i)perylene	1.82E-09	lb/hr		
		Benzo(k)fluoranthene	2.74E-09	lb/hr		
		Chrysene	2.74E-09	lb/hr		
		Dibenz(a,h)anthracene	1.82E-09	lb/hr		
		Dichlorobenzene	1.82E-06	lb/hr		
		Fluoranthene	4.56E-09	lb/hr		
		Fluorene	4.25E-09	lb/hr		
		Formaldehyde	1.14E-04	lb/hr		
		Hexane	2.74E-03	lb/hr		
		Indeno(1,2,3-cd)pyrene	2.74E-09	lb/hr		
		Naphthalene	9.27E-07	lb/hr		
		Phenanthrene	2.58E-08	lb/hr		
		Pyrene	7.60E-09	lb/hr		
		Toluene	5.17E-06	lb/hr		
		Antimony	2.61E-04	lb/hr		
		Arsenic	3.18E-03	lb/hr		
		Beryllium	1.29E-06	lb/hr		
		Cadmium	6.44E-06	lb/hr		
		Chromium	4.80E-06	lb/hr		
		Cobalt	1.69E-05	lb/hr		
		Manganese	8.84E-06	lb/hr		
		Mercury	4.71E-06	lb/hr		
		Nickel	1.53E-05	lb/hr		
		Selenium	3.24E-05	lb/hr		
		Total HAPs	6.42E-03	lb/hr		
MDCD1	Processes Controlled by Molybdenum Concentrate Dust Collector 1	Antimony	6.40E-09	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	7.80E-08	lb/dscf		
		Beryllium	3.12E-11	lb/dscf		
		Cadmium	1.17E-10	lb/dscf		
		Chromium	6.55E-11	lb/dscf		
		Cobalt	4.11E-10	lb/dscf		
		Lead	7.11E-10	lb/dscf		
		Manganese	2.03E-10	lb/dscf		
		Mercury	1.06E-10	lb/dscf		
		Nickel	2.97E-10	lb/dscf		
		Selenium	7.96E-10	lb/dscf		
		Total HAPs	8.72E-08	lb/dscf		
MDCD2	Processes Controlled by Molybdenum Concentrate Dust Collector 2	Antimony	6.40E-09	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	7.80E-08	lb/dscf		
		Beryllium	3.12E-11	lb/dscf		
		Cadmium	1.17E-10	lb/dscf		
		Chromium	6.55E-11	lb/dscf		
		Cobalt	4.11E-10	lb/dscf		
		Lead	7.11E-10	lb/dscf		
		Manganese	2.03E-10	lb/dscf		
		Mercury	1.06E-10	lb/dscf		
		Nickel	2.97E-10	lb/dscf		
		Selenium	7.96E-10	lb/dscf		
		Total HAPs	8.72E-08	lb/dscf		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
C51 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	Antimony	5.80E-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	8.58E-11	lb/dscf		
		Beryllium	2.03E-12	lb/dscf		
		Cadmium	1.49E-12	lb/dscf		
		Chromium	5.95E-11	lb/dscf		
		Cobalt	1.15E-10	lb/dscf		
		Lead	3.66E-11	lb/dscf		
		Manganese	5.46E-10	lb/dscf		
		Mercury	8.49E-13	lb/dscf		
		Nickel	3.40E-11	lb/dscf		
		Selenium	5.36E-12	lb/dscf		
		Total HAPs	9.45E-10	lb/dscf		
SDC1 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	Antimony	9.88E-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	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC2 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	Antimony	9.88E-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	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC3 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	Antimony	9.88E-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	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC4 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	Antimony	9.88E-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	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
SDC4 (AOS1) (cont'd)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1) (cont'd)	Mercury	1.45E-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	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC5 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC6 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC7 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC8 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
		Total HAPs	1.61E-10	lb/dscf		
SDC9 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
SDC9 (AOS1) (cont'd)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1) (cont'd)	Chromium	1.01E-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)
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
		Selenium	9.13E-13	lb/dscf		
	Total HAPs	1.61E-10	lb/dscf			
SDC10 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
Selenium	9.13E-13	lb/dscf				
	Total HAPs	1.61E-10	lb/dscf			
SDC11 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	Antimony	9.88E-12	lb/dscf	dscf	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)
		Arsenic	1.46E-11	lb/dscf		
		Beryllium	3.45E-13	lb/dscf		
		Cadmium	2.53E-13	lb/dscf		
		Chromium	1.01E-11	lb/dscf		
		Cobalt	1.96E-11	lb/dscf		
		Lead	6.24E-12	lb/dscf		
		Manganese	9.31E-11	lb/dscf		
		Mercury	1.45E-13	lb/dscf		
		Nickel	5.80E-12	lb/dscf		
Selenium	9.13E-13	lb/dscf				
	Total HAPs	1.61E-10	lb/dscf			
MDWSS (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	Antimony	1.29E-04	lb/hr	hours	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), diesel vapor mass fractions
		Arsenic	1.41E-04	lb/hr		
		Beryllium	6.31E-07	lb/hr		
		Cadmium	2.36E-06	lb/hr		
		Chromium	1.32E-06	lb/hr		
		Cobalt	8.30E-06	lb/hr		
		Lead	1.44E-05	lb/hr		
		Manganese	4.10E-06	lb/hr		
		Mercury	2.14E-06	lb/hr		
		Nickel	5.99E-06	lb/hr		
		Selenium	1.61E-05	lb/hr		
		Benzene	3.48E-03	lb/hr		
		Ethylbenzene	5.86E-03	lb/hr		
		Hexane	7.32E-04	lb/hr		
		Toluene	4.19E-02	lb/hr		
m-Xylene	1.09E-01	lb/hr				
	Total HAPs	1.62E-01	lb/hr			
Drilling and Blasting Operations						
Drilling	Drilling	Antimony	9.90E-06	lb/hole	holes	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)
		Arsenic	1.70E-05	lb/hole		
		Beryllium	1.07E-06	lb/hole		
		Cadmium	3.86E-07	lb/hole		
		Chromium	2.33E-05	lb/hole		
	Cobalt	2.20E-05	lb/hole			

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Drilling (cont'd)	Drilling (cont'd)	Lead	1.81E-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)
		Manganese	2.01E-04	lb/hole		
		Mercury	2.01E-07	lb/hole		
		Nickel	1.54E-05	lb/hole		
		Selenium	1.63E-06	lb/hole		
		Total HAPs	3.10E-04	lb/hole		
Drilling (AOS1)	Drilling (AOS1)	Antimony	1.05E-05	lb/hole	holes	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)
		Arsenic	1.81E-05	lb/hole		
		Beryllium	9.45E-07	lb/hole		
		Cadmium	4.24E-07	lb/hole		
		Chromium	2.56E-05	lb/hole		
		Cobalt	2.27E-05	lb/hole		
		Lead	1.92E-05	lb/hole		
		Manganese	2.07E-04	lb/hole		
		Mercury	2.02E-07	lb/hole		
		Nickel	1.67E-05	lb/hole		
		Selenium	1.80E-06	lb/hole		
		Total HAPs	3.24E-04	lb/hole		
ABlasting	Blasting (annual basis)	Lead	6.36E-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), 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)
		POM	4.25E-03	lb/blast		
		Formaldehyde	7.86E-02	lb/blast		
		Antimony	2.62E-03	lb/blast		
		Arsenic	5.20E-03	lb/blast		
		Beryllium	8.09E-04	lb/blast		
		Cadmium	6.29E-04	lb/blast		
		Chromium	6.68E-03	lb/blast		
		Cobalt	5.81E-03	lb/blast		
		Manganese	5.43E-02	lb/blast		
		Mercury	5.80E-04	lb/blast		
		Nickel	4.60E-03	lb/blast		
		Selenium	3.06E-03	lb/blast		
		Total HAPs	1.74E-01	lb/blast		
HBlasting	Blasting (hourly basis)	Lead	1.72E-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), 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)
		POM	5.67E-03	lb/blast		
		Formaldehyde	1.05E-01	lb/blast		
		Antimony	8.27E-03	lb/blast		
		Arsenic	1.51E-02	lb/blast		
		Beryllium	1.59E-03	lb/blast		
		Cadmium	1.02E-03	lb/blast		
		Chromium	2.01E-02	lb/blast		
		Cobalt	1.83E-02	lb/blast		
		Manganese	1.69E-01	lb/blast		
		Mercury	8.70E-04	lb/blast		
		Nickel	1.36E-02	lb/blast		
		Selenium	4.87E-03	lb/blast		
		Total HAPs	3.81E-01	lb/blast		
ABlasting (AOS1)	Blasting (AOS1) (annual basis)	Lead	5.46E-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), 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)
		POM	1.78E-02	lb/blast		
		Formaldehyde	3.29E-01	lb/blast		
		Antimony	2.62E-02	lb/blast		
		Arsenic	4.82E-02	lb/blast		
		Beryllium	4.56E-03	lb/blast		
		Cadmium	3.26E-03	lb/blast		
		Chromium	6.62E-02	lb/blast		
		Cobalt	5.67E-02	lb/blast		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
ABlasting (AOS1) (cont'd)	Blasting (AOS1) (annual basis) (cont'd)	Manganese	5.22E-01	lb/blast	blasts (cont'd)	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), 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	2.71E-03	lb/blast		
		Nickel	4.39E-02	lb/blast		
		Selenium	1.55E-02	lb/blast		
		Total HAPs	1.19E+00	lb/blast		
HBlasting (AOS1)	Blasting (AOS1) (hourly basis)	Lead	7.10E-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), 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)
		POM	2.14E-02	lb/blast		
		Formaldehyde	3.95E-01	lb/blast		
		Antimony	3.44E-02	lb/blast		
		Arsenic	6.30E-02	lb/blast		
		Beryllium	5.74E-03	lb/blast		
		Cadmium	4.04E-03	lb/blast		
		Chromium	8.67E-02	lb/blast		
		Cobalt	7.45E-02	lb/blast		
		Manganese	6.85E-01	lb/blast		
		Mercury	3.31E-03	lb/blast		
		Nickel	5.74E-02	lb/blast		
		Selenium	1.91E-02	lb/blast		
		Total HAPs	1.52E+00	lb/blast		
Vehicle Operations						
ATravel	Vehicle Travel on Unpaved Roads (annual basis)	Antimony	2.92E-05	lb/VMT	VMT	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)
		Arsenic	5.00E-05	lb/VMT		
		Beryllium	3.14E-06	lb/VMT		
		Cadmium	1.14E-06	lb/VMT		
		Chromium	6.85E-05	lb/VMT		
		Cobalt	6.47E-05	lb/VMT		
		Lead	5.32E-05	lb/VMT		
		Manganese	5.92E-04	lb/VMT		
		Mercury	5.92E-07	lb/VMT		
		Nickel	4.53E-05	lb/VMT		
		Selenium	4.79E-06	lb/VMT		
Total HAPs	9.13E-04	lb/VMT				
HTravel	Vehicle Travel on Unpaved Roads (hourly basis)	Antimony	3.62E-05	lb/VMT	VMT	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)
		Arsenic	6.22E-05	lb/VMT		
		Beryllium	3.91E-06	lb/VMT		
		Cadmium	1.41E-06	lb/VMT		
		Chromium	8.51E-05	lb/VMT		
		Cobalt	8.04E-05	lb/VMT		
		Lead	6.61E-05	lb/VMT		
		Manganese	7.36E-04	lb/VMT		
		Mercury	7.35E-07	lb/VMT		
		Nickel	5.63E-05	lb/VMT		
		Selenium	5.95E-06	lb/VMT		
Total HAPs	1.13E-03	lb/VMT				
ATravel (AOS1)	Vehicle Travel on Unpaved Roads (annual basis) (AOS1)	Antimony	4.02E-05	lb/VMT	VMT	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)
		Arsenic	6.94E-05	lb/VMT		
		Beryllium	3.62E-06	lb/VMT		
		Cadmium	1.62E-06	lb/VMT		
		Chromium	9.81E-05	lb/VMT		
		Cobalt	8.69E-05	lb/VMT		
		Lead	7.36E-05	lb/VMT		
		Manganese	7.94E-04	lb/VMT		
		Mercury	7.72E-07	lb/VMT		
		Nickel	6.39E-05	lb/VMT		
		Selenium	6.89E-06	lb/VMT		
Total HAPs	1.24E-03	lb/VMT				

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
HTravel (AOS1)	Vehicle Travel on Unpaved Roads (hourly basis) (AOS1)	Antimony	5.34E-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	9.23E-05	lb/VMT		
		Beryllium	4.81E-06	lb/VMT		
		Cadmium	2.16E-06	lb/VMT		
		Chromium	1.31E-04	lb/VMT		
		Cobalt	1.16E-04	lb/VMT		
		Lead	9.78E-05	lb/VMT		
		Manganese	1.06E-03	lb/VMT		
		Mercury	1.03E-06	lb/VMT		
		Nickel	8.50E-05	lb/VMT		
		Selenium	9.17E-06	lb/VMT		
		Total HAPs	1.65E-03	lb/VMT		
Dozer	Dozer Operation	Antimony	2.04E-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	3.50E-05	lb/hr		
		Beryllium	2.20E-06	lb/hr		
		Cadmium	7.95E-07	lb/hr		
		Chromium	4.79E-05	lb/hr		
		Cobalt	4.52E-05	lb/hr		
		Lead	3.72E-05	lb/hr		
		Manganese	4.14E-04	lb/hr		
		Mercury	4.14E-07	lb/hr		
		Nickel	3.17E-05	lb/hr		
		Selenium	3.35E-06	lb/hr		
		Total HAPs	6.38E-04	lb/hr		
Dozer (AOS1)	Dozer Operation (AOS1)	Antimony	2.16E-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	3.73E-05	lb/hr		
		Beryllium	1.94E-06	lb/hr		
		Cadmium	8.73E-07	lb/hr		
		Chromium	5.28E-05	lb/hr		
		Cobalt	4.67E-05	lb/hr		
		Lead	3.96E-05	lb/hr		
		Manganese	4.27E-04	lb/hr		
		Mercury	4.15E-07	lb/hr		
		Nickel	3.44E-05	lb/hr		
		Selenium	3.71E-06	lb/hr		
		Total HAPs	6.66E-04	lb/hr		
Grader	Road Grader Operation	Antimony	1.40E-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	2.40E-05	lb/VMT		
		Beryllium	1.51E-06	lb/VMT		
		Cadmium	5.46E-07	lb/VMT		
		Chromium	3.29E-05	lb/VMT		
		Cobalt	3.10E-05	lb/VMT		
		Lead	2.55E-05	lb/VMT		
		Manganese	2.84E-04	lb/VMT		
		Mercury	2.84E-07	lb/VMT		
		Nickel	2.17E-05	lb/VMT		
		Selenium	2.30E-06	lb/VMT		
		Total HAPs	4.38E-04	lb/VMT		
Grader (AOS1)	Road Grader Operation (AOS1)	Antimony	1.48E-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	2.56E-05	lb/VMT		
		Beryllium	1.33E-06	lb/VMT		
		Cadmium	5.99E-07	lb/VMT		
		Chromium	3.62E-05	lb/VMT		
		Cobalt	3.21E-05	lb/VMT		
		Lead	2.71E-05	lb/VMT		
		Manganese	2.93E-04	lb/VMT		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Grader (AOS1) (cont'd)	Road Grader Operation (AOS1) (cont'd)	Mercury	2.85E-07	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)
		Nickel	2.36E-05	lb/VMT		
		Selenium	2.54E-06	lb/VMT		
		Total HAPs	4.57E-04	lb/VMT		
Material Transfer Operations						
Ore1TrUnprt	Material Transfer of the Combination of All Mined Material (unprotected)	Antimony	1.63E-08	lb/ton	tons	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)
		Arsenic	2.79E-08	lb/ton		
		Beryllium	1.76E-09	lb/ton		
		Cadmium	6.36E-10	lb/ton		
		Chromium	3.83E-08	lb/ton		
		Cobalt	3.61E-08	lb/ton		
		Lead	2.97E-08	lb/ton		
		Manganese	3.31E-07	lb/ton		
		Mercury	3.31E-10	lb/ton		
		Nickel	2.53E-08	lb/ton		
		Selenium	2.67E-09	lb/ton		
		Total HAPs	5.10E-07	lb/ton		
Ore1TrUnprt (AOS1)	Material Transfer of the Combination of All Mined Material (unprotected) (AOS1)	Antimony	1.73E-08	lb/ton	tons	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)
		Arsenic	2.98E-08	lb/ton		
		Beryllium	1.55E-09	lb/ton		
		Cadmium	6.98E-10	lb/ton		
		Chromium	4.22E-08	lb/ton		
		Cobalt	3.74E-08	lb/ton		
		Lead	3.16E-08	lb/ton		
		Manganese	3.41E-07	lb/ton		
		Mercury	3.32E-10	lb/ton		
		Nickel	2.75E-08	lb/ton		
		Selenium	2.96E-09	lb/ton		
		Total HAPs	5.33E-07	lb/ton		
Ore2TrPrt	Material Transfer of Mill Ore (protected)	Antimony	4.13E-09	lb/ton	tons	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)
		Arsenic	6.11E-09	lb/ton		
		Beryllium	1.44E-10	lb/ton		
		Cadmium	1.06E-10	lb/ton		
		Chromium	4.24E-09	lb/ton		
		Cobalt	8.17E-09	lb/ton		
		Lead	2.61E-09	lb/ton		
		Manganese	3.89E-08	lb/ton		
		Mercury	6.04E-11	lb/ton		
		Nickel	2.42E-09	lb/ton		
		Selenium	3.82E-10	lb/ton		
		Total HAPs	6.73E-08	lb/ton		
Ore2TrUnprt	Material Transfer of Mill Ore (unprotected)	Antimony	3.86E-08	lb/ton	tons	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)
		Arsenic	5.71E-08	lb/ton		
		Beryllium	1.35E-09	lb/ton		
		Cadmium	9.88E-10	lb/ton		
		Chromium	3.96E-08	lb/ton		
		Cobalt	7.64E-08	lb/ton		
		Lead	2.44E-08	lb/ton		
		Manganese	3.64E-07	lb/ton		
		Mercury	5.65E-10	lb/ton		
		Nickel	2.26E-08	lb/ton		
		Selenium	3.57E-09	lb/ton		
		Total HAPs	6.29E-07	lb/ton		
Ore3TrUnprt	Material Transfer of Leach Ore (unprotected)	Antimony	0.00E+00	lb/ton	tons	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)
		Arsenic	1.54E-09	lb/ton		
		Beryllium	3.54E-09	lb/ton		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Ore3TrUnprt (cont'd)	Material Transfer of Leach Ore (unprotected) (cont'd)	Cadmium	0.00E+00	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)
		Chromium	6.16E-09	lb/ton		
		Cobalt	1.10E-08	lb/ton		
		Lead	1.64E-08	lb/ton		
		Manganese	2.34E-07	lb/ton		
		Mercury	2.31E-10	lb/ton		
		Nickel	8.98E-09	lb/ton		
		Selenium	0.00E+00	lb/ton		
Ore4TrUnprt	Material Transfer of Overburden/Low Grade Ore (unprotected)	Total HAPs	2.82E-07	lb/ton	tons	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)
		Antimony	8.47E-09	lb/ton		
		Arsenic	1.89E-08	lb/ton		
		Beryllium	1.54E-09	lb/ton		
		Cadmium	6.03E-10	lb/ton		
		Chromium	4.53E-08	lb/ton		
		Cobalt	2.10E-08	lb/ton		
		Lead	3.58E-08	lb/ton		
		Manganese	3.37E-07	lb/ton		
		Mercury	2.31E-10	lb/ton		
		Nickel	3.07E-08	lb/ton		
MC1TrPrt	Material Transfer of Bagdad Molybdenum Concentrate (protected)	Selenium	2.85E-09	lb/ton	tons	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)
		Total HAPs	5.02E-07	lb/ton		
		Antimony	5.34E-08	lb/ton		
		Arsenic	5.83E-08	lb/ton		
		Beryllium	2.61E-10	lb/ton		
		Cadmium	9.78E-10	lb/ton		
		Chromium	5.47E-10	lb/ton		
		Cobalt	3.43E-09	lb/ton		
		Lead	5.94E-09	lb/ton		
		Manganese	1.69E-09	lb/ton		
		Mercury	8.84E-10	lb/ton		
MC2TrPrt	Material Transfer of Bagdad or High Moisture Outside Source Molybdenum Concentrate (protected)	Nickel	2.48E-09	lb/ton	tons	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)
		Selenium	6.65E-09	lb/ton		
		Total HAPs	1.35E-07	lb/ton		
		Antimony	5.34E-08	lb/ton		
		Arsenic	6.52E-07	lb/ton		
		Beryllium	2.61E-10	lb/ton		
		Cadmium	9.78E-10	lb/ton		
		Chromium	5.47E-10	lb/ton		
		Cobalt	3.43E-09	lb/ton		
		Lead	5.94E-09	lb/ton		
		Manganese	1.69E-09	lb/ton		
MC3TrPrt	Material Transfer of Bagdad or Low Moisture Outside Source Molybdenum Concentrate (protected)	Mercury	8.84E-10	lb/ton	tons	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)
		Nickel	2.48E-09	lb/ton		
		Selenium	6.65E-09	lb/ton		
		Total HAPs	7.28E-07	lb/ton		
		Antimony	2.64E-05	lb/ton		
		Arsenic	3.22E-04	lb/ton		
		Beryllium	1.29E-07	lb/ton		
		Cadmium	4.83E-07	lb/ton		
		Chromium	2.71E-07	lb/ton		
		Cobalt	1.70E-06	lb/ton		
		Lead	2.94E-06	lb/ton		
		Manganese	8.38E-07	lb/ton		
		Mercury	4.37E-07	lb/ton		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
MC3TrPrt (cont'd)	Material Transfer of Bagdad or Low Moisture Outside Source Molybdenum Concentrate (protected) (cont'd)	Nickel	1.22E-06	lb/ton	tons (cont'd)	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) (cont'd)
		Selenium	3.29E-06	lb/ton		
		Total HAPs	3.60E-04	lb/ton		
MC3TrUnprt	Material Transfer of Bagdad or Low Moisture Outside Source Molybdenum Concentrate (unprotected)	Antimony	2.47E-04	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	3.01E-03	lb/ton		
		Beryllium	1.20E-06	lb/ton		
		Cadmium	4.52E-06	lb/ton		
		Chromium	2.53E-06	lb/ton		
		Cobalt	1.59E-05	lb/ton		
		Lead	2.74E-05	lb/ton		
		Manganese	7.83E-06	lb/ton		
		Mercury	4.09E-06	lb/ton		
		Nickel	1.14E-05	lb/ton		
		Selenium	3.07E-05	lb/ton		
		Total HAPs	3.36E-03	lb/ton		
MC4TrPrt	Material Transfer of Second Concentrator Molybdenum Concentrate Post-Dryer (protected)	Antimony	2.11E-06	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	2.30E-06	lb/ton		
		Beryllium	1.03E-08	lb/ton		
		Cadmium	3.86E-08	lb/ton		
		Chromium	2.16E-08	lb/ton		
		Cobalt	1.36E-07	lb/ton		
		Lead	2.35E-07	lb/ton		
		Manganese	6.70E-08	lb/ton		
		Mercury	3.49E-08	lb/ton		
		Nickel	9.79E-08	lb/ton		
		Selenium	2.63E-07	lb/ton		
		Total HAPs	5.32E-06	lb/ton		
MOTrPrt	Material Transfer of Molybdenum Trioxide (protected)	Antimony	0.00E+00	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	6.98E-07	lb/ton		
		Beryllium	0.00E+00	lb/ton		
		Cadmium	0.00E+00	lb/ton		
		Chromium	0.00E+00	lb/ton		
		Cobalt	0.00E+00	lb/ton		
		Lead	5.30E-09	lb/ton		
		Manganese	0.00E+00	lb/ton		
		Mercury	0.00E+00	lb/ton		
		Nickel	0.00E+00	lb/ton		
		Selenium	3.19E-10	lb/ton		
		Total HAPs	7.03E-07	lb/ton		
CCTrPrt	Material Transfer of Copper Concentrate (protected)	Antimony	4.85E-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	8.06E-08	lb/ton		
		Beryllium	2.37E-10	lb/ton		
		Cadmium	8.88E-10	lb/ton		
		Chromium	4.97E-10	lb/ton		
		Cobalt	3.12E-09	lb/ton		
		Lead	1.99E-08	lb/ton		
		Manganese	1.54E-09	lb/ton		
		Mercury	8.03E-10	lb/ton		
		Nickel	2.25E-09	lb/ton		
		Selenium	3.91E-09	lb/ton		
		Total HAPs	1.62E-07	lb/ton		
CCTrUnprt	Material Transfer of Copper Concentrate (unprotected)	Antimony	4.54E-07	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	7.53E-07	lb/ton		
		Beryllium	2.21E-09	lb/ton		
		Cadmium	8.30E-09	lb/ton		
		Chromium	4.65E-09	lb/ton		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
CCTrUnprt (cont'd)	Material Transfer of Copper Concentrate (unprotected) (cont'd)	Cobalt	2.91E-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)
		Lead	1.86E-07	lb/ton		
		Manganese	1.44E-08	lb/ton		
		Mercury	7.51E-09	lb/ton		
		Nickel	2.10E-08	lb/ton		
		Selenium	3.65E-08	lb/ton		
		Total HAPs	1.52E-06	lb/ton		
NMTrPrt	Material Transfer of Nonmetallic Minerals Processed by the Portable Aggregate System (protected)	Antimony	2.46E-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	5.51E-10	lb/ton		
		Beryllium	4.48E-11	lb/ton		
		Cadmium	1.75E-11	lb/ton		
		Chromium	1.32E-09	lb/ton		
		Cobalt	6.10E-10	lb/ton		
		Lead	1.04E-09	lb/ton		
		Manganese	9.80E-09	lb/ton		
		Mercury	6.72E-12	lb/ton		
		Nickel	8.93E-10	lb/ton		
		Selenium	8.29E-11	lb/ton		
		Total HAPs	1.46E-08	lb/ton		
NMTrUnprt	Material Transfer of Nonmetallic Minerals Processed by the Portable Aggregate System (unprotected)	Antimony	2.30E-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	5.15E-09	lb/ton		
		Beryllium	4.19E-10	lb/ton		
		Cadmium	1.64E-10	lb/ton		
		Chromium	1.23E-08	lb/ton		
		Cobalt	5.70E-09	lb/ton		
		Lead	9.73E-09	lb/ton		
		Manganese	9.16E-08	lb/ton		
		Mercury	6.28E-11	lb/ton		
		Nickel	8.34E-09	lb/ton		
		Selenium	7.75E-10	lb/ton		
		Total HAPs	1.37E-07	lb/ton		
DSH1TrUnprt	Material Transfer of Copper Decant Material Processed by the Copper Decant Solids Handling Operations (unprotected)	Antimony	1.00E-06	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	1.76E-06	lb/ton		
		Beryllium	2.61E-09	lb/ton		
		Cadmium	1.57E-08	lb/ton		
		Chromium	1.70E-08	lb/ton		
		Cobalt	3.13E-08	lb/ton		
		Lead	1.90E-07	lb/ton		
		Manganese	2.87E-08	lb/ton		
		Mercury	1.52E-08	lb/ton		
		Nickel	2.48E-08	lb/ton		
		Selenium	4.31E-08	lb/ton		
		Total HAPs	3.13E-06	lb/ton		
Wind Erosion						
AWindCOS 1/5	Wind Erosion of Coarse Ore Stockpiles 1/5 (annual basis)	Antimony	2.95E-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	4.37E-02	lb/acre-yr		
		Beryllium	1.03E-03	lb/acre-yr		
		Cadmium	7.56E-04	lb/acre-yr		
		Chromium	3.03E-02	lb/acre-yr		
		Cobalt	5.84E-02	lb/acre-yr		
		Lead	1.86E-02	lb/acre-yr		
		Manganese	2.78E-01	lb/acre-yr		
		Mercury	4.32E-04	lb/acre-yr		
		Nickel	1.73E-02	lb/acre-yr		
		Selenium	2.73E-03	lb/acre-yr		
Total HAPs	4.81E-01	lb/acre-yr				

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
HWindCOS 1/5	Wind Erosion of Coarse Ore Stockpiles 1/5 (hourly basis)	Antimony	3.37E-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	4.99E-06	lb/acre-hr		
		Beryllium	1.18E-07	lb/acre-hr		
		Cadmium	8.63E-08	lb/acre-hr		
		Chromium	3.46E-06	lb/acre-hr		
		Cobalt	6.67E-06	lb/acre-hr		
		Lead	2.13E-06	lb/acre-hr		
		Manganese	3.17E-05	lb/acre-hr		
		Mercury	4.93E-08	lb/acre-hr		
		Nickel	1.98E-06	lb/acre-hr		
		Selenium	3.11E-07	lb/acre-hr		
		Total HAPs	5.49E-05	lb/acre-hr		
AWindOCC	Wind Erosion of Outdoor Copper Concentrate Stockpile (annual basis)	Antimony	4.83E+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	8.02E+01	lb/acre-yr		
		Beryllium	2.36E-01	lb/acre-yr		
		Cadmium	8.83E-01	lb/acre-yr		
		Chromium	4.95E-01	lb/acre-yr		
		Cobalt	3.10E+00	lb/acre-yr		
		Lead	1.98E+01	lb/acre-yr		
		Manganese	1.53E+00	lb/acre-yr		
		Mercury	7.99E-01	lb/acre-yr		
		Nickel	2.24E+00	lb/acre-yr		
		Selenium	3.89E+00	lb/acre-yr		
		Total HAPs	1.61E+02	lb/acre-yr		
HWindOCC	Wind Erosion of Outdoor Copper Concentrate Stockpile (hourly basis)	Antimony	5.51E-03	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	9.15E-03	lb/acre-hr		
		Beryllium	2.69E-05	lb/acre-hr		
		Cadmium	1.01E-04	lb/acre-hr		
		Chromium	5.65E-05	lb/acre-hr		
		Cobalt	3.54E-04	lb/acre-hr		
		Lead	2.26E-03	lb/acre-hr		
		Manganese	1.75E-04	lb/acre-hr		
		Mercury	9.12E-05	lb/acre-hr		
		Nickel	2.55E-04	lb/acre-hr		
		Selenium	4.44E-04	lb/acre-hr		
		Total HAPs	1.84E-02	lb/acre-hr		
AWindICC	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (annual basis)	Antimony	4.83E+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	8.02E+01	lb/acre-yr		
		Beryllium	2.36E-01	lb/acre-yr		
		Cadmium	8.83E-01	lb/acre-yr		
		Chromium	4.95E-01	lb/acre-yr		
		Cobalt	3.10E+00	lb/acre-yr		
		Lead	1.98E+01	lb/acre-yr		
		Manganese	1.53E+00	lb/acre-yr		
		Mercury	7.99E-01	lb/acre-yr		
		Nickel	2.24E+00	lb/acre-yr		
		Selenium	3.89E+00	lb/acre-yr		
		Total HAPs	1.61E+02	lb/acre-yr		
HWindICC	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (hourly basis)	Antimony	5.51E-03	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	9.15E-03	lb/acre-hr		
		Beryllium	2.69E-05	lb/acre-hr		
		Cadmium	1.01E-04	lb/acre-hr		
		Chromium	5.65E-05	lb/acre-hr		
		Cobalt	3.54E-04	lb/acre-hr		
		Lead	2.26E-03	lb/acre-hr		
		Manganese	1.75E-04	lb/acre-hr		

Emission Inventory Tables for Potential Emission Calculations
October 2025

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
HWindICC (cont'd)	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles (hourly basis) (cont'd)	Mercury	9.12E-05	lb/acre-hr	acre-yr (cont'd)	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) (cont'd)
		Nickel	2.55E-04	lb/acre-hr		
		Selenium	4.44E-04	lb/acre-hr		
		Total HAPs	1.84E-02	lb/acre-hr		
AWindT	Wind Erosion of Tailings (annual basis)	Antimony	6.18E-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	8.20E-04	lb/acre-yr		
		Beryllium	2.06E-04	lb/acre-yr		
		Cadmium	2.06E-04	lb/acre-yr		
		Chromium	5.15E-03	lb/acre-yr		
		Cobalt	6.10E-03	lb/acre-yr		
		Lead	1.13E-03	lb/acre-yr		
		Manganese	2.95E-02	lb/acre-yr		
		Mercury	5.15E-07	lb/acre-yr		
		Nickel	4.12E-03	lb/acre-yr		
		Selenium	2.27E-04	lb/acre-yr		
		Total HAPs	4.81E-02	lb/acre-yr		
HWindT	Wind Erosion of Tailings (hourly basis)	Antimony	7.06E-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	9.36E-08	lb/acre-hr		
		Beryllium	2.35E-08	lb/acre-hr		
		Cadmium	2.35E-08	lb/acre-hr		
		Chromium	5.88E-07	lb/acre-hr		
		Cobalt	6.96E-07	lb/acre-hr		
		Lead	1.29E-07	lb/acre-hr		
		Manganese	3.37E-06	lb/acre-hr		
		Mercury	5.88E-11	lb/acre-hr		
		Nickel	4.71E-07	lb/acre-hr		
		Selenium	2.59E-08	lb/acre-hr		
		Total HAPs	5.49E-06	lb/acre-hr		
AWindPAS	Wind Erosion of Coarse and Fine Aggregate Stockpiles (annual basis)	Antimony	1.05E-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	2.35E-02	lb/acre-yr		
		Beryllium	1.91E-03	lb/acre-yr		
		Cadmium	7.50E-04	lb/acre-yr		
		Chromium	5.63E-02	lb/acre-yr		
		Cobalt	2.61E-02	lb/acre-yr		
		Lead	4.44E-02	lb/acre-yr		
		Manganese	4.19E-01	lb/acre-yr		
		Mercury	2.87E-04	lb/acre-yr		
		Nickel	3.81E-02	lb/acre-yr		
		Selenium	3.54E-03	lb/acre-yr		
		Total HAPs	6.24E-01	lb/acre-yr		
HWindPAS	Wind Erosion of Coarse and Fine Aggregate Stockpiles (hourly basis)	Antimony	1.20E-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	2.69E-06	lb/acre-hr		
		Beryllium	2.18E-07	lb/acre-hr		
		Cadmium	8.56E-08	lb/acre-hr		
		Chromium	6.43E-06	lb/acre-hr		
		Cobalt	2.97E-06	lb/acre-hr		
		Lead	5.07E-06	lb/acre-hr		
		Manganese	4.78E-05	lb/acre-hr		
		Mercury	3.28E-08	lb/acre-hr		
		Nickel	4.35E-06	lb/acre-hr		
		Selenium	4.04E-07	lb/acre-hr		
		Total HAPs	7.12E-05	lb/acre-hr		
AWindSPAS	Wind Erosion of the SPAS Stockpiles (annual basis)	Antimony	1.05E-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	2.35E-02	lb/acre-yr		
		Beryllium	1.91E-03	lb/acre-yr		
		Cadmium	7.50E-04	lb/acre-yr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
AWindSPAS (cont'd)	Wind Erosion of the SPAS Stockpiles (annual basis) (cont'd)	Chromium	5.63E-02	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)
		Cobalt	2.61E-02	lb/acre-yr		
		Lead	4.44E-02	lb/acre-yr		
		Manganese	4.19E-01	lb/acre-yr		
		Mercury	2.87E-04	lb/acre-yr		
		Nickel	3.81E-02	lb/acre-yr		
		Selenium	3.54E-03	lb/acre-yr		
		Total HAPs	6.24E-01	lb/acre-yr		
HWindSPAS	Wind Erosion of the SPAS Stockpiles (hourly basis)	Antimony	1.20E-06	lb/acre-hr	acre-yr	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)
		Arsenic	2.69E-06	lb/acre-hr		
		Beryllium	2.18E-07	lb/acre-hr		
		Cadmium	8.56E-08	lb/acre-hr		
		Chromium	6.43E-06	lb/acre-hr		
		Cobalt	2.97E-06	lb/acre-hr		
		Lead	5.07E-06	lb/acre-hr		
		Manganese	4.78E-05	lb/acre-hr		
		Mercury	3.28E-08	lb/acre-hr		
		Nickel	4.35E-06	lb/acre-hr		
		Selenium	4.04E-07	lb/acre-hr		
		Total HAPs	7.12E-05	lb/acre-hr		
AWindDSH1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (annual basis)	Antimony	1.19E+00	lb/acre-yr	acre-yr	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)
		Arsenic	2.08E+00	lb/acre-yr		
		Beryllium	3.09E-03	lb/acre-yr		
		Cadmium	1.85E-02	lb/acre-yr		
		Chromium	2.01E-02	lb/acre-yr		
		Cobalt	3.71E-02	lb/acre-yr		
		Lead	2.26E-01	lb/acre-yr		
		Manganese	3.40E-02	lb/acre-yr		
		Mercury	1.81E-02	lb/acre-yr		
		Nickel	2.94E-02	lb/acre-yr		
		Selenium	5.10E-02	lb/acre-yr		
		Total HAPs	3.71E+00	lb/acre-yr		
HWindDSH1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (hourly basis)	Antimony	5.33E-04	lb/acre-hr	acre-yr	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)
		Arsenic	9.34E-04	lb/acre-hr		
		Beryllium	1.39E-06	lb/acre-hr		
		Cadmium	8.31E-06	lb/acre-hr		
		Chromium	9.00E-06	lb/acre-hr		
		Cobalt	1.66E-05	lb/acre-hr		
		Lead	1.01E-04	lb/acre-hr		
		Manganese	1.52E-05	lb/acre-hr		
		Mercury	8.09E-06	lb/acre-hr		
		Nickel	1.32E-05	lb/acre-hr		
		Selenium	2.29E-05	lb/acre-hr		
		Total HAPs	1.66E-03	lb/acre-hr		
AWindCOS 1/5 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1) (annual basis)	Antimony	2.95E-02	lb/acre-yr	acre-yr	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)
		Arsenic	4.37E-02	lb/acre-yr		
		Beryllium	1.03E-03	lb/acre-yr		
		Cadmium	7.56E-04	lb/acre-yr		
		Chromium	3.03E-02	lb/acre-yr		
		Cobalt	5.84E-02	lb/acre-yr		
		Lead	1.86E-02	lb/acre-yr		
		Manganese	2.78E-01	lb/acre-yr		
		Mercury	4.32E-04	lb/acre-yr		
		Nickel	1.73E-02	lb/acre-yr		
		Selenium	2.73E-03	lb/acre-yr		
		Total HAPs	4.81E-01	lb/acre-yr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
HWindCOS 1/5 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1) (hourly basis)	Antimony	3.37E-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	4.99E-06	lb/acre-hr		
		Beryllium	1.18E-07	lb/acre-hr		
		Cadmium	8.63E-08	lb/acre-hr		
		Chromium	3.46E-06	lb/acre-hr		
		Cobalt	6.67E-06	lb/acre-hr		
		Lead	2.13E-06	lb/acre-hr		
		Manganese	3.17E-05	lb/acre-hr		
		Mercury	4.93E-08	lb/acre-hr		
		Nickel	1.98E-06	lb/acre-hr		
		Selenium	3.11E-07	lb/acre-hr		
AWindCOS 6 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1) (annual basis)	Total HAPs	5.49E-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)
		Antimony	2.95E-02	lb/acre-yr		
		Arsenic	4.37E-02	lb/acre-yr		
		Beryllium	1.03E-03	lb/acre-yr		
		Cadmium	7.56E-04	lb/acre-yr		
		Chromium	3.03E-02	lb/acre-yr		
		Cobalt	5.84E-02	lb/acre-yr		
		Lead	1.86E-02	lb/acre-yr		
		Manganese	2.78E-01	lb/acre-yr		
		Mercury	4.32E-04	lb/acre-yr		
		Nickel	1.73E-02	lb/acre-yr		
HWindCOS 6 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1) (hourly basis)	Selenium	2.73E-03	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)
		Total HAPs	4.81E-01	lb/acre-yr		
		Antimony	3.37E-06	lb/acre-hr		
		Arsenic	4.99E-06	lb/acre-hr		
		Beryllium	1.18E-07	lb/acre-hr		
		Cadmium	8.63E-08	lb/acre-hr		
		Chromium	3.46E-06	lb/acre-hr		
		Cobalt	6.67E-06	lb/acre-hr		
		Lead	2.13E-06	lb/acre-hr		
		Manganese	3.17E-05	lb/acre-hr		
		Mercury	4.93E-08	lb/acre-hr		
AWindSCC (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (annual basis)	Nickel	1.98E-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)
		Selenium	3.11E-07	lb/acre-hr		
		Total HAPs	5.49E-05	lb/acre-hr		
		Antimony	4.83E+01	lb/acre-yr		
		Arsenic	8.02E+01	lb/acre-yr		
		Beryllium	2.36E-01	lb/acre-yr		
		Cadmium	8.83E-01	lb/acre-yr		
		Chromium	4.95E-01	lb/acre-yr		
		Cobalt	3.10E+00	lb/acre-yr		
		Lead	1.98E+01	lb/acre-yr		
		Manganese	1.53E+00	lb/acre-yr		
HWindSCC (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (hourly basis)	Mercury	7.99E-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)
		Nickel	2.24E+00	lb/acre-yr		
		Selenium	3.89E+00	lb/acre-yr		
		Total HAPs	1.61E+02	lb/acre-yr		
		Antimony	5.51E-03	lb/acre-hr		
		Arsenic	9.15E-03	lb/acre-hr		
		Beryllium	2.69E-05	lb/acre-hr		
		Cadmium	1.01E-04	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)
		Chromium	5.65E-05	lb/acre-hr		
		Cobalt	3.54E-04	lb/acre-hr		
		Lead	2.26E-03	lb/acre-hr		
		Manganese	1.75E-04	lb/acre-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
HWindSCC (AOS1) (cont'd)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (hourly basis) (cont'd)	Mercury	9.12E-05	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)
		Nickel	2.55E-04	lb/acre-hr		
		Selenium	4.44E-04	lb/acre-hr		
		Total HAPs	1.84E-02	lb/acre-hr		
AWindTOS	Wind Erosion of Temporary Oversize Stockpile (AOS5) (annual basis)	Antimony	2.95E-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	4.37E-02	lb/acre-yr		
		Beryllium	1.03E-03	lb/acre-yr		
		Cadmium	7.56E-04	lb/acre-yr		
		Chromium	3.03E-02	lb/acre-yr		
		Cobalt	5.84E-02	lb/acre-yr		
		Lead	1.86E-02	lb/acre-yr		
		Manganese	2.78E-01	lb/acre-yr		
		Mercury	4.32E-04	lb/acre-yr		
		Nickel	1.73E-02	lb/acre-yr		
		Selenium	2.73E-03	lb/acre-yr		
		Total HAPs	4.81E-01	lb/acre-yr		
HWindTOS	Wind Erosion of Temporary Oversize Stockpile (AOS5) (hourly basis)	Antimony	3.37E-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	4.99E-06	lb/acre-hr		
		Beryllium	1.18E-07	lb/acre-hr		
		Cadmium	8.63E-08	lb/acre-hr		
		Chromium	3.46E-06	lb/acre-hr		
		Cobalt	6.67E-06	lb/acre-hr		
		Lead	2.13E-06	lb/acre-hr		
		Manganese	3.17E-05	lb/acre-hr		
		Mercury	4.93E-08	lb/acre-hr		
		Nickel	1.98E-06	lb/acre-hr		
		Selenium	3.11E-07	lb/acre-hr		
		Total HAPs	5.49E-05	lb/acre-hr		
Screening Operations						
VGFScreen C	Vibrating Grizzly Feeder Screening in the Portable Aggregate System (moisture content of material processed >1.3%)	Antimony	4.88E-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	1.09E-08	lb/ton		
		Beryllium	8.88E-10	lb/ton		
		Cadmium	3.48E-10	lb/ton		
		Chromium	2.61E-08	lb/ton		
		Cobalt	1.21E-08	lb/ton		
		Lead	2.06E-08	lb/ton		
		Manganese	1.94E-07	lb/ton		
		Mercury	1.33E-10	lb/ton		
		Nickel	1.77E-08	lb/ton		
		Selenium	1.64E-09	lb/ton		
TDSScreen C	Triple Deck Screening in the Portable Aggregate System (moisture content of material processed >1.3%)	Total HAPs	2.90E-07	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)
		Antimony	4.88E-09	lb/ton		
		Arsenic	1.09E-08	lb/ton		
		Beryllium	8.88E-10	lb/ton		
		Cadmium	3.48E-10	lb/ton		
		Chromium	2.61E-08	lb/ton		
		Cobalt	1.21E-08	lb/ton		
		Lead	2.06E-08	lb/ton		
		Manganese	1.94E-07	lb/ton		
		Mercury	1.33E-10	lb/ton		
		Nickel	1.77E-08	lb/ton		
Selenium	1.64E-09	lb/ton				
AgScreenC	Screens in the Supplemental Portable Aggregate System (moisture content of material processed >1.3%)	Total HAPs	2.90E-07	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)
		Antimony	4.88E-09	lb/ton		
		Arsenic	1.09E-08	lb/ton		
		Beryllium	8.88E-10	lb/ton		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
AgScreenC (cont'd)	Screens in the Supplemental Portable Aggregate System (moisture content of material processed >1.3%) (cont'd)	Cadmium	3.48E-10	lb/ton	tons (cont'd)	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) (cont'd)
		Chromium	2.61E-08	lb/ton		
		Cobalt	1.21E-08	lb/ton		
		Lead	2.06E-08	lb/ton		
		Manganese	1.94E-07	lb/ton		
		Mercury	1.33E-10	lb/ton		
		Nickel	1.77E-08	lb/ton		
		Selenium	1.64E-09	lb/ton		
BGScreenC	Bar Grizzly Screening in the Emergency Grizzly Systems (AOS5) (moisture content of material processed >1.3%)	Total HAPs	2.90E-07	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)
		Antimony	2.22E-08	lb/ton		
		Arsenic	3.29E-08	lb/ton		
		Beryllium	7.77E-10	lb/ton		
		Cadmium	5.70E-10	lb/ton		
		Chromium	2.28E-08	lb/ton		
		Cobalt	4.40E-08	lb/ton		
		Lead	1.41E-08	lb/ton		
		Manganese	2.10E-07	lb/ton		
		Mercury	3.26E-10	lb/ton		
		Nickel	1.31E-08	lb/ton		
JCCrushC	Jaw Crushing in the Portable Aggregate System (moisture content of material processed >1.3%)	Selenium	2.06E-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)
		Total HAPs	3.62E-07	lb/ton		
		Antimony	3.56E-09	lb/ton		
		Arsenic	7.97E-09	lb/ton		
		Beryllium	6.48E-10	lb/ton		
		Cadmium	2.54E-10	lb/ton		
		Chromium	1.91E-08	lb/ton		
		Cobalt	8.82E-09	lb/ton		
		Lead	1.50E-08	lb/ton		
		Manganese	1.42E-07	lb/ton		
		Mercury	9.72E-11	lb/ton		
CSSCrushC	Cone Crushing in the Portable Aggregate System (moisture content of material processed >1.3%)	Nickel	1.29E-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)
		Selenium	1.20E-09	lb/ton		
		Total HAPs	2.11E-07	lb/ton		
		Antimony	3.56E-09	lb/ton		
		Arsenic	7.97E-09	lb/ton		
		Beryllium	6.48E-10	lb/ton		
		Cadmium	2.54E-10	lb/ton		
		Chromium	1.91E-08	lb/ton		
		Cobalt	8.82E-09	lb/ton		
		Lead	1.50E-08	lb/ton		
		Manganese	1.42E-07	lb/ton		
AgCrushC	Crushers in the Supplemental Portable Aggregate System (moisture content of material processed >1.3%)	Mercury	9.72E-11	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)
		Nickel	1.29E-08	lb/ton		
		Selenium	1.20E-09	lb/ton		
		Total HAPs	2.11E-07	lb/ton		
		Antimony	3.56E-09	lb/ton		
		Arsenic	7.97E-09	lb/ton		
		Beryllium	6.48E-10	lb/ton		
		Cadmium	2.54E-10	lb/ton		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
AgCrushC (cont'd)	Crushers in the Supplemental Portable Aggregate System (moisture content of material processed >1.3%) (cont'd)	Nickel	1.29E-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)
		Selenium	1.20E-09	lb/ton		
		Total HAPs	2.11E-07	lb/ton		
Cooling Towers						
CLP-CT	CLP Cooling Tower	Antimony	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	0.00E+00	lb/1000 gal		
		Beryllium	0.00E+00	lb/1000 gal		
		Cadmium	0.00E+00	lb/1000 gal		
		Chromium	5.62E-12	lb/1000 gal		
		Cobalt	0.00E+00	lb/1000 gal		
		Lead	1.40E-11	lb/1000 gal		
		Manganese	6.95E-10	lb/1000 gal		
		Mercury	0.00E+00	lb/1000 gal		
		Nickel	0.00E+00	lb/1000 gal		
		Selenium	0.00E+00	lb/1000 gal		
		Total HAPs	7.15E-10	lb/1000 gal		
Bulk and Molybdenum Flotation Operations						
MFE	Bulk and Molybdenum Flotation Equipment	Benzene	8.67E-06	lb/ton	tons	Testing at the Freeport-McMoRan Henderson Mill in 2009 and diesel vapor mass fractions
		Ethylbenzene	1.46E-05	lb/ton		
		n-Hexane	1.83E-06	lb/ton		
		Toluene	1.04E-04	lb/ton		
		m-Xylene	2.72E-04	lb/ton		
		Total HAPs	4.02E-04	lb/ton		
Settling Operations						
ST	Settling Tank	Benzene	1.28E-06	lb/hr	hours	EPA TANKS Program
		Ethylbenzene	2.03E-06	lb/hr		
		n-Hexane	2.60E-07	lb/hr		
		Toluene	1.48E-05	lb/hr		
		m-Xylene	3.77E-05	lb/hr		
		Total HAPs	5.61E-05	lb/hr		
Solution Extraction/Electrowinning Operations						
SX MPL	Solution Extraction - Molybdenum Pressure Leaching	Benzene	6.02E-04	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	2.16E-03	lb/hr		
		Ethylbenzene	7.12E-03	lb/hr		
		Xylenes	9.27E-03	lb/hr		
		Total HAPs	1.91E-02	lb/hr		
SXM	Solution Extraction - Main Systems	Benzene	1.03E-02	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Toluene	3.68E-02	lb/hr		
		Ethylbenzene	1.21E-01	lb/hr		
		Xylenes	1.58E-01	lb/hr		
		Total HAPs	3.26E-01	lb/hr		
EWM	Electrowinning - Main System	Cobalt Compounds	1.24E-04	lb/hr	hours	Assumes the fraction of cobalt sulfate in the electrolyte (~150 ppm) is equal to cobalt compounds in the H ₂ SO ₄ emitted
		Total HAPs	1.24E-04	lb/hr		
RP	Raffinate Pond	Benzene	1.40E-02	lb/hr	hours	Hydrometallurgy of Copper
		Toluene	5.03E-02	lb/hr		
		Ethylbenzene	1.66E-01	lb/hr		
		Xylenes	2.16E-01	lb/hr		
TK-22	Organic Tank TK-22	Total HAPs	4.46E-01	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Benzene	2.95E-04	lb/hr		
		Toluene	1.06E-03	lb/hr		
		Ethylbenzene	3.48E-03	lb/hr		
		Xylenes	4.53E-03	lb/hr		
TK-13	Organic Mix Tank TK-13	Total HAPs	9.37E-03	lb/hr	hours	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas)
		Benzene	3.21E-04	lb/hr		
		Toluene	1.15E-03	lb/hr		
		Ethylbenzene	3.79E-03	lb/hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
TK-13 (cont'd)	Organic Mix Tank TK-13 (cont'd)	Xylenes	4.94E-03	lb/hr	hours (cont'd)	Hydrometallurgy of Copper (control efficiency of 67% for the covered areas) (cont'd)
		Total HAPs	1.02E-02	lb/hr		
External Combustion						
NGC	General Uncontrolled Natural Gas Combustion 0.3 ≤ MMBtu/hr < 100	Lead	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	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu		
		Acenaphthene	1.76E-09	lb/MMBtu		
		Acenaphthylene	1.76E-09	lb/MMBtu		
		Anthracene	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	1.76E-09	lb/MMBtu		
		Benzene	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	1.76E-09	lb/MMBtu		
		Chrysene	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu		
		Dichlorobenzene	1.18E-06	lb/MMBtu		
		Fluoranthene	2.94E-09	lb/MMBtu		
		Fluorene	2.75E-09	lb/MMBtu		
		Formaldehyde	7.35E-05	lb/MMBtu		
		Hexane	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu		
		Naphthalene	5.98E-07	lb/MMBtu		
		Phenanthrene	1.67E-08	lb/MMBtu		
		Pyrene	4.90E-09	lb/MMBtu		
		Toluene	3.33E-06	lb/MMBtu		
		Arsenic	1.96E-07	lb/MMBtu		
		Beryllium	1.18E-08	lb/MMBtu		
		Cadmium	1.08E-06	lb/MMBtu		
		Chromium	1.37E-06	lb/MMBtu		
		Cobalt	8.24E-08	lb/MMBtu		
Manganese	3.73E-07	lb/MMBtu				
Mercury	2.55E-07	lb/MMBtu				
Nickel	2.06E-06	lb/MMBtu				
Selenium	2.35E-08	lb/MMBtu				
Total HAPs	1.85E-03	lb/MMBtu				
NGHWH	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	Lead	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	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu		
		Acenaphthene	1.76E-09	lb/MMBtu		
		Acenaphthylene	1.76E-09	lb/MMBtu		
		Anthracene	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	1.76E-09	lb/MMBtu		
		Benzene	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	1.76E-09	lb/MMBtu		
		Chrysene	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu		
		Dichlorobenzene	1.18E-06	lb/MMBtu		
		Fluoranthene	2.94E-09	lb/MMBtu		
		Fluorene	2.75E-09	lb/MMBtu		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
NGHWH (cont'd)	Natural Gas Hot Water Heater (6.842 MMBtu/hr) (cont'd)	Formaldehyde	7.35E-05	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)
		Hexane	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu		
		Naphthalene	5.98E-07	lb/MMBtu		
		Phenanthrene	1.67E-08	lb/MMBtu		
		Pyrene	4.90E-09	lb/MMBtu		
		Toluene	3.33E-06	lb/MMBtu		
		Arsenic	1.96E-07	lb/MMBtu		
		Beryllium	1.18E-08	lb/MMBtu		
		Cadmium	1.08E-06	lb/MMBtu		
		Chromium	1.37E-06	lb/MMBtu		
		Cobalt	8.24E-08	lb/MMBtu		
		Manganese	3.73E-07	lb/MMBtu		
		Mercury	2.55E-07	lb/MMBtu		
		Nickel	2.06E-06	lb/MMBtu		
		Selenium	2.35E-08	lb/MMBtu		
		Total HAPs	1.85E-03	lb/MMBtu		
NGEH	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	Lead	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	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu		
		Acenaphthene	1.76E-09	lb/MMBtu		
		Acenaphthylene	1.76E-09	lb/MMBtu		
		Anthracene	2.35E-09	lb/MMBtu		
		Benzo(a)anthracene	1.76E-09	lb/MMBtu		
		Benzene	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	1.76E-09	lb/MMBtu		
		Chrysene	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu		
		Dichlorobenzene	1.18E-06	lb/MMBtu		
		Fluoranthene	2.94E-09	lb/MMBtu		
		Fluorene	2.75E-09	lb/MMBtu		
		Formaldehyde	7.35E-05	lb/MMBtu		
		Hexane	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu		
		Naphthalene	5.98E-07	lb/MMBtu		
		Phenanthrene	1.67E-08	lb/MMBtu		
		Pyrene	4.90E-09	lb/MMBtu		
		Toluene	3.33E-06	lb/MMBtu		
		Arsenic	1.96E-07	lb/MMBtu		
		Beryllium	1.18E-08	lb/MMBtu		
		Cadmium	1.08E-06	lb/MMBtu		
		Chromium	1.37E-06	lb/MMBtu		
		Cobalt	8.24E-08	lb/MMBtu		
		Manganese	3.73E-07	lb/MMBtu		
		Mercury	2.55E-07	lb/MMBtu		
		Nickel	2.06E-06	lb/MMBtu		
		Selenium	2.35E-08	lb/MMBtu		
		Total HAPs	1.85E-03	lb/MMBtu		
DCI	General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr	Lead	9.00E-06	lb/MMBtu	MMBtu	AP-42 Tables 1.3-8 and 1.3-10 (05/10) and 137,000 Btu/gallon
		POM	2.41E-05	lb/MMBtu		
		Formaldehyde	4.45E-04	lb/MMBtu		
		Arsenic	4.00E-06	lb/MMBtu		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
DCI (cont'd)	General Uncontrolled Industrial Diesel Combustion < 100 MMBtu/hr (cont'd)	Beryllium	3.00E-06	lb/MMBtu	MMBtu (cont'd)	AP-42 Tables 1.3-8 and 1.3-10 (05/10) and 137,000 Btu/gallon (cont'd)
		Cadmium	3.00E-06	lb/MMBtu		
		Chromium	3.00E-06	lb/MMBtu		
		Mercury	3.00E-06	lb/MMBtu		
		Manganese	6.00E-06	lb/MMBtu		
		Nickel	3.00E-06	lb/MMBtu		
		Selenium	1.50E-05	lb/MMBtu		
	Total HAPs	5.18E-04	lb/MMBtu			
PCI	General Uncontrolled Propane Combustion in Industrial Boilers	Lead	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	2.35E-08	lb/MMBtu		
		3-Methylchloranthrene	1.76E-09	lb/MMBtu		
		7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu		
		Acenaphthene	1.76E-09	lb/MMBtu		
		Acenaphthylene	1.76E-09	lb/MMBtu		
		Anthracene	2.35E-09	lb/MMBtu		
		Benz(a)anthracene	1.76E-09	lb/MMBtu		
		Benzene	2.06E-06	lb/MMBtu		
		Benzo(a)pyrene	1.18E-09	lb/MMBtu		
		Benzo(b)fluoranthene	1.76E-09	lb/MMBtu		
		Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu		
		Benzo(k)fluoranthene	1.76E-09	lb/MMBtu		
		Chrysene	1.76E-09	lb/MMBtu		
		Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu		
		Dichlorobenzene	1.18E-06	lb/MMBtu		
		Fluoranthene	2.94E-09	lb/MMBtu		
		Fluorene	2.75E-09	lb/MMBtu		
		Formaldehyde	7.35E-05	lb/MMBtu		
		Hexane	1.76E-03	lb/MMBtu		
		Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu		
		Naphthalene	5.98E-07	lb/MMBtu		
		Phenanthrene	1.67E-08	lb/MMBtu		
		Pyrene	4.90E-09	lb/MMBtu		
		Toluene	3.33E-06	lb/MMBtu		
		Arsenic	1.96E-07	lb/MMBtu		
		Beryllium	1.18E-08	lb/MMBtu		
		Cadmium	1.08E-06	lb/MMBtu		
		Chromium	1.37E-06	lb/MMBtu		
		Cobalt	8.24E-08	lb/MMBtu		
		Manganese	3.73E-07	lb/MMBtu		
		Mercury	2.55E-07	lb/MMBtu		
		Nickel	2.06E-06	lb/MMBtu		
		Selenium	2.35E-08	lb/MMBtu		
			Total HAPs	1.85E-03		
Diesel Emergency ICE						
DES	Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
DES (cont'd)	Diesel Engines with No Tier Rating or Engine Family Number (≤ 600 hp) (cont'd)	Anthracene	1.31E-08	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)
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
Table2-19/37-D	2008+ Diesel Emergency Engines ($19 \leq \text{kW} < 37$)	Total HAPs	2.71E-05	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
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
Tier2-560-D	Tier 2 Diesel Emergency Engines ($\text{kW} > 560$)	Total HAPs	2.71E-05	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
		Benzene	5.43E-06	lb/hp-hr		
		Toluene	1.97E-06	lb/hp-hr		
		Xylenes	1.35E-06	lb/hp-hr		
		Formaldehyde	5.52E-07	lb/hp-hr		
		Acetaldehyde	1.76E-07	lb/hp-hr		
		Acrolein	5.52E-08	lb/hp-hr		
		Naphthalene	9.10E-07	lb/hp-hr		
		Acenaphthylene	6.46E-08	lb/hp-hr		
		Acenaphthene	3.28E-08	lb/hp-hr		
		Fluorene	8.96E-08	lb/hp-hr		
		Phenanthrene	2.86E-07	lb/hp-hr		
		Anthracene	8.61E-09	lb/hp-hr		
		Fluoranthene	2.82E-08	lb/hp-hr		
		Pyrene	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	4.35E-09	lb/hp-hr		
		Chrysene	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Tier2-560-D (cont'd)	Tier 2 Diesel Emergency Engines (kW > 560) (cont'd)	Dibenz(a,h)anthracene	2.42E-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)
		Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr		
		Total HAPs	1.10E-05	lb/hp-hr		
Tier3-75/130-D	Tier 3 Diesel Emergency Engines (75 ≤ kW < 130)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
Tier3-450/560-D	Tier 3 Diesel Emergency Engines (450 ≤ kW ≤ 560)	Benzene	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	1.97E-06	lb/hp-hr		
		Xylenes	1.35E-06	lb/hp-hr		
		Formaldehyde	5.52E-07	lb/hp-hr		
		Acetaldehyde	1.76E-07	lb/hp-hr		
		Acrolein	5.52E-08	lb/hp-hr		
		Naphthalene	9.10E-07	lb/hp-hr		
		Acenaphthylene	6.46E-08	lb/hp-hr		
		Acenaphthene	3.28E-08	lb/hp-hr		
		Fluorene	8.96E-08	lb/hp-hr		
		Phenanthrene	2.86E-07	lb/hp-hr		
		Anthracene	8.61E-09	lb/hp-hr		
		Fluoranthene	2.82E-08	lb/hp-hr		
		Pyrene	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	4.35E-09	lb/hp-hr		
		Chrysene	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr		
		Total HAPs	1.10E-05	lb/hp-hr		
C41	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	Benzene	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	1.97E-06	lb/hp-hr		
		Xylenes	1.35E-06	lb/hp-hr		
		Formaldehyde	5.52E-07	lb/hp-hr		
		Acetaldehyde	1.76E-07	lb/hp-hr		
		Acrolein	5.52E-08	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
C41 (cont'd)	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine) (cont'd)	Naphthalene	9.10E-07	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)
		Acenaphthylene	6.46E-08	lb/hp-hr		
		Acenaphthene	3.28E-08	lb/hp-hr		
		Fluorene	8.96E-08	lb/hp-hr		
		Phenanthrene	2.86E-07	lb/hp-hr		
		Anthracene	8.61E-09	lb/hp-hr		
		Fluoranthene	2.82E-08	lb/hp-hr		
		Pyrene	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	4.35E-09	lb/hp-hr		
		Chrysene	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr		
IA24-D	Diesel Emergency Generator IA24-D (762 hp engine)	Total HAPs	1.10E-05	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
		Benzene	5.43E-06	lb/hp-hr		
		Toluene	1.97E-06	lb/hp-hr		
		Xylenes	1.35E-06	lb/hp-hr		
		Formaldehyde	5.52E-07	lb/hp-hr		
		Acetaldehyde	1.76E-07	lb/hp-hr		
		Acrolein	5.52E-08	lb/hp-hr		
		Naphthalene	9.10E-07	lb/hp-hr		
		Acenaphthylene	6.46E-08	lb/hp-hr		
		Acenaphthene	3.28E-08	lb/hp-hr		
		Fluorene	8.96E-08	lb/hp-hr		
		Phenanthrene	2.86E-07	lb/hp-hr		
		Anthracene	8.61E-09	lb/hp-hr		
		Fluoranthene	2.82E-08	lb/hp-hr		
		Pyrene	2.60E-08	lb/hp-hr		
		Benz(a)anthracene	4.35E-09	lb/hp-hr		
		Chrysene	1.07E-08	lb/hp-hr		
		Benzo(b)fluoranthene	7.77E-09	lb/hp-hr		
		Benzo(k)fluoranthene	1.53E-09	lb/hp-hr		
		Benzo(a)pyrene	1.80E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr		
IA25-D	Diesel Emergency Generator IA25-D (90 hp engine)	Total HAPs	1.10E-05	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
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA25-D (cont'd)	Diesel Emergency Generator IA25-D (90 hp engine) (cont'd)	Chrysene	2.47E-09	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(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
IA28-D	Diesel Emergency Generator IA28-D (900 hp engine)	Benzene	4.97E-06	lb/hp-hr	hp-hr	AP-42 Tables 3.4-3 and 3.4-4 (10/96), a BSFC of 0.332 lb/hp-hr, and 19,300 Btu/lb diesel
		Toluene	1.80E-06	lb/hp-hr		
		Xylenes	1.24E-06	lb/hp-hr		
		Formaldehyde	5.06E-07	lb/hp-hr		
		Acetaldehyde	1.61E-07	lb/hp-hr		
		Acrolein	5.05E-08	lb/hp-hr		
		Naphthalene	8.33E-07	lb/hp-hr		
		Acenaphthylene	5.91E-08	lb/hp-hr		
		Acenaphthene	3.00E-08	lb/hp-hr		
		Fluorene	8.20E-08	lb/hp-hr		
		Phenanthrene	2.61E-07	lb/hp-hr		
		Anthracene	7.88E-09	lb/hp-hr		
		Fluoranthene	2.58E-08	lb/hp-hr		
		Pyrene	2.38E-08	lb/hp-hr		
		Benz(a)anthracene	3.99E-09	lb/hp-hr		
		Chrysene	9.80E-09	lb/hp-hr		
		Benzo(b)fluoranthene	7.11E-09	lb/hp-hr		
		Benzo(k)fluoranthene	1.40E-09	lb/hp-hr		
		Benzo(a)pyrene	1.65E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.65E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	2.22E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.56E-09	lb/hp-hr		
		Total HAPs	1.01E-05	lb/hp-hr		
IA42-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA43-D	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
IA44-D	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	Dibenz(a,h)anthracene	4.08E-09	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
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
IA47-D	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	Benzo(k)fluoranthene	1.09E-09	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
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		

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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA47-D (cont'd)	CLP Diesel Emergency Generator IA47-D (85.8 hp engine) (cont'd)	Acenaphthylene	3.54E-08	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)
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
IA48-D	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	Total HAPs	2.71E-05	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
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
IA54-D	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	Total HAPs	2.71E-05	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
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA54-D (cont'd)	Command Center Diesel Emergency Generator IA54-D (480 hp engine) (cont'd)	Chrysene	2.47E-09	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(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
Propane Emergency ICE						
IA16-P	Propane Emergency Generator IA16-P (13 hp engine)	1,1,2,2-Tetrachloroethane	2.53E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 51.6 scf/hr
		1,1,2-Trichloroethane	1.53E-07	lb/hp-hr		
		1,1-Dichloroethane	1.13E-07	lb/hp-hr		
		1,2-Dichloroethane	1.13E-07	lb/hp-hr		
		1,2-Dichloropropane	1.30E-07	lb/hp-hr		
		1,3-Butadiene	6.63E-06	lb/hp-hr		
		1,3-Dichloropropene	1.27E-07	lb/hp-hr		
		Acetaldehyde	2.79E-05	lb/hp-hr		
		Acrolein	2.63E-05	lb/hp-hr		
		Benzene	1.58E-05	lb/hp-hr		
		Carbon Tetrachloride	1.77E-07	lb/hp-hr		
		Chlorobenzene	1.29E-07	lb/hp-hr		
		Chloroform	1.37E-07	lb/hp-hr		
		Ethylbenzene	2.48E-07	lb/hp-hr		
		Ethylene Dibromide	2.13E-07	lb/hp-hr		
		Formaldehyde	2.05E-04	lb/hp-hr		
		Methanol	3.06E-05	lb/hp-hr		
		Methylene Chloride	4.12E-07	lb/hp-hr		
		Naphthalene	9.71E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.41E-06	lb/hp-hr		
		Styrene	1.19E-07	lb/hp-hr		
		Toluene	5.58E-06	lb/hp-hr		
		Vinyl Chloride	7.18E-08	lb/hp-hr		
		Xylene	1.95E-06	lb/hp-hr		
		Total HAPs	3.25E-04	lb/hp-hr		
IA19-P	Propane Emergency Generator IA19-P (60 hp engine)	1,1,2,2-Tetrachloroethane	2.55E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 240 scf/hr
		1,1,2-Trichloroethane	1.54E-07	lb/hp-hr		
		1,1-Dichloroethane	1.14E-07	lb/hp-hr		
		1,2-Dichloroethane	1.14E-07	lb/hp-hr		
		1,2-Dichloropropane	1.31E-07	lb/hp-hr		
		1,3-Butadiene	6.68E-06	lb/hp-hr		
		1,3-Dichloropropene	1.28E-07	lb/hp-hr		
		Acetaldehyde	2.81E-05	lb/hp-hr		
		Acrolein	2.65E-05	lb/hp-hr		
		Benzene	1.59E-05	lb/hp-hr		
		Carbon Tetrachloride	1.78E-07	lb/hp-hr		
		Chlorobenzene	1.30E-07	lb/hp-hr		
		Chloroform	1.38E-07	lb/hp-hr		
		Ethylbenzene	2.50E-07	lb/hp-hr		
		Ethylene Dibromide	2.15E-07	lb/hp-hr		
		Formaldehyde	2.07E-04	lb/hp-hr		
		Methanol	3.08E-05	lb/hp-hr		
		Methylene Chloride	4.15E-07	lb/hp-hr		
		Naphthalene	9.79E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.42E-06	lb/hp-hr		
		Styrene	1.20E-07	lb/hp-hr		
		Toluene	5.62E-06	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA19-P (cont'd)	Propane Emergency Generator IA19-P (60 hp engine) (cont'd)	Vinyl Chloride	7.24E-08	lb/hp-hr	hp-hr (cont'd)	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 240 scf/hr (cont'd)
		Xylene	1.97E-06	lb/hp-hr		
		Total HAPs	3.27E-04	lb/hp-hr		
IA21-P	Propane Emergency Generator IA21-P (80 hp engine)	1,1,2,2-Tetrachloroethane	2.34E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 293.2 scf/hr
		1,1,2-Trichloroethane	1.41E-07	lb/hp-hr		
		1,1-Dichloroethane	1.04E-07	lb/hp-hr		
		1,2-Dichloroethane	1.04E-07	lb/hp-hr		
		1,2-Dichloropropane	1.20E-07	lb/hp-hr		
		1,3-Butadiene	6.12E-06	lb/hp-hr		
		1,3-Dichloropropene	1.17E-07	lb/hp-hr		
		Acetaldehyde	2.58E-05	lb/hp-hr		
		Acrolein	2.43E-05	lb/hp-hr		
		Benzene	1.46E-05	lb/hp-hr		
		Carbon Tetrachloride	1.63E-07	lb/hp-hr		
		Chlorobenzene	1.19E-07	lb/hp-hr		
		Chloroform	1.27E-07	lb/hp-hr		
		Ethylbenzene	2.29E-07	lb/hp-hr		
		Ethylene Dibromide	1.97E-07	lb/hp-hr		
		Formaldehyde	1.89E-04	lb/hp-hr		
		Methanol	2.83E-05	lb/hp-hr		
		Methylene Chloride	3.81E-07	lb/hp-hr		
		Naphthalene	8.97E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.30E-06	lb/hp-hr		
		Styrene	1.10E-07	lb/hp-hr		
		Toluene	5.15E-06	lb/hp-hr		
		Vinyl Chloride	6.63E-08	lb/hp-hr		
		Xylene	1.80E-06	lb/hp-hr		
		Total HAPs	3.00E-04	lb/hp-hr		
IA31-P	Propane Emergency Generator IA31-P (30.52 hp engine)	1,1,2,2-Tetrachloroethane	2.72E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 130 scf/hr
		1,1,2-Trichloroethane	1.64E-07	lb/hp-hr		
		1,1-Dichloroethane	1.21E-07	lb/hp-hr		
		1,2-Dichloroethane	1.21E-07	lb/hp-hr		
		1,2-Dichloropropane	1.40E-07	lb/hp-hr		
		1,3-Butadiene	7.12E-06	lb/hp-hr		
		1,3-Dichloropropene	1.36E-07	lb/hp-hr		
		Acetaldehyde	2.99E-05	lb/hp-hr		
		Acrolein	2.82E-05	lb/hp-hr		
		Benzene	1.70E-05	lb/hp-hr		
		Carbon Tetrachloride	1.90E-07	lb/hp-hr		
		Chlorobenzene	1.38E-07	lb/hp-hr		
		Chloroform	1.47E-07	lb/hp-hr		
		Ethylbenzene	2.66E-07	lb/hp-hr		
		Ethylene Dibromide	2.29E-07	lb/hp-hr		
		Formaldehyde	2.20E-04	lb/hp-hr		
		Methanol	3.28E-05	lb/hp-hr		
		Methylene Chloride	4.42E-07	lb/hp-hr		
		Naphthalene	1.04E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.51E-06	lb/hp-hr		
		Styrene	1.28E-07	lb/hp-hr		
		Toluene	5.99E-06	lb/hp-hr		
		Vinyl Chloride	7.71E-08	lb/hp-hr		
		Xylene	2.09E-06	lb/hp-hr		
		Total HAPs	3.48E-04	lb/hp-hr		
IA32-P	Propane Emergency Generator IA32-P (32 hp engine)	1,1,2,2-Tetrachloroethane	1.87E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 94 scf/hr
		1,1,2-Trichloroethane	1.13E-07	lb/hp-hr		
		1,1-Dichloroethane	8.36E-08	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA32-P (cont'd)	Propane Emergency Generator IA32-P (32 hp engine) (cont'd)	1,2-Dichloroethane	8.36E-08	lb/hp-hr	hp-hr (cont'd)	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 94 scf/hr (cont'd)
		1,2-Dichloropropane	9.62E-08	lb/hp-hr		
		1,3-Butadiene	4.91E-06	lb/hp-hr		
		1,3-Dichloropropene	9.40E-08	lb/hp-hr		
		Acetaldehyde	2.07E-05	lb/hp-hr		
		Acrolein	1.95E-05	lb/hp-hr		
		Benzene	1.17E-05	lb/hp-hr		
		Carbon Tetrachloride	1.31E-07	lb/hp-hr		
		Chlorobenzene	9.55E-08	lb/hp-hr		
		Chloroform	1.01E-07	lb/hp-hr		
		Ethylbenzene	1.84E-07	lb/hp-hr		
		Ethylene Dibromide	1.58E-07	lb/hp-hr		
		Formaldehyde	1.52E-04	lb/hp-hr		
		Methanol	2.27E-05	lb/hp-hr		
		Methylene Chloride	3.05E-07	lb/hp-hr		
		Naphthalene	7.19E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.04E-06	lb/hp-hr		
		Styrene	8.81E-08	lb/hp-hr		
		Toluene	4.13E-06	lb/hp-hr		
		Vinyl Chloride	5.31E-08	lb/hp-hr		
		Xylene	1.44E-06	lb/hp-hr		
		Total HAPs	2.40E-04	lb/hp-hr		
IA37-P	Propane Emergency Generator IA37-P (113.18 hp engine)	1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
		1,1,2-Trichloroethane	9.81E-08	lb/hp-hr		
		1,1-Dichloroethane	7.25E-08	lb/hp-hr		
		1,2-Dichloroethane	7.25E-08	lb/hp-hr		
		1,2-Dichloropropane	8.34E-08	lb/hp-hr		
		1,3-Butadiene	4.25E-06	lb/hp-hr		
		1,3-Dichloropropene	8.14E-08	lb/hp-hr		
		Acetaldehyde	1.79E-05	lb/hp-hr		
		Acrolein	1.69E-05	lb/hp-hr		
		Benzene	1.01E-05	lb/hp-hr		
		Carbon Tetrachloride	1.13E-07	lb/hp-hr		
		Chlorobenzene	8.27E-08	lb/hp-hr		
		Chloroform	8.78E-08	lb/hp-hr		
		Ethylbenzene	1.59E-07	lb/hp-hr		
		Ethylene Dibromide	1.37E-07	lb/hp-hr		
		Formaldehyde	1.31E-04	lb/hp-hr		
		Methanol	1.96E-05	lb/hp-hr		
		Methylene Chloride	2.64E-07	lb/hp-hr		
		Naphthalene	6.23E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr		
		Styrene	7.63E-08	lb/hp-hr		
		Toluene	3.58E-06	lb/hp-hr		
		Vinyl Chloride	4.60E-08	lb/hp-hr		
		Xylene	1.25E-06	lb/hp-hr		
		Total HAPs	2.08E-04	lb/hp-hr		
IA38-P	Propane Emergency Generator IA38-P (113.18 hp engine)	1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	hp-hr	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr
		1,1,2-Trichloroethane	9.81E-08	lb/hp-hr		
		1,1-Dichloroethane	7.25E-08	lb/hp-hr		
		1,2-Dichloroethane	7.25E-08	lb/hp-hr		
		1,2-Dichloropropane	8.34E-08	lb/hp-hr		
		1,3-Butadiene	4.25E-06	lb/hp-hr		
		1,3-Dichloropropene	8.14E-08	lb/hp-hr		
		Acetaldehyde	1.79E-05	lb/hp-hr		
		Acrolein	1.69E-05	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA38-P (cont'd)	Propane Emergency Generator IA38-P (113.18 hp engine) (cont'd)	Benzene	1.01E-05	lb/hp-hr	hp-hr (cont'd)	AP-42 Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 288 scf/hr (cont'd)
		Carbon Tetrachloride	1.13E-07	lb/hp-hr		
		Chlorobenzene	8.27E-08	lb/hp-hr		
		Chloroform	8.78E-08	lb/hp-hr		
		Ethylbenzene	1.59E-07	lb/hp-hr		
		Ethylene Dibromide	1.37E-07	lb/hp-hr		
		Formaldehyde	1.31E-04	lb/hp-hr		
		Methanol	1.96E-05	lb/hp-hr		
		Methylene Chloride	2.64E-07	lb/hp-hr		
		Naphthalene	6.23E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr		
		Styrene	7.63E-08	lb/hp-hr		
		Toluene	3.58E-06	lb/hp-hr		
		Vinyl Chloride	4.60E-08	lb/hp-hr		
		Xylene	1.25E-06	lb/hp-hr		
		Total HAPs	2.08E-04	lb/hp-hr		
IA55-P	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	1,1,2,2-Tetrachloroethane	2.09E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 337 scf/hr
		1,1,2-Trichloroethane	1.26E-07	lb/hp-hr		
		1,1-Dichloroethane	9.32E-08	lb/hp-hr		
		1,2-Dichloroethane	9.32E-08	lb/hp-hr		
		1,2-Dichloropropane	1.07E-07	lb/hp-hr		
		1,3-Butadiene	5.47E-06	lb/hp-hr		
		1,3-Dichloropropene	1.05E-07	lb/hp-hr		
		Acetaldehyde	2.30E-05	lb/hp-hr		
		Acrolein	2.17E-05	lb/hp-hr		
		Benzene	1.30E-05	lb/hp-hr		
		Carbon Tetrachloride	1.46E-07	lb/hp-hr		
		Chlorobenzene	1.06E-07	lb/hp-hr		
		Chloroform	1.13E-07	lb/hp-hr		
		Ethylbenzene	2.04E-07	lb/hp-hr		
		Ethylene Dibromide	1.76E-07	lb/hp-hr		
		Formaldehyde	1.69E-04	lb/hp-hr		
		Methanol	2.52E-05	lb/hp-hr		
		Methylene Chloride	3.40E-07	lb/hp-hr		
		Naphthalene	8.01E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.16E-06	lb/hp-hr		
		Styrene	9.81E-08	lb/hp-hr		
		Toluene	4.60E-06	lb/hp-hr		
		Vinyl Chloride	5.92E-08	lb/hp-hr		
		Xylene	1.61E-06	lb/hp-hr		
		Total HAPs	2.68E-04	lb/hp-hr		
SEG-P	Second Concentrator Propane Emergency Generators	1,1,2,2-Tetrachloroethane	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	1.61E-07	lb/hp-hr		
		1,1-Dichloroethane	1.19E-07	lb/hp-hr		
		1,2-Dichloroethane	1.19E-07	lb/hp-hr		
		1,2-Dichloropropane	1.37E-07	lb/hp-hr		
		1,3-Butadiene	6.96E-06	lb/hp-hr		
		1,3-Dichloropropene	1.33E-07	lb/hp-hr		
		Acetaldehyde	2.93E-05	lb/hp-hr		
		Acrolein	2.76E-05	lb/hp-hr		
		Benzene	1.66E-05	lb/hp-hr		
		Carbon Tetrachloride	1.86E-07	lb/hp-hr		
		Chlorobenzene	1.35E-07	lb/hp-hr		
		Chloroform	1.44E-07	lb/hp-hr		
		Ethylbenzene	2.60E-07	lb/hp-hr		
		Ethylene Dibromide	2.24E-07	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
SEG-P (cont'd)	Second Concentrator Propane Emergency Generators (cont'd)	Formaldehyde	2.15E-04	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)
		Methanol	3.21E-05	lb/hp-hr		
		Methylene Chloride	4.33E-07	lb/hp-hr		
		Naphthalene	1.02E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.48E-06	lb/hp-hr		
		Styrene	1.25E-07	lb/hp-hr		
		Toluene	5.86E-06	lb/hp-hr		
		Vinyl Chloride	7.54E-08	lb/hp-hr		
		Xylene	2.05E-06	lb/hp-hr		
		Total HAPs	3.41E-04	lb/hp-hr		
Natural Gas Emergency ICE						
IA13-NG	Natural Gas Emergency Generator IA13-NG (17 hp engine)	1,1,2,2-Tetrachloroethane	3.34E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 220 scf/hr
		1,1,2-Trichloroethane	2.02E-07	lb/hp-hr		
		1,1-Dichloroethane	1.49E-07	lb/hp-hr		
		1,2-Dichloroethane	1.49E-07	lb/hp-hr		
		1,2-Dichloropropane	1.72E-07	lb/hp-hr		
		1,3-Butadiene	8.75E-06	lb/hp-hr		
		1,3-Dichloropropene	1.68E-07	lb/hp-hr		
		Acetaldehyde	3.68E-05	lb/hp-hr		
		Acrolein	3.47E-05	lb/hp-hr		
		Benzene	2.09E-05	lb/hp-hr		
		Carbon Tetrachloride	2.34E-07	lb/hp-hr		
		Chlorobenzene	1.70E-07	lb/hp-hr		
		Chloroform	1.81E-07	lb/hp-hr		
		Ethylbenzene	3.27E-07	lb/hp-hr		
		Ethylene Dibromide	2.81E-07	lb/hp-hr		
		Formaldehyde	2.71E-04	lb/hp-hr		
		Methanol	4.04E-05	lb/hp-hr		
		Methylene Chloride	5.44E-07	lb/hp-hr		
		Naphthalene	1.28E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.86E-06	lb/hp-hr		
		Styrene	1.57E-07	lb/hp-hr		
		Toluene	7.37E-06	lb/hp-hr		
		Vinyl Chloride	9.48E-08	lb/hp-hr		
		Xylene	2.57E-06	lb/hp-hr		
		Total HAPs	4.28E-04	lb/hp-hr		
IA22-NG	Natural Gas Emergency Generator IA22-NG (199 hp engine)	1,1,2,2-Tetrachloroethane	1.82E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr
		1,1,2-Trichloroethane	1.10E-07	lb/hp-hr		
		1,1-Dichloroethane	8.11E-08	lb/hp-hr		
		1,2-Dichloroethane	8.11E-08	lb/hp-hr		
		1,2-Dichloropropane	9.33E-08	lb/hp-hr		
		1,3-Butadiene	4.76E-06	lb/hp-hr		
		1,3-Dichloropropene	9.11E-08	lb/hp-hr		
		Acetaldehyde	2.00E-05	lb/hp-hr		
		Acrolein	1.89E-05	lb/hp-hr		
		Benzene	1.13E-05	lb/hp-hr		
		Carbon Tetrachloride	1.27E-07	lb/hp-hr		
		Chlorobenzene	9.26E-08	lb/hp-hr		
		Chloroform	9.83E-08	lb/hp-hr		
		Ethylbenzene	1.78E-07	lb/hp-hr		
		Ethylene Dibromide	1.53E-07	lb/hp-hr		
		Formaldehyde	1.47E-04	lb/hp-hr		
		Methanol	2.20E-05	lb/hp-hr		
		Methylene Chloride	2.96E-07	lb/hp-hr		
		Naphthalene	6.97E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.01E-06	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA22-NG (cont'd)	Natural Gas Emergency Generator IA22-NG (199 hp engine) (cont'd)	Styrene	8.54E-08	lb/hp-hr	hp-hr (cont'd)	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 1,400 scf/hr (cont'd)
		Toluene	4.00E-06	lb/hp-hr		
		Vinyl Chloride	5.15E-08	lb/hp-hr		
		Xylene	1.40E-06	lb/hp-hr		
		Total HAPs	2.33E-04	lb/hp-hr		
IA23-NG	Natural Gas Emergency Generator IA23-NG (192 hp engine)	1,1,2,2-Tetrachloroethane	2.40E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 1,786 scf/hr
		1,1,2-Trichloroethane	1.45E-07	lb/hp-hr		
		1,1-Dichloroethane	1.07E-07	lb/hp-hr		
		1,2-Dichloroethane	1.07E-07	lb/hp-hr		
		1,2-Dichloropropane	1.23E-07	lb/hp-hr		
		1,3-Butadiene	6.29E-06	lb/hp-hr		
		1,3-Dichloropropene	1.20E-07	lb/hp-hr		
		Acetaldehyde	2.65E-05	lb/hp-hr		
		Acrolein	2.50E-05	lb/hp-hr		
		Benzene	1.50E-05	lb/hp-hr		
		Carbon Tetrachloride	1.68E-07	lb/hp-hr		
		Chlorobenzene	1.22E-07	lb/hp-hr		
		Chloroform	1.30E-07	lb/hp-hr		
		Ethylbenzene	2.35E-07	lb/hp-hr		
		Ethylene Dibromide	2.02E-07	lb/hp-hr		
		Formaldehyde	1.95E-04	lb/hp-hr		
		Methanol	2.90E-05	lb/hp-hr		
		Methylene Chloride	3.91E-07	lb/hp-hr		
		Naphthalene	9.21E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.34E-06	lb/hp-hr		
		Styrene	1.13E-07	lb/hp-hr		
		Toluene	5.29E-06	lb/hp-hr		
		Vinyl Chloride	6.81E-08	lb/hp-hr		
		Xylene	1.85E-06	lb/hp-hr		
		Total HAPs	3.08E-04	lb/hp-hr		
IA30-NG	Natural Gas Emergency Generator IA30-NG (40 hp engine)	1,1,2,2-Tetrachloroethane	1.67E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 259.6 scf/hr
		1,1,2-Trichloroethane	1.01E-07	lb/hp-hr		
		1,1-Dichloroethane	7.48E-08	lb/hp-hr		
		1,2-Dichloroethane	7.48E-08	lb/hp-hr		
		1,2-Dichloropropane	8.61E-08	lb/hp-hr		
		1,3-Butadiene	4.39E-06	lb/hp-hr		
		1,3-Dichloropropene	8.41E-08	lb/hp-hr		
		Acetaldehyde	1.85E-05	lb/hp-hr		
		Acrolein	1.74E-05	lb/hp-hr		
		Benzene	1.05E-05	lb/hp-hr		
		Carbon Tetrachloride	1.17E-07	lb/hp-hr		
		Chlorobenzene	8.54E-08	lb/hp-hr		
		Chloroform	9.07E-08	lb/hp-hr		
		Ethylbenzene	1.64E-07	lb/hp-hr		
		Ethylene Dibromide	1.41E-07	lb/hp-hr		
		Formaldehyde	1.36E-04	lb/hp-hr		
		Methanol	2.03E-05	lb/hp-hr		
		Methylene Chloride	2.73E-07	lb/hp-hr		
		Naphthalene	6.43E-07	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	9.33E-07	lb/hp-hr		
		Styrene	7.88E-08	lb/hp-hr		
		Toluene	3.69E-06	lb/hp-hr		
		Vinyl Chloride	4.75E-08	lb/hp-hr		
		Xylene	1.29E-06	lb/hp-hr		
		Total HAPs	2.15E-04	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA33-NG	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	1,1,2,2-Tetrachloroethane	2.75E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, 23.8 scf/lb, Fuel Usage = 14.27 lb/hr
		1,1,2-Trichloroethane	1.67E-07	lb/hp-hr		
		1,1-Dichloroethane	1.23E-07	lb/hp-hr		
		1,2-Dichloroethane	1.23E-07	lb/hp-hr		
		1,2-Dichloropropane	1.41E-07	lb/hp-hr		
		1,3-Butadiene	7.22E-06	lb/hp-hr		
		1,3-Dichloropropene	1.38E-07	lb/hp-hr		
		Acetaldehyde	3.04E-05	lb/hp-hr		
		Acrolein	2.86E-05	lb/hp-hr		
		Benzene	1.72E-05	lb/hp-hr		
		Carbon Tetrachloride	1.93E-07	lb/hp-hr		
		Chlorobenzene	1.40E-07	lb/hp-hr		
		Chloroform	1.49E-07	lb/hp-hr		
		Ethylbenzene	2.70E-07	lb/hp-hr		
		Ethylene Dibromide	2.32E-07	lb/hp-hr		
		Formaldehyde	2.23E-04	lb/hp-hr		
		Methanol	3.33E-05	lb/hp-hr		
		Methylene Chloride	4.48E-07	lb/hp-hr		
		Naphthalene	1.06E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.53E-06	lb/hp-hr		
		Styrene	1.30E-07	lb/hp-hr		
		Toluene	6.07E-06	lb/hp-hr		
		Vinyl Chloride	7.81E-08	lb/hp-hr		
		Xylene	2.12E-06	lb/hp-hr		
		Total HAPs	3.53E-04	lb/hp-hr		
IA34-NG	Natural Gas Emergency Generator IA34-NG (32 hp engine)	1,1,2,2-Tetrachloroethane	2.76E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 1,020 Btu/scf, and Fuel Usage = 342 scf/hr
		1,1,2-Trichloroethane	1.67E-07	lb/hp-hr		
		1,1-Dichloroethane	1.23E-07	lb/hp-hr		
		1,2-Dichloroethane	1.23E-07	lb/hp-hr		
		1,2-Dichloropropane	1.42E-07	lb/hp-hr		
		1,3-Butadiene	7.23E-06	lb/hp-hr		
		1,3-Dichloropropene	1.38E-07	lb/hp-hr		
		Acetaldehyde	3.04E-05	lb/hp-hr		
		Acrolein	2.87E-05	lb/hp-hr		
		Benzene	1.72E-05	lb/hp-hr		
		Carbon Tetrachloride	1.93E-07	lb/hp-hr		
		Chlorobenzene	1.41E-07	lb/hp-hr		
		Chloroform	1.49E-07	lb/hp-hr		
		Ethylbenzene	2.70E-07	lb/hp-hr		
		Ethylene Dibromide	2.32E-07	lb/hp-hr		
		Formaldehyde	2.23E-04	lb/hp-hr		
		Methanol	3.34E-05	lb/hp-hr		
		Methylene Chloride	4.49E-07	lb/hp-hr		
		Naphthalene	1.06E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.54E-06	lb/hp-hr		
		Styrene	1.30E-07	lb/hp-hr		
		Toluene	6.08E-06	lb/hp-hr		
		Vinyl Chloride	7.83E-08	lb/hp-hr		
		Xylene	2.13E-06	lb/hp-hr		
		Total HAPs	3.54E-04	lb/hp-hr		
Diesel Non-Emergency ICE						
Tier3-75/130-DN	Tier 3 Diesel Non-Emergency Engines (75 ≤ kW < 130)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
Tier3-75/130-DN (cont'd)	Tier 3 Diesel Non-Emergency Engines (75 ≤ kW < 130) (cont'd)	Acetaldehyde	5.37E-06	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)
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
IA14-DN	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
IA15-DN	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA15-DN (cont'd)	Diesel Non-Emergency Generator IA15-DN (130 hp engine) (cont'd)	Fluoranthene	5.33E-08	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)
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
IA45-DN	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	Benzo(g,h,i)perylene	3.42E-09	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
		Total HAPs	2.71E-05	lb/hp-hr		
		Benzene	6.53E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
IA53-DN	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	Benzo(a)pyrene	1.32E-09	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
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		Toluene	2.86E-06	lb/hp-hr		
		Benzene	6.53E-06	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		

Emission Inventory Tables for Potential Emission Calculations
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Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
IA53-DN (cont'd)	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine) (cont'd)	Dibenz(a,h)anthracene	4.08E-09	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(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
IA56-DN	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	Benzene	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	2.86E-06	lb/hp-hr		
		Xylenes	2.00E-06	lb/hp-hr		
		1,3-Butadiene	2.74E-07	lb/hp-hr		
		Formaldehyde	8.26E-06	lb/hp-hr		
		Acetaldehyde	5.37E-06	lb/hp-hr		
		Acrolein	6.48E-07	lb/hp-hr		
		Naphthalene	5.94E-07	lb/hp-hr		
		Acenaphthylene	3.54E-08	lb/hp-hr		
		Acenaphthene	9.94E-09	lb/hp-hr		
		Fluorene	2.04E-07	lb/hp-hr		
		Phenanthrene	2.06E-07	lb/hp-hr		
		Anthracene	1.31E-08	lb/hp-hr		
		Fluoranthene	5.33E-08	lb/hp-hr		
		Pyrene	3.35E-08	lb/hp-hr		
		Benzo(a)anthracene	1.18E-08	lb/hp-hr		
		Chrysene	2.47E-09	lb/hp-hr		
		Benzo(b)fluoranthene	6.94E-10	lb/hp-hr		
		Benzo(k)fluoranthene	1.09E-09	lb/hp-hr		
		Benzo(a)pyrene	1.32E-09	lb/hp-hr		
		Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr		
		Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr		
		Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr		
		Total HAPs	2.71E-05	lb/hp-hr		
Propane Non-Emergency ICE						
IA10-PN	Propane Non-Emergency Generator IA10-PN (27 hp engine)	1,1,2,2-Tetrachloroethane	2.95E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 125 scf/hr
		1,1,2-Trichloroethane	1.79E-07	lb/hp-hr		
		1,1-Dichloroethane	1.32E-07	lb/hp-hr		
		1,2-Dichloroethane	1.32E-07	lb/hp-hr		
		1,2-Dichloropropane	1.52E-07	lb/hp-hr		
		1,3-Butadiene	7.74E-06	lb/hp-hr		
		1,3-Dichloropropene	1.48E-07	lb/hp-hr		
		Acetaldehyde	3.26E-05	lb/hp-hr		
		Acrolein	3.07E-05	lb/hp-hr		
		Benzene	1.84E-05	lb/hp-hr		
		Carbon Tetrachloride	2.07E-07	lb/hp-hr		
		Chlorobenzene	1.51E-07	lb/hp-hr		
		Chloroform	1.60E-07	lb/hp-hr		
		Ethylbenzene	2.89E-07	lb/hp-hr		
		Ethylene Dibromide	2.49E-07	lb/hp-hr		
		Formaldehyde	2.39E-04	lb/hp-hr		
		Methanol	3.57E-05	lb/hp-hr		
		Methylene Chloride	4.81E-07	lb/hp-hr		
		Naphthalene	1.13E-06	lb/hp-hr		
		Polycyclic Aromatic Hydrocarbons	1.65E-06	lb/hp-hr		
		Styrene	1.39E-07	lb/hp-hr		
		Toluene	6.51E-06	lb/hp-hr		
		Vinyl Chloride	8.38E-08	lb/hp-hr		
		Xylene	2.28E-06	lb/hp-hr		
Total HAPs	3.79E-04	lb/hp-hr				
IA18-PN	Propane Non-Emergency Generator IA18-PN (20 hp engine)	1,1,2,2-Tetrachloroethane	3.51E-07	lb/hp-hr	hp-hr	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 110 scf/hr
		1,1,2-Trichloroethane	2.12E-07	lb/hp-hr		
		1,1-Dichloroethane	1.57E-07	lb/hp-hr		

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference		
		Name	EF	EF Units				
IA18-PN (cont'd)	Propane Non-Emergency Generator IA18-PN (20 hp engine) (cont'd)	1,2-Dichloroethane	1.57E-07	lb/hp-hr	hp-hr (cont'd)	AP-42, Table 3.2-3 (08/00), 4-Stroke Rich Burn, 2,520 Btu/scf, and Fuel Usage = 110 scf/hr (cont'd)		
		1,2-Dichloropropane	1.80E-07	lb/hp-hr				
		1,3-Butadiene	9.19E-06	lb/hp-hr				
		1,3-Dichloropropene	1.76E-07	lb/hp-hr				
		Acetaldehyde	3.87E-05	lb/hp-hr				
		Acrolein	3.65E-05	lb/hp-hr				
		Benzene	2.19E-05	lb/hp-hr				
		Carbon Tetrachloride	2.45E-07	lb/hp-hr				
		Chlorobenzene	1.79E-07	lb/hp-hr				
		Chloroform	1.90E-07	lb/hp-hr				
		Ethylbenzene	3.44E-07	lb/hp-hr				
		Ethylene Dibromide	2.95E-07	lb/hp-hr				
		Formaldehyde	2.84E-04	lb/hp-hr				
		Methanol	4.24E-05	lb/hp-hr				
		Methylene Chloride	5.71E-07	lb/hp-hr				
		Naphthalene	1.35E-06	lb/hp-hr				
		Polycyclic Aromatic Hydrocarbons	1.95E-06	lb/hp-hr				
		Styrene	1.65E-07	lb/hp-hr				
		Toluene	7.73E-06	lb/hp-hr				
		Vinyl Chloride	9.95E-08	lb/hp-hr				
		Xylene	2.70E-06	lb/hp-hr				
			Total HAPs	4.50E-04			lb/hp-hr	
Storage Tanks and Parts Cleaning								
GST-150	Gasoline Storage Tank 150 (GDF1)	Benzene	4.57E-03	lb/hr	hours	EPA TANKS Program		
		Ethylbenzene	2.08E-04	lb/hr				
		n-Hexane	6.91E-03	lb/hr				
		Naphthalene	1.11E-06	lb/hr				
		Cumene	1.47E-04	lb/hr				
		Toluene	5.37E-03	lb/hr				
		m-Xylene	8.31E-04	lb/hr				
		Total HAPs	1.80E-02	lb/hr				
GST-FT-3	Gasoline Storage Tank FT-3 (GDF2)	Benzene	4.57E-03	lb/hr	hours	EPA TANKS Program		
		Ethylbenzene	2.08E-04	lb/hr				
		n-Hexane	6.91E-03	lb/hr				
		Naphthalene	1.11E-06	lb/hr				
		Cumene	1.47E-04	lb/hr				
		Toluene	5.37E-03	lb/hr				
		m-Xylene	8.31E-04	lb/hr				
		Total HAPs	1.80E-02	lb/hr				
GST-FF	Gasoline Storage Tank Sycamore TSF (GDF3)	Benzene	4.27E-03	lb/hr	hours	EPA TANKS Program		
		Ethylbenzene	1.95E-04	lb/hr				
		n-Hexane	6.47E-03	lb/hr				
		Naphthalene	1.04E-06	lb/hr				
		Cumene	1.37E-04	lb/hr				
		Toluene	5.03E-03	lb/hr				
		m-Xylene	7.78E-04	lb/hr				
		Total HAPs	1.69E-02	lb/hr				
GST-MO	Gasoline Storage Tank Mine Operations (GDF4)	Benzene	4.27E-03	lb/hr	hours	EPA TANKS Program		
		Ethylbenzene	1.95E-04	lb/hr				
		n-Hexane	6.47E-03	lb/hr				
		Naphthalene	1.04E-06	lb/hr				
		Cumene	1.37E-04	lb/hr				
		Toluene	5.03E-03	lb/hr				
		m-Xylene	7.78E-04	lb/hr				
		Total HAPs	1.69E-02	lb/hr				

Emission Inventory Tables for Potential Emission Calculations
October 2025

Table F.9 HAP Emission Factors - Potential Emission Inventory

Process Code	Process Description	HAP Information			Emission Rate Units	Reference
		Name	EF	EF Units		
XMS	Xanthate Mixing and Storage Tanks	Carbon Disulfide	1.23E+01	lb/ton	tons	AERO Xanthate Handbook (1972), assume a 3-day holding period, and assume sodium ethyl xanthate as a worst-case estimate
		Total HAPs	1.23E+01	lb/ton		
SXMS	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	Carbon Disulfide	1.23E+01	lb/ton	tons	AERO Xanthate Handbook (1972) and assume a 3-day holding period
		Total HAPs	1.23E+01	lb/ton		

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Mining Operations										
026-3	Drilling	Drilling	F	90,000	holes	Antimony	9.90E-06	lb/hole	0%	4.46E-04
						Arsenic	1.70E-05	lb/hole	0%	7.64E-04
						Beryllium	1.07E-06	lb/hole	0%	4.80E-05
						Cadmium	3.86E-07	lb/hole	0%	1.74E-05
						Chromium	2.33E-05	lb/hole	0%	1.05E-03
						Cobalt	2.20E-05	lb/hole	0%	9.88E-04
						Lead	1.81E-05	lb/hole	0%	8.13E-04
						Manganese	2.01E-04	lb/hole	0%	9.05E-03
						Mercury	2.01E-07	lb/hole	0%	9.04E-06
						Nickel	1.54E-05	lb/hole	0%	6.93E-04
Selenium	1.63E-06	lb/hole	0%	7.31E-05						
026-2	Blasting	ABlasting	F	600	blasts	Lead	6.36E-03	lb/blast	0%	1.91E-03
						POM	4.25E-03	lb/blast	0%	1.28E-03
						Formaldehyde	7.86E-02	lb/blast	0%	2.36E-02
						Antimony	2.62E-03	lb/blast	0%	7.86E-04
						Arsenic	5.20E-03	lb/blast	0%	1.56E-03
						Beryllium	8.09E-04	lb/blast	0%	2.43E-04
						Cadmium	6.29E-04	lb/blast	0%	1.89E-04
						Chromium	6.68E-03	lb/blast	0%	2.01E-03
						Cobalt	5.81E-03	lb/blast	0%	1.74E-03
						Manganese	5.43E-02	lb/blast	0%	1.63E-02
						Mercury	5.80E-04	lb/blast	0%	1.74E-04
						Nickel	4.60E-03	lb/blast	0%	1.38E-03
						Selenium	3.06E-03	lb/blast	0%	9.19E-04
						Antimony	2.92E-05	lb/VMT	90%	3.66E-03
022-1	Haul Truck Travel Inside the Pit	ATravel	F	2,513,371.50	VMT	Arsenic	5.00E-05	lb/VMT	90%	6.29E-03
						Beryllium	3.14E-06	lb/VMT	90%	3.95E-04
						Cadmium	1.14E-06	lb/VMT	90%	1.43E-04
						Chromium	6.85E-05	lb/VMT	90%	8.61E-03
						Cobalt	6.47E-05	lb/VMT	90%	8.13E-03
						Lead	5.32E-05	lb/VMT	90%	6.69E-03
						Manganese	5.92E-04	lb/VMT	90%	7.44E-02
						Mercury	5.92E-07	lb/VMT	90%	7.43E-05
						Nickel	4.53E-05	lb/VMT	90%	5.70E-03
						Selenium	4.79E-06	lb/VMT	90%	6.02E-04
022-2	Haul Truck Travel Outside the Pit	ATravel	F	837,791	VMT	Antimony	2.92E-05	lb/VMT	90%	1.22E-03
						Arsenic	5.00E-05	lb/VMT	90%	2.10E-03
						Beryllium	3.14E-06	lb/VMT	90%	1.32E-04
						Cadmium	1.14E-06	lb/VMT	90%	4.77E-05
						Chromium	6.85E-05	lb/VMT	90%	2.87E-03
						Cobalt	6.47E-05	lb/VMT	90%	2.71E-03
						Lead	5.32E-05	lb/VMT	90%	2.23E-03
						Manganese	5.92E-04	lb/VMT	90%	2.48E-02
						Mercury	5.92E-07	lb/VMT	90%	2.48E-05
						Nickel	4.53E-05	lb/VMT	90%	1.90E-03
Selenium	4.79E-06	lb/VMT	90%	2.01E-04						
023-3	Other Vehicle Travel	ATravel	F	12,570,727	VMT	Antimony	2.92E-05	lb/VMT	90%	1.83E-02
						Arsenic	5.00E-05	lb/VMT	90%	3.14E-02
						Beryllium	3.14E-06	lb/VMT	90%	1.98E-03
						Cadmium	1.14E-06	lb/VMT	90%	7.15E-04
						Chromium	6.85E-05	lb/VMT	90%	4.31E-02
						Cobalt	6.47E-05	lb/VMT	90%	4.07E-02
						Lead	5.32E-05	lb/VMT	90%	3.35E-02
						Manganese	5.92E-04	lb/VMT	90%	3.72E-01
						Mercury	5.92E-07	lb/VMT	90%	3.72E-04
						Nickel	4.53E-05	lb/VMT	90%	2.85E-02
Selenium	4.79E-06	lb/VMT	90%	3.01E-03						
023-1	Dozer Operation	Dozer	F	78,046	hours	Antimony	2.04E-05	lb/hr	0%	7.95E-04
						Arsenic	3.50E-05	lb/hr	0%	1.36E-03
						Beryllium	2.20E-06	lb/hr	0%	8.57E-05
						Cadmium	7.95E-07	lb/hr	0%	3.10E-05
						Chromium	4.79E-05	lb/hr	0%	1.87E-03

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
023-1 (cont'd)	Dozer Operation (cont'd)	Dozer (cont'd)	F (cont'd)	78,046	hours (cont'd)	Cobalt	4.52E-05	lb/hr	0%	1.76E-03
						Lead	3.72E-05	lb/hr	0%	1.45E-03
						Manganese	4.14E-04	lb/hr	0%	1.62E-02
						Mercury	4.14E-07	lb/hr	0%	1.61E-05
						Nickel	3.17E-05	lb/hr	0%	1.24E-03
023-2	Road Grader Operation	Grader	F	118,587	VMT	Selenium	3.35E-06	lb/hr	0%	1.31E-04
						Antimony	1.40E-05	lb/VMT	90%	8.29E-05
						Arsenic	2.40E-05	lb/VMT	90%	1.42E-04
						Beryllium	1.51E-06	lb/VMT	90%	8.94E-06
						Cadmium	5.46E-07	lb/VMT	90%	3.24E-06
						Chromium	3.29E-05	lb/VMT	90%	1.95E-04
						Cobalt	3.10E-05	lb/VMT	90%	1.84E-04
						Lead	2.55E-05	lb/VMT	90%	1.51E-04
						Manganese	2.84E-04	lb/VMT	90%	1.68E-03
						Mercury	2.84E-07	lb/VMT	90%	1.68E-06
						Nickel	2.17E-05	lb/VMT	90%	1.29E-04
						Selenium	2.30E-06	lb/VMT	90%	1.36E-05
021-1	Loading Mined Material into Haul Trucks	Ore1TrUnpr t	F	220,314,000	tons	Antimony	1.63E-08	lb/ton	0%	1.79E-03
						Arsenic	2.79E-08	lb/ton	0%	3.08E-03
						Beryllium	1.76E-09	lb/ton	0%	1.93E-04
						Cadmium	6.36E-10	lb/ton	0%	7.00E-05
						Chromium	3.83E-08	lb/ton	0%	4.22E-03
						Cobalt	3.61E-08	lb/ton	0%	3.98E-03
						Lead	2.97E-08	lb/ton	0%	3.28E-03
						Manganese	3.31E-07	lb/ton	0%	3.64E-02
						Mercury	3.31E-10	lb/ton	0%	3.64E-05
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Ore2TrUnpr t	F	65,700,000	tons	Nickel	2.53E-08	lb/ton	0%	2.79E-03
						Selenium	2.67E-09	lb/ton	0%	2.95E-04
						Antimony	3.86E-08	lb/ton	0%	1.27E-03
						Arsenic	5.71E-08	lb/ton	0%	1.88E-03
						Beryllium	1.35E-09	lb/ton	0%	4.43E-05
						Cadmium	9.88E-10	lb/ton	0%	3.25E-05
						Chromium	3.96E-08	lb/ton	0%	1.30E-03
						Cobalt	7.64E-08	lb/ton	0%	2.51E-03
						Lead	2.44E-08	lb/ton	0%	8.01E-04
045-3	Unloading Ore to Leaching Areas	Ore3TrUnpr t	F	30,076,000	tons	Manganese	3.64E-07	lb/ton	0%	1.19E-02
						Mercury	5.65E-10	lb/ton	0%	1.86E-05
						Nickel	2.26E-08	lb/ton	0%	7.44E-04
						Selenium	3.57E-09	lb/ton	0%	1.17E-04
						Antimony	0.00E+00	lb/ton	0%	0.00E+00
						Arsenic	1.54E-09	lb/ton	0%	2.32E-05
						Beryllium	3.54E-09	lb/ton	0%	5.33E-05
						Cadmium	0.00E+00	lb/ton	0%	0.00E+00
						Chromium	6.16E-09	lb/ton	0%	9.26E-05
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Ore4TrUnpr t	F	124,538,000	tons	Cobalt	1.10E-08	lb/ton	0%	1.66E-04
						Lead	1.64E-08	lb/ton	0%	2.47E-04
						Manganese	2.34E-07	lb/ton	0%	3.52E-03
						Mercury	2.31E-10	lb/ton	0%	3.47E-06
						Nickel	8.98E-09	lb/ton	0%	1.35E-04
						Selenium	0.00E+00	lb/ton	0%	0.00E+00
						Antimony	8.47E-09	lb/ton	0%	5.27E-04
						Arsenic	1.89E-08	lb/ton	0%	1.18E-03
						Beryllium	1.54E-09	lb/ton	0%	9.59E-05
Cadmium	6.03E-10	lb/ton	0%	3.76E-05						
Chromium	4.53E-08	lb/ton	0%	2.82E-03						
Cobalt	2.10E-08	lb/ton	0%	1.31E-03						
Lead	3.58E-08	lb/ton	0%	2.23E-03						
Manganese	3.37E-07	lb/ton	0%	2.10E-02						
Mercury	2.31E-10	lb/ton	0%	1.44E-05						
Nickel	3.07E-08	lb/ton	0%	1.91E-03						
Selenium	2.85E-09	lb/ton	0%	1.77E-04						
Total of Non-Fugitive Emissions for Mining Operations:										0.00E+00
Total of Fugitive Emissions for Mining Operations:										9.32E-01

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:										9.32E-01
Primary Crushing and Overland Conveying Operations										
001-1	Processes Controlled by Scrubber C18	C18	NF	5,781,600,000	dscf	Antimony	5.80E-11	lb/dscf	0%	1.68E-04
						Arsenic	8.58E-11	lb/dscf	0%	2.48E-04
						Beryllium	2.03E-12	lb/dscf	0%	5.85E-06
						Cadmium	1.49E-12	lb/dscf	0%	4.29E-06
						Chromium	5.95E-11	lb/dscf	0%	1.72E-04
						Cobalt	1.15E-10	lb/dscf	0%	3.32E-04
						Lead	3.66E-11	lb/dscf	0%	1.06E-04
						Manganese	5.46E-10	lb/dscf	0%	1.58E-03
						Mercury	8.49E-13	lb/dscf	0%	2.45E-06
001-5	Processes Controlled by Dust Collector C51	C51	NF	7,884,000,000	dscf	Nickel	3.40E-11	lb/dscf	0%	9.83E-05
						Selenium	5.36E-12	lb/dscf	0%	1.55E-05
						Antimony	5.80E-11	lb/dscf	0%	2.29E-04
						Arsenic	8.58E-11	lb/dscf	0%	3.38E-04
						Beryllium	2.03E-12	lb/dscf	0%	7.98E-06
						Cadmium	1.49E-12	lb/dscf	0%	5.85E-06
						Chromium	5.95E-11	lb/dscf	0%	2.35E-04
						Cobalt	1.15E-10	lb/dscf	0%	4.52E-04
						Lead	3.66E-11	lb/dscf	0%	1.44E-04
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Ore2TrPrt	NF	65,700,000	tons	Manganese	5.46E-10	lb/dscf	0%	2.15E-03
						Mercury	8.49E-13	lb/dscf	0%	3.35E-06
						Nickel	3.40E-11	lb/dscf	0%	1.34E-04
						Selenium	5.36E-12	lb/dscf	0%	2.11E-05
						Antimony	4.13E-09	lb/ton	0%	1.36E-04
						Arsenic	6.11E-09	lb/ton	0%	2.01E-04
						Beryllium	1.44E-10	lb/ton	0%	4.74E-06
						Cadmium	1.06E-10	lb/ton	0%	3.47E-06
						Chromium	4.24E-09	lb/ton	0%	1.39E-04
001-8	Overland Conveyor 3 to Overland Conveyor 4	Ore2TrPrt	NF	65,700,000	tons	Cobalt	8.17E-09	lb/ton	0%	2.68E-04
						Lead	2.61E-09	lb/ton	0%	8.57E-05
						Manganese	3.89E-08	lb/ton	0%	1.28E-03
						Mercury	6.04E-11	lb/ton	0%	1.98E-06
						Nickel	2.42E-09	lb/ton	0%	7.96E-05
						Selenium	3.82E-10	lb/ton	0%	1.25E-05
						Antimony	4.13E-09	lb/ton	0%	1.36E-04
						Arsenic	6.11E-09	lb/ton	0%	2.01E-04
						Beryllium	1.44E-10	lb/ton	0%	4.74E-06
001-9	Overland Conveyor 4 to Radial Stacker 5	Ore2TrPrt	NF	65,700,000	tons	Cadmium	1.06E-10	lb/ton	0%	3.47E-06
						Chromium	4.24E-09	lb/ton	0%	1.39E-04
						Cobalt	8.17E-09	lb/ton	0%	2.68E-04
						Lead	2.61E-09	lb/ton	0%	8.57E-05
						Manganese	3.89E-08	lb/ton	0%	1.28E-03
						Mercury	6.04E-11	lb/ton	0%	1.98E-06
						Nickel	2.42E-09	lb/ton	0%	7.96E-05
						Selenium	3.82E-10	lb/ton	0%	1.25E-05
						Antimony	4.13E-09	lb/ton	0%	1.36E-04
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Ore2TrUnpr t	F	52,560,000	tons	Beryllium	1.44E-10	lb/ton	0%	4.74E-06
						Cadmium	1.06E-10	lb/ton	0%	3.47E-06
						Chromium	4.24E-09	lb/ton	0%	1.39E-04
						Cobalt	8.17E-09	lb/ton	0%	2.68E-04
						Lead	2.61E-09	lb/ton	0%	8.57E-05
						Manganese	3.89E-08	lb/ton	0%	1.28E-03

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units								
001-4 (cont'd)	Radial Stacker 5 to Coarse Ore Stockpiles 1/4 (cont'd)	Ore2TrUnpr t (cont'd)	F (cont'd)	52,560,000	tons (cont'd)	Lead	2.44E-08	lb/ton	0%	6.41E-04						
						Manganese	3.64E-07	lb/ton	0%	9.55E-03						
						Mercury	5.65E-10	lb/ton	0%	1.48E-05						
						Nickel	2.26E-08	lb/ton	0%	5.95E-04						
						Selenium	3.57E-09	lb/ton	0%	9.38E-05						
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Ore2TrUnpr t	F	13,140,000	tons	Antimony	3.86E-08	lb/ton	0%	2.53E-04						
						Arsenic	5.71E-08	lb/ton	0%	3.75E-04						
						Beryllium	1.35E-09	lb/ton	0%	8.85E-06						
						Cadmium	9.88E-10	lb/ton	0%	6.49E-06						
						Chromium	3.96E-08	lb/ton	0%	2.60E-04						
						Cobalt	7.64E-08	lb/ton	0%	5.02E-04						
						Lead	2.44E-08	lb/ton	0%	1.60E-04						
						Manganese	3.64E-07	lb/ton	0%	2.39E-03						
						Mercury	5.65E-10	lb/ton	0%	3.71E-06						
						Nickel	2.26E-08	lb/ton	0%	1.49E-04						
						Selenium	3.57E-09	lb/ton	0%	2.34E-05						
						001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Ore2TrUnpr t	F	13,140,000	tons	Arsenic	3.86E-08	lb/ton	0%	2.53E-04
												Arsenic	5.71E-08	lb/ton	0%	3.75E-04
Beryllium	1.35E-09	lb/ton	0%	8.85E-06												
Cadmium	9.88E-10	lb/ton	0%	6.49E-06												
Chromium	3.96E-08	lb/ton	0%	2.60E-04												
Cobalt	7.64E-08	lb/ton	0%	5.02E-04												
Lead	2.44E-08	lb/ton	0%	1.60E-04												
Manganese	3.64E-07	lb/ton	0%	2.39E-03												
Mercury	5.65E-10	lb/ton	0%	3.71E-06												
Nickel	2.26E-08	lb/ton	0%	1.49E-04												
Selenium	3.57E-09	lb/ton	0%	2.34E-05												
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	AWindCOS 1/5	F	9.22	acre-yr	Antimony	2.95E-02	lb/acre-yr	0%	1.36E-04						
						Arsenic	4.37E-02	lb/acre-yr	0%	2.01E-04						
						Beryllium	1.03E-03	lb/acre-yr	0%	4.75E-06						
						Cadmium	7.56E-04	lb/acre-yr	0%	3.48E-06						
						Chromium	3.03E-02	lb/acre-yr	0%	1.40E-04						
						Cobalt	5.84E-02	lb/acre-yr	0%	2.69E-04						
						Lead	1.86E-02	lb/acre-yr	0%	8.60E-05						
						Manganese	2.78E-01	lb/acre-yr	0%	1.28E-03						
						Mercury	4.32E-04	lb/acre-yr	0%	1.99E-06						
						Nickel	1.73E-02	lb/acre-yr	0%	7.98E-05						
						Selenium	2.73E-03	lb/acre-yr	0%	1.26E-05						
Total of Non-Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										1.31E-02						
Total of Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										2.70E-02						
Total of Non-Fugitive and Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										4.01E-02						
Milling Operations																
002-1	Processes Controlled by GL1 Dust Collector C1	C1	NF	7,884,000,000	dscf	Antimony	5.32E-11	lb/dscf	0%	2.10E-04						
						Arsenic	7.88E-11	lb/dscf	0%	3.11E-04						
						Beryllium	1.86E-12	lb/dscf	0%	7.33E-06						
						Cadmium	1.36E-12	lb/dscf	0%	5.38E-06						
						Chromium	5.47E-11	lb/dscf	0%	2.16E-04						
						Cobalt	1.05E-10	lb/dscf	0%	4.15E-04						
						Lead	3.37E-11	lb/dscf	0%	1.33E-04						
						Manganese	5.02E-10	lb/dscf	0%	1.98E-03						
						Mercury	7.79E-13	lb/dscf	0%	3.07E-06						
						Nickel	3.12E-11	lb/dscf	0%	1.23E-04						
002-2	Processes Controlled by GL2 Dust Collector C2	C2	NF	7,884,000,000	dscf	Selenium	4.92E-12	lb/dscf	0%	1.94E-05						
						Antimony	5.32E-11	lb/dscf	0%	2.10E-04						
						Arsenic	7.88E-11	lb/dscf	0%	3.11E-04						
						Beryllium	1.86E-12	lb/dscf	0%	7.33E-06						
						Cadmium	1.36E-12	lb/dscf	0%	5.38E-06						
						Chromium	5.47E-11	lb/dscf	0%	2.16E-04						
						Cobalt	1.05E-10	lb/dscf	0%	4.15E-04						
						Lead	3.37E-11	lb/dscf	0%	1.33E-04						
						Manganese	5.02E-10	lb/dscf	0%	1.98E-03						
Mercury	7.79E-13	lb/dscf	0%	3.07E-06												

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
002-2 (cont'd)	Processes Controlled by GL2 Dust Collector C2 (cont'd)	C2 (cont'd)	NF (cont'd)	7,884,000,000	dscf (cont'd)	Nickel	3.12E-11	lb/dscf	0%	1.23E-04
002-3	Processes Controlled by GL3 Dust Collector DC3	DC3	NF	7,884,000,000	dscf	Selenium	4.92E-12	lb/dscf	0%	1.94E-05
						Antimony	5.32E-11	lb/dscf	0%	2.10E-04
						Arsenic	7.88E-11	lb/dscf	0%	3.11E-04
						Beryllium	1.86E-12	lb/dscf	0%	7.33E-06
						Cadmium	1.36E-12	lb/dscf	0%	5.38E-06
						Chromium	5.47E-11	lb/dscf	0%	2.16E-04
						Cobalt	1.05E-10	lb/dscf	0%	4.15E-04
						Lead	3.37E-11	lb/dscf	0%	1.33E-04
						Manganese	5.02E-10	lb/dscf	0%	1.98E-03
						Mercury	7.79E-13	lb/dscf	0%	3.07E-06
002-4	Processes Controlled by GL4 Dust Collector DC4	DC4	NF	7,884,000,000	dscf	Nickel	3.12E-11	lb/dscf	0%	1.23E-04
						Selenium	4.92E-12	lb/dscf	0%	1.94E-05
						Antimony	5.32E-11	lb/dscf	0%	2.10E-04
						Arsenic	7.88E-11	lb/dscf	0%	3.11E-04
						Beryllium	1.86E-12	lb/dscf	0%	7.33E-06
						Cadmium	1.36E-12	lb/dscf	0%	5.38E-06
						Chromium	5.47E-11	lb/dscf	0%	2.16E-04
						Cobalt	1.05E-10	lb/dscf	0%	4.15E-04
						Lead	3.37E-11	lb/dscf	0%	1.33E-04
						Manganese	5.02E-10	lb/dscf	0%	1.98E-03
002-6	Processes Controlled by GL5 Dust Collector DC5	DC5	NF	7,884,000,000	dscf	Mercury	7.79E-13	lb/dscf	0%	3.07E-06
						Nickel	3.12E-11	lb/dscf	0%	1.23E-04
						Selenium	4.92E-12	lb/dscf	0%	1.94E-05
						Antimony	1.72E-11	lb/dscf	0%	6.77E-05
						Arsenic	2.54E-11	lb/dscf	0%	1.00E-04
						Beryllium	6.00E-13	lb/dscf	0%	2.37E-06
						Cadmium	4.40E-13	lb/dscf	0%	1.73E-06
						Chromium	1.76E-11	lb/dscf	0%	6.95E-05
						Cobalt	3.40E-11	lb/dscf	0%	1.34E-04
						Lead	1.09E-11	lb/dscf	0%	4.28E-05
044-1	Bulk and Molybdenum Flotation Equipment	MFE	F	2,238,180	tons	Manganese	1.62E-10	lb/dscf	0%	6.38E-04
						Mercury	2.51E-13	lb/dscf	0%	9.91E-07
						Nickel	1.01E-11	lb/dscf	0%	3.97E-05
						Selenium	1.59E-12	lb/dscf	0%	6.26E-06
						m-Xylene	2.72E-04	lb/ton	0%	3.05E-01
Total of Non-Fugitive Emissions for Milling Operations:										1.48E-02
Total of Fugitive Emissions for Milling Operations:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Milling Operations:										1.48E-02
Bulk and Molybdenum Flotation Operations										
044-1	Bulk and Molybdenum Flotation Equipment	MFE	F	2,238,180	tons	Benzene	8.67E-06	lb/ton	0%	9.70E-03
						Ethylbenzene	1.46E-05	lb/ton	0%	1.63E-02
						n-Hexane	1.83E-06	lb/ton	0%	2.04E-03
						Toluene	1.04E-04	lb/ton	0%	1.17E-01
						m-Xylene	2.72E-04	lb/ton	0%	3.05E-01
Total of Non-Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										0.00E+00
Total of Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										4.50E-01
Total of Non-Fugitive and Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										4.50E-01
Copper Concentrate Processing and Loading Operations										
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	CCTrPrt	NF	2,102,400	tons	Antimony	4.85E-08	lb/ton	0%	5.10E-05
						Arsenic	8.06E-08	lb/ton	0%	8.47E-05
						Beryllium	2.37E-10	lb/ton	0%	2.49E-07
						Cadmium	8.88E-10	lb/ton	0%	9.33E-07
						Chromium	4.97E-10	lb/ton	0%	5.23E-07
						Cobalt	3.12E-09	lb/ton	0%	3.28E-06
						Lead	1.99E-08	lb/ton	0%	2.09E-05
						Manganese	1.54E-09	lb/ton	0%	1.62E-06
						Mercury	8.03E-10	lb/ton	0%	8.44E-07
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	CCTrPrt	NF	2,102,400	tons	Nickel	2.25E-09	lb/ton	0%	2.36E-06
						Selenium	3.91E-09	lb/ton	0%	4.11E-06
						Antimony	4.85E-08	lb/ton	0%	5.10E-05
						Arsenic	8.06E-08	lb/ton	0%	8.47E-05
						Beryllium	2.37E-10	lb/ton	0%	2.49E-07
						Cadmium	8.88E-10	lb/ton	0%	9.33E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
006-5 (cont'd)	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor (cont'd)	CCTrPrt (cont'd)	NF (cont'd)	2,102,400	tons (cont'd)	Chromium	4.97E-10	lb/ton	0%	5.23E-07
						Cobalt	3.12E-09	lb/ton	0%	3.28E-06
						Lead	1.99E-08	lb/ton	0%	2.09E-05
						Manganese	1.54E-09	lb/ton	0%	1.62E-06
						Mercury	8.03E-10	lb/ton	0%	8.44E-07
						Nickel	2.25E-09	lb/ton	0%	2.36E-06
						Selenium	3.91E-09	lb/ton	0%	4.11E-06
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	CCTrPrt	F	2,102,400	tons	Antimony	4.85E-08	lb/ton	0%	5.10E-05
						Arsenic	8.06E-08	lb/ton	0%	8.47E-05
						Beryllium	2.37E-10	lb/ton	0%	2.49E-07
						Cadmium	8.88E-10	lb/ton	0%	9.33E-07
						Chromium	4.97E-10	lb/ton	0%	5.23E-07
						Cobalt	3.12E-09	lb/ton	0%	3.28E-06
						Lead	1.99E-08	lb/ton	0%	2.09E-05
						Manganese	1.54E-09	lb/ton	0%	1.62E-06
						Mercury	8.03E-10	lb/ton	0%	8.44E-07
						Nickel	2.25E-09	lb/ton	0%	2.36E-06
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	CCTrPrt	F	2,102,400	tons	Selenium	3.91E-09	lb/ton	0%	4.11E-06
						Antimony	4.85E-08	lb/ton	0%	5.10E-05
						Arsenic	8.06E-08	lb/ton	0%	8.47E-05
						Beryllium	2.37E-10	lb/ton	0%	2.49E-07
						Cadmium	8.88E-10	lb/ton	0%	9.33E-07
						Chromium	4.97E-10	lb/ton	0%	5.23E-07
						Cobalt	3.12E-09	lb/ton	0%	3.28E-06
						Lead	1.99E-08	lb/ton	0%	2.09E-05
						Manganese	1.54E-09	lb/ton	0%	1.62E-06
						Mercury	8.03E-10	lb/ton	0%	8.44E-07
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	AWindICC	F	0.50	acre-yr	Nickel	2.25E-09	lb/ton	0%	2.36E-06
						Selenium	3.91E-09	lb/ton	0%	4.11E-06
						Antimony	4.83E+01	lb/acre-yr	75%	3.02E-03
						Arsenic	8.02E+01	lb/acre-yr	75%	5.01E-03
						Beryllium	2.36E-01	lb/acre-yr	75%	1.47E-05
						Cadmium	8.83E-01	lb/acre-yr	75%	5.52E-05
						Chromium	4.95E-01	lb/acre-yr	75%	3.09E-05
						Cobalt	3.10E+00	lb/acre-yr	75%	1.94E-04
						Lead	1.98E+01	lb/acre-yr	75%	1.24E-03
						Manganese	1.53E+00	lb/acre-yr	75%	9.57E-05
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	CCTrUnprt	F	2,102,400	tons	Mercury	7.99E-01	lb/acre-yr	75%	4.99E-05
						Nickel	2.24E+00	lb/acre-yr	75%	1.40E-04
						Selenium	3.89E+00	lb/acre-yr	75%	2.43E-04
						Antimony	4.54E-07	lb/ton	0%	4.77E-04
						Arsenic	7.53E-07	lb/ton	0%	7.92E-04
						Beryllium	2.21E-09	lb/ton	0%	2.33E-06
						Cadmium	8.30E-09	lb/ton	0%	8.72E-06
						Chromium	4.65E-09	lb/ton	0%	4.88E-06
						Cobalt	2.91E-08	lb/ton	0%	3.06E-05
						Lead	1.86E-07	lb/ton	0%	1.96E-04
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	AWindOCC	F	1.80	acre-yr	Manganese	1.44E-08	lb/ton	0%	1.51E-05
						Mercury	7.51E-09	lb/ton	0%	7.89E-06
						Nickel	2.10E-08	lb/ton	0%	2.21E-05
						Selenium	3.65E-08	lb/ton	0%	3.84E-05
						Antimony	4.83E+01	lb/acre-yr	0%	4.35E-02
						Arsenic	8.02E+01	lb/acre-yr	0%	7.21E-02
						Beryllium	2.36E-01	lb/acre-yr	0%	2.12E-04
						Cadmium	8.83E-01	lb/acre-yr	0%	7.95E-04
						Chromium	4.95E-01	lb/acre-yr	0%	4.45E-04
						Cobalt	3.10E+00	lb/acre-yr	0%	2.79E-03
006-7	All Copper Concentrate Stockpiles to Trucks	CCTrUnprt	F	2,102,400	tons	Lead	1.98E+01	lb/acre-yr	0%	1.78E-02
						Manganese	1.53E+00	lb/acre-yr	0%	1.38E-03
						Mercury	7.99E-01	lb/acre-yr	0%	7.19E-04
						Nickel	2.24E+00	lb/acre-yr	0%	2.01E-03
						Selenium	3.89E+00	lb/acre-yr	0%	3.50E-03
006-7	All Copper Concentrate Stockpiles to Trucks	CCTrUnprt	F	2,102,400	tons	Antimony	4.54E-07	lb/ton	0%	4.77E-04
						Chromium	4.95E-01	lb/acre-yr	0%	4.45E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
006-7 (cont'd)	All Copper Concentrate Stockpiles to Trucks (cont'd)	CCTrUnprt (cont'd)	F (cont'd)	2,102,400	tons (cont'd)	Arsenic	7.53E-07	lb/ton	0%	7.92E-04
						Beryllium	2.21E-09	lb/ton	0%	2.33E-06
						Cadmium	8.30E-09	lb/ton	0%	8.72E-06
						Chromium	4.65E-09	lb/ton	0%	4.88E-06
						Cobalt	2.91E-08	lb/ton	0%	3.06E-05
						Lead	1.86E-07	lb/ton	0%	1.96E-04
						Manganese	1.44E-08	lb/ton	0%	1.51E-05
						Mercury	7.51E-09	lb/ton	0%	7.89E-06
Nickel	2.10E-08	lb/ton	0%	2.21E-05						
Selenium	3.65E-08	lb/ton	0%	3.84E-05	Total of Non-Fugitive Emissions for Copper Concentrate Processing and Loading Operations:					3.41E-04
Total of Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										1.59E-01
Total of Non-Fugitive and Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										1.59E-01
Molybdenum Concentrate Processing and Bagging Operations										
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	MC1TrPrt	F	43,800	tons	Antimony	5.34E-08	lb/ton	0%	1.17E-06
						Arsenic	5.83E-08	lb/ton	0%	1.28E-06
						Beryllium	2.61E-10	lb/ton	0%	5.71E-09
						Cadmium	9.78E-10	lb/ton	0%	2.14E-08
						Chromium	5.47E-10	lb/ton	0%	1.20E-08
						Cobalt	3.43E-09	lb/ton	0%	7.52E-08
						Lead	5.94E-09	lb/ton	0%	1.30E-07
						Manganese	1.69E-09	lb/ton	0%	3.71E-08
						Mercury	8.84E-10	lb/ton	0%	1.94E-08
						Nickel	2.48E-09	lb/ton	0%	5.42E-08
Selenium	6.65E-09	lb/ton	0%	1.46E-07	Total of Non-Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:					0.00E+00
Total of Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:										2.95E-06
Total of Non-Fugitive and Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:										2.95E-06
Tailings Operations										
027-3	Wind Erosion of Tailings	AWindT	F	4,200	acre-yr	Antimony	6.18E-04	lb/acre-yr	0%	1.30E-03
						Arsenic	8.20E-04	lb/acre-yr	0%	1.72E-03
						Beryllium	2.06E-04	lb/acre-yr	0%	4.33E-04
						Cadmium	2.06E-04	lb/acre-yr	0%	4.33E-04
						Chromium	5.15E-03	lb/acre-yr	0%	1.08E-02
						Cobalt	6.10E-03	lb/acre-yr	0%	1.28E-02
						Lead	1.13E-03	lb/acre-yr	0%	2.38E-03
						Manganese	2.95E-02	lb/acre-yr	0%	6.20E-02
						Mercury	5.15E-07	lb/acre-yr	0%	1.08E-06
						Nickel	4.12E-03	lb/acre-yr	0%	8.66E-03
Selenium	2.27E-04	lb/acre-yr	0%	4.76E-04	Total of Non-Fugitive Emissions for Tailings Operations:					0.00E+00
Total of Fugitive Emissions for Tailings Operations:										1.01E-01
Total of Non-Fugitive and Fugitive Emissions for Tailings Operations:										1.01E-01
Concentrate Leach Plant										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	NGC	NF	219,000	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	5.37E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	2.58E-06
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.93E-07
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.72E-06
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Anthracene	2.35E-09	lb/MMBtu	0%	2.58E-07
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Benzene	2.06E-06	lb/MMBtu	0%	2.25E-04
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	1.29E-07
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	1.29E-07
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Chrysene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	1.29E-07
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	1.29E-04
						Fluoranthene	2.94E-09	lb/MMBtu	0%	3.22E-07
						Fluorene	2.75E-09	lb/MMBtu	0%	3.01E-07
						Formaldehyde	7.35E-05	lb/MMBtu	0%	8.05E-03

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
042-10 (cont'd)	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	219,000	MMBtu (cont'd)	Hexane	1.76E-03	lb/MMBtu	0%	1.93E-01
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.93E-07
						Naphthalene	5.98E-07	lb/MMBtu	0%	6.55E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.83E-06
						Pyrene	4.90E-09	lb/MMBtu	0%	5.37E-07
						Toluene	3.33E-06	lb/MMBtu	0%	3.65E-04
						Arsenic	1.96E-07	lb/MMBtu	0%	2.15E-05
						Beryllium	1.18E-08	lb/MMBtu	0%	1.29E-06
						Cadmium	1.08E-06	lb/MMBtu	0%	1.18E-04
						Chromium	1.37E-06	lb/MMBtu	0%	1.50E-04
						Cobalt	8.24E-08	lb/MMBtu	0%	9.02E-06
						Manganese	3.73E-07	lb/MMBtu	0%	4.08E-05
						Mercury	2.55E-07	lb/MMBtu	0%	2.79E-05
						Nickel	2.06E-06	lb/MMBtu	0%	2.25E-04
042-11	CLP Cooling Tower	CLP-CT	F	2,102,400	1000 gal	Selenium	2.35E-08	lb/MMBtu	0%	2.58E-06
						Antimony	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	5.62E-12	lb/1000 gal	0%	5.91E-09
						Cobalt	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	1.40E-11	lb/1000 gal	0%	1.48E-08
						Manganese	6.95E-10	lb/1000 gal	0%	7.31E-07
						Mercury	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	0.00E+00	lb/1000 gal	0%	0.00E+00
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	8,760	hours	Selenium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chloromethane	7.83E-05	lb/hr	0%	3.43E-04
						Chloroethane	1.17E-05	lb/hr	0%	5.12E-05
						Methyl Iodide	1.56E-04	lb/hr	0%	6.83E-04
						Methylene Chloride	7.83E-05	lb/hr	0%	3.43E-04
						Carbon Disulfide	2.88E-02	lb/hr	0%	1.26E-01
						Benzene	3.00E-04	lb/hr	0%	1.32E-03
						Methyl Isobutyl Ketone	3.23E-04	lb/hr	0%	1.42E-03
						Toluene	3.17E-04	lb/hr	0%	1.39E-03
						1,1,2-Trichloroethane	2.25E-05	lb/hr	0%	9.84E-05
						Ethylbenzene	1.05E-04	lb/hr	0%	4.62E-04
						Xylenes	4.16E-04	lb/hr	0%	1.82E-03
						Antimony	5.64E-03	lb/hr	0%	2.47E-02
						Arsenic	6.88E-02	lb/hr	0%	3.01E-01
						Beryllium	2.75E-05	lb/hr	0%	1.20E-04
						Cadmium	1.03E-04	lb/hr	0%	4.52E-04
						Chromium	5.78E-05	lb/hr	0%	2.53E-04
						Cobalt	3.62E-04	lb/hr	0%	1.59E-03
						Lead	6.27E-04	lb/hr	0%	2.74E-03
						Manganese	1.79E-04	lb/hr	0%	7.83E-04
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	MC2TrPrt	NF	35,040	tons	Mercury	9.33E-05	lb/hr	0%	4.09E-04
						Nickel	2.61E-04	lb/hr	0%	1.14E-03
						Selenium	7.01E-04	lb/hr	0%	3.07E-03
						Antimony	5.34E-08	lb/ton	0%	9.36E-07
						Arsenic	6.52E-07	lb/ton	0%	1.14E-05
						Beryllium	2.61E-10	lb/ton	0%	4.57E-09
						Cadmium	9.78E-10	lb/ton	0%	1.71E-08
						Chromium	5.47E-10	lb/ton	0%	9.59E-09
						Cobalt	3.43E-09	lb/ton	0%	6.01E-08
						Lead	5.94E-09	lb/ton	0%	1.04E-07
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	35,040	tons	Manganese	1.69E-09	lb/ton	0%	2.97E-08
						Mercury	8.84E-10	lb/ton	0%	1.55E-08
						Nickel	2.48E-09	lb/ton	0%	4.34E-08
						Selenium	6.65E-09	lb/ton	0%	1.16E-07
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	35,040	tons	Antimony	5.34E-08	lb/ton	0%	9.36E-07
						Arsenic	6.52E-07	lb/ton	0%	1.14E-05
						Beryllium	2.61E-10	lb/ton	0%	4.57E-09
						Cadmium	9.78E-10	lb/ton	0%	1.71E-08

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-1 (cont'd)	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder (cont'd)	MC2TrPrt (cont'd)	NF (cont'd)	35,040	tons (cont'd)	Chromium	5.47E-10	lb/ton	0%	9.59E-09
						Cobalt	3.43E-09	lb/ton	0%	6.01E-08
						Lead	5.94E-09	lb/ton	0%	1.04E-07
						Manganese	1.69E-09	lb/ton	0%	2.97E-08
						Mercury	8.84E-10	lb/ton	0%	1.55E-08
						Nickel	2.48E-09	lb/ton	0%	4.34E-08
						Selenium	6.65E-09	lb/ton	0%	1.16E-07
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	MC3TrPrt	NF	35,040	tons	Antimony	2.64E-05	lb/ton	0%	4.63E-04
						Arsenic	3.22E-04	lb/ton	0%	5.64E-03
						Beryllium	1.29E-07	lb/ton	0%	2.26E-06
						Cadmium	4.83E-07	lb/ton	0%	8.47E-06
						Chromium	2.71E-07	lb/ton	0%	4.74E-06
						Cobalt	1.70E-06	lb/ton	0%	2.97E-05
						Lead	2.94E-06	lb/ton	0%	5.14E-05
						Manganese	8.38E-07	lb/ton	0%	1.47E-05
						Mercury	4.37E-07	lb/ton	0%	7.66E-06
						Nickel	1.22E-06	lb/ton	0%	2.14E-05
						Selenium	3.29E-06	lb/ton	0%	5.76E-05
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	MCD C2	NF	262,800,000	dscf	Antimony	6.40E-09	lb/dscf	0%	8.41E-04
						Arsenic	7.80E-08	lb/dscf	0%	1.03E-02
						Beryllium	3.12E-11	lb/dscf	0%	4.10E-06
						Cadmium	1.17E-10	lb/dscf	0%	1.54E-05
						Chromium	6.55E-11	lb/dscf	0%	8.61E-06
						Cobalt	4.11E-10	lb/dscf	0%	5.40E-05
						Lead	7.11E-10	lb/dscf	0%	9.34E-05
						Manganese	2.03E-10	lb/dscf	0%	2.67E-05
						Mercury	1.06E-10	lb/dscf	0%	1.39E-05
						Nickel	2.97E-10	lb/dscf	0%	3.90E-05
						Selenium	7.96E-10	lb/dscf	0%	1.05E-04
						Lead	4.90E-07	lb/MMBtu	0%	1.12E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.39E-07
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	45,814.80	MMBtu	3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	4.04E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.59E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	5.39E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Benzene	2.06E-06	lb/MMBtu	0%	4.72E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.69E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.69E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.69E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.69E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	6.74E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	6.29E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.68E-03
						Hexane	1.76E-03	lb/MMBtu	0%	4.04E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	4.04E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.37E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	3.82E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	1.12E-07
						Toluene	3.33E-06	lb/MMBtu	0%	7.64E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	4.49E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	2.69E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	2.47E-05
						Chromium	1.37E-06	lb/MMBtu	0%	3.14E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	1.89E-06
						Manganese	3.73E-07	lb/MMBtu	0%	8.53E-06
						Mercury	2.55E-07	lb/MMBtu	0%	5.84E-06
						Nickel	2.06E-06	lb/MMBtu	0%	4.72E-05
						Selenium	2.35E-08	lb/MMBtu	0%	5.39E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	NGC	NF	56,940	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.40E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	6.70E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	5.02E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	4.47E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	6.70E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Benzene	2.06E-06	lb/MMBtu	0%	5.86E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	3.35E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	3.35E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	3.35E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	3.35E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	8.37E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	7.82E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.09E-03
						Hexane	1.76E-03	lb/MMBtu	0%	5.02E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	5.02E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.70E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	4.75E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	1.40E-07
						Toluene	3.33E-06	lb/MMBtu	0%	9.49E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	5.58E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	3.35E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	3.07E-05
						Chromium	1.37E-06	lb/MMBtu	0%	3.91E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	2.34E-06
						Manganese	3.73E-07	lb/MMBtu	0%	1.06E-05
						Mercury	2.55E-07	lb/MMBtu	0%	7.26E-06
						Nickel	2.06E-06	lb/MMBtu	0%	5.86E-05
						Selenium	2.35E-08	lb/MMBtu	0%	6.70E-07
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	8,760	hours	Lead	2.97E-05	lb/hr	0%	1.30E-04
						2-Methylnaphthalene	3.65E-08	lb/hr	0%	1.60E-07
						3-Methylchloranthrene	2.74E-09	lb/hr	0%	1.20E-08
						7,12-Dimethylbenz(a)anthracene	2.43E-08	lb/hr	0%	1.06E-07
						Acenaphthene	2.74E-09	lb/hr	0%	1.20E-08
						Acenaphthylene	2.74E-09	lb/hr	0%	1.20E-08
						Anthracene	3.65E-09	lb/hr	0%	1.60E-08
						Benz(a)anthracene	2.74E-09	lb/hr	0%	1.20E-08
						Benzene	3.19E-06	lb/hr	0%	1.40E-05
						Benzo(a)pyrene	1.82E-09	lb/hr	0%	7.99E-09
						Benzo(b)fluoranthene	2.74E-09	lb/hr	0%	1.20E-08
						Benzo(g,h,i)perylene	1.82E-09	lb/hr	0%	7.99E-09
						Benzo(k)fluoranthene	2.74E-09	lb/hr	0%	1.20E-08
						Chrysene	2.74E-09	lb/hr	0%	1.20E-08
						Dibenz(a,h)anthracene	1.82E-09	lb/hr	0%	7.99E-09
						Dichlorobenzene	1.82E-06	lb/hr	0%	7.99E-06
						Fluoranthene	4.56E-09	lb/hr	0%	2.00E-08
						Fluorene	4.25E-09	lb/hr	0%	1.86E-08
						Formaldehyde	1.14E-04	lb/hr	0%	4.99E-04
						Hexane	2.74E-03	lb/hr	0%	1.20E-02
						Indeno(1,2,3-cd)pyrene	2.74E-09	lb/hr	0%	1.20E-08
						Naphthalene	9.27E-07	lb/hr	0%	4.06E-06
						Phenanthrene	2.58E-08	lb/hr	0%	1.13E-07
						Pyrene	7.60E-09	lb/hr	0%	3.33E-08
						Toluene	5.17E-06	lb/hr	0%	2.26E-05
						Antimony	2.61E-04	lb/hr	0%	1.14E-03
						Arsenic	3.18E-03	lb/hr	0%	1.39E-02
						Beryllium	1.29E-06	lb/hr	0%	5.65E-06
						Cadmium	6.44E-06	lb/hr	0%	2.82E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-5 (cont'd)	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare (cont'd)	NGF (cont'd)	NF (cont'd)	8,760	hours (cont'd)	Chromium	4.80E-06	lb/hr	0%	2.10E-05
						Cobalt	1.69E-05	lb/hr	0%	7.38E-05
						Manganese	8.84E-06	lb/hr	0%	3.87E-05
						Mercury	4.71E-06	lb/hr	0%	2.06E-05
						Nickel	1.53E-05	lb/hr	0%	6.69E-05
						Selenium	3.24E-05	lb/hr	0%	1.42E-04
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	MCDC1	NF	473,040,000	dscf	Antimony	6.40E-09	lb/dscf	0%	1.51E-03
						Arsenic	7.80E-08	lb/dscf	0%	1.85E-02
						Beryllium	3.12E-11	lb/dscf	0%	7.38E-06
						Cadmium	1.17E-10	lb/dscf	0%	2.77E-05
						Chromium	6.55E-11	lb/dscf	0%	1.55E-05
						Cobalt	4.11E-10	lb/dscf	0%	9.72E-05
						Lead	7.11E-10	lb/dscf	0%	1.68E-04
						Manganese	2.03E-10	lb/dscf	0%	4.80E-05
						Mercury	1.06E-10	lb/dscf	0%	2.50E-05
						Nickel	2.97E-10	lb/dscf	0%	7.01E-05
						Selenium	7.96E-10	lb/dscf	0%	1.88E-04
						047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	MOTrPrt	F	61,320
Arsenic	6.98E-07	lb/ton	0%	2.14E-05						
Beryllium	0.00E+00	lb/ton	0%	0.00E+00						
Cadmium	0.00E+00	lb/ton	0%	0.00E+00						
Chromium	0.00E+00	lb/ton	0%	0.00E+00						
Cobalt	0.00E+00	lb/ton	0%	0.00E+00						
Lead	5.30E-09	lb/ton	0%	1.63E-07						
Manganese	0.00E+00	lb/ton	0%	0.00E+00						
Mercury	0.00E+00	lb/ton	0%	0.00E+00						
Nickel	0.00E+00	lb/ton	0%	0.00E+00						
Selenium	3.19E-10	lb/ton	0%	9.77E-09						
047-7	Settling Tank	ST	NF	8,760	hours					
						Ethylbenzene	2.03E-06	lb/hr	0%	8.88E-06
						n-Hexane	2.60E-07	lb/hr	0%	1.14E-06
						Toluene	1.48E-05	lb/hr	0%	6.50E-05
						m-Xylene	3.77E-05	lb/hr	0%	1.65E-04
047-8	Solution Extraction - Molybdenum Pressure Leaching	SX MPL	F	8,760	hours	Benzene	6.02E-04	lb/hr	0%	2.64E-03
						Toluene	2.16E-03	lb/hr	0%	9.46E-03
						Ethylbenzene	7.12E-03	lb/hr	0%	3.12E-02
						Xylenes	9.27E-03	lb/hr	0%	4.06E-02
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	MC3TrUnpr t	F	600	tons	Antimony	2.47E-04	lb/ton	0%	7.41E-05
						Arsenic	3.01E-03	lb/ton	0%	9.03E-04
						Beryllium	1.20E-06	lb/ton	0%	3.61E-07
						Cadmium	4.52E-06	lb/ton	0%	1.36E-06
						Chromium	2.53E-06	lb/ton	0%	7.59E-07
						Cobalt	1.59E-05	lb/ton	0%	4.76E-06
						Lead	2.74E-05	lb/ton	0%	8.23E-06
						Manganese	7.83E-06	lb/ton	0%	2.35E-06
						Mercury	4.09E-06	lb/ton	0%	1.23E-06
						Nickel	1.14E-05	lb/ton	0%	3.43E-06
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	MC3TrUnpr t	F	600	tons	Selenium	3.07E-05	lb/ton	0%	9.22E-06
						Antimony	2.47E-04	lb/ton	0%	7.41E-05
						Arsenic	3.01E-03	lb/ton	0%	9.03E-04
						Beryllium	1.20E-06	lb/ton	0%	3.61E-07
						Cadmium	4.52E-06	lb/ton	0%	1.36E-06
						Chromium	2.53E-06	lb/ton	0%	7.59E-07
						Cobalt	1.59E-05	lb/ton	0%	4.76E-06
						Lead	2.74E-05	lb/ton	0%	8.23E-06
						Manganese	7.83E-06	lb/ton	0%	2.35E-06
						Mercury	4.09E-06	lb/ton	0%	1.23E-06
Nickel	1.14E-05	lb/ton	0%	3.43E-06						
Selenium	3.07E-05	lb/ton	0%	9.22E-06						
Total of Non-Fugitive Emissions for Concentrate Leach Plant:										8.35E-01
Total of Fugitive Emissions for Concentrate Leach Plant:										8.59E-02
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:										9.21E-01

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Solution Extraction/Electrowinning Operations										
029-1	Solution Extraction - Main Systems	SXM	F	8,760	hours	Benzene	1.03E-02	lb/hr	0%	4.50E-02
						Toluene	3.68E-02	lb/hr	0%	1.61E-01
						Ethylbenzene	1.21E-01	lb/hr	0%	5.31E-01
						Xylenes	1.58E-01	lb/hr	0%	6.92E-01
011-1	Electrowinning - Main System	EWM	F	8,760	hours	Cobalt Compounds	1.24E-04	lb/hr	0%	5.43E-04
029-2	Raffinate Pond	RP	F	8,760	hours	Benzene	1.40E-02	lb/hr	0%	6.15E-02
						Toluene	5.03E-02	lb/hr	0%	2.20E-01
						Ethylbenzene	1.66E-01	lb/hr	0%	7.26E-01
						Xylenes	2.16E-01	lb/hr	0%	9.46E-01
029-3	Organic Tank TK-22	TK-22	NF	8,760	hours	Benzene	2.95E-04	lb/hr	0%	1.29E-03
						Toluene	1.06E-03	lb/hr	0%	4.63E-03
						Ethylbenzene	3.48E-03	lb/hr	0%	1.52E-02
						Xylenes	4.53E-03	lb/hr	0%	1.99E-02
029-4	Organic Mix Tank TK-13	TK-13	NF	8,760	hours	Benzene	3.21E-04	lb/hr	0%	1.41E-03
						Toluene	1.15E-03	lb/hr	0%	5.04E-03
						Ethylbenzene	3.79E-03	lb/hr	0%	1.66E-02
						Xylenes	4.94E-03	lb/hr	0%	2.16E-02
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	8.59E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	4.12E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	3.09E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	2.75E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	4.12E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Benzene	2.06E-06	lb/MMBtu	0%	3.61E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.06E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	5.15E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	4.81E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.29E-04
						Hexane	1.76E-03	lb/MMBtu	0%	3.09E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.05E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	2.92E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	8.59E-09
						Toluene	3.33E-06	lb/MMBtu	0%	5.84E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	3.44E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	2.06E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	1.89E-06
						Chromium	1.37E-06	lb/MMBtu	0%	2.40E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	1.44E-07
						Manganese	3.73E-07	lb/MMBtu	0%	6.53E-07
						Mercury	2.55E-07	lb/MMBtu	0%	4.47E-07
						Nickel	2.06E-06	lb/MMBtu	0%	3.61E-06
						Selenium	2.35E-08	lb/MMBtu	0%	4.12E-08
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	3,504	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	8.59E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	4.12E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	3.09E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	2.75E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	4.12E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Benzene	2.06E-06	lb/MMBtu	0%	3.61E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	3.09E-09

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-50 (cont'd)	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	3,504	MMBtu (cont'd)	Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.06E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.06E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	5.15E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	4.81E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.29E-04
						Hexane	1.76E-03	lb/MMBtu	0%	3.09E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	3.09E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.05E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	2.92E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	8.59E-09
						Toluene	3.33E-06	lb/MMBtu	0%	5.84E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	3.44E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	2.06E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	1.89E-06
						Chromium	1.37E-06	lb/MMBtu	0%	2.40E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	1.44E-07
						Manganese	3.73E-07	lb/MMBtu	0%	6.53E-07
						Mercury	2.55E-07	lb/MMBtu	0%	4.47E-07
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	2,978.40	MMBtu	Nickel	2.06E-06	lb/MMBtu	0%	3.61E-06
						Selenium	2.35E-08	lb/MMBtu	0%	4.12E-08
						Lead	4.90E-07	lb/MMBtu	0%	7.30E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	3.50E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	2.63E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	2.34E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	3.50E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Benzene	2.06E-06	lb/MMBtu	0%	3.07E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	1.75E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	1.75E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	1.75E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	1.75E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	4.38E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	4.09E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.10E-04
						Hexane	1.76E-03	lb/MMBtu	0%	2.63E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	2.63E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	8.91E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	2.48E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	7.30E-09
						Toluene	3.33E-06	lb/MMBtu	0%	4.96E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	2.92E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	1.75E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	1.61E-06
						Chromium	1.37E-06	lb/MMBtu	0%	2.04E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	1.23E-07
						Manganese	3.73E-07	lb/MMBtu	0%	5.55E-07
						Mercury	2.55E-07	lb/MMBtu	0%	3.80E-07
						Nickel	2.06E-06	lb/MMBtu	0%	3.07E-06
						Selenium	2.35E-08	lb/MMBtu	0%	3.50E-08
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	59,935.92	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.47E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	7.05E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	5.29E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	4.70E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	5.29E-08

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
010-1 (cont'd)	Natural Gas Hot Water Heater (6.842 MMBtu/hr) (cont'd)	NGHWH (cont'd)	NF (cont'd)	59,935.92	MMBtu (cont'd)	Anthracene	2.35E-09	lb/MMBtu	0%	7.05E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Benzene	2.06E-06	lb/MMBtu	0%	6.17E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	3.53E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	3.53E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	3.53E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	3.53E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	8.81E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	8.23E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.20E-03
						Hexane	1.76E-03	lb/MMBtu	0%	5.29E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	5.29E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.79E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	4.99E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	1.47E-07
						Toluene	3.33E-06	lb/MMBtu	0%	9.99E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	5.88E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	3.53E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	3.23E-05
						Chromium	1.37E-06	lb/MMBtu	0%	4.11E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	2.47E-06
						Manganese	3.73E-07	lb/MMBtu	0%	1.12E-05
						Mercury	2.55E-07	lb/MMBtu	0%	7.64E-06
						Nickel	2.06E-06	lb/MMBtu	0%	6.17E-05
						Selenium	2.35E-08	lb/MMBtu	0%	7.05E-07
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	47,654.40	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.17E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.61E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	4.20E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.74E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	5.61E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Benzene	2.06E-06	lb/MMBtu	0%	4.91E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.80E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.80E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.80E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.80E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	7.01E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	6.54E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.75E-03
						Hexane	1.76E-03	lb/MMBtu	0%	4.20E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	4.20E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.42E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	3.97E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	1.17E-07
						Toluene	3.33E-06	lb/MMBtu	0%	7.94E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	4.67E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	2.80E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	2.57E-05
						Chromium	1.37E-06	lb/MMBtu	0%	3.27E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	1.96E-06
						Manganese	3.73E-07	lb/MMBtu	0%	8.88E-06
						Mercury	2.55E-07	lb/MMBtu	0%	6.07E-06
						Nickel	2.06E-06	lb/MMBtu	0%	4.91E-05
						Selenium	2.35E-08	lb/MMBtu	0%	5.61E-07
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:										1.95E-01

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:										3.38E+00
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:										3.58E+00
Portable Aggregate System										
009-9	Aggregate to Hopper (via front-end loader)	NMTrUnprt	F	2,500,000	tons	Antimony	2.30E-09	lb/ton	0%	2.88E-06
						Arsenic	5.15E-09	lb/ton	0%	6.43E-06
						Beryllium	4.19E-10	lb/ton	0%	5.23E-07
						Cadmium	1.64E-10	lb/ton	0%	2.05E-07
						Chromium	1.23E-08	lb/ton	0%	1.54E-05
						Cobalt	5.70E-09	lb/ton	0%	7.13E-06
						Lead	9.73E-09	lb/ton	0%	1.22E-05
						Manganese	9.16E-08	lb/ton	0%	1.14E-04
						Mercury	6.28E-11	lb/ton	0%	7.85E-08
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	VGFScreen C	NF	2,500,000	tons	Nickel	8.34E-09	lb/ton	0%	1.04E-05
						Selenium	7.75E-10	lb/ton	0%	9.68E-07
						Antimony	4.88E-09	lb/ton	0%	6.11E-06
						Arsenic	1.09E-08	lb/ton	0%	1.36E-05
						Beryllium	8.88E-10	lb/ton	0%	1.11E-06
						Cadmium	3.48E-10	lb/ton	0%	4.35E-07
						Chromium	2.61E-08	lb/ton	0%	3.27E-05
						Cobalt	1.21E-08	lb/ton	0%	1.51E-05
						Lead	2.06E-08	lb/ton	0%	2.58E-05
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	JCCrushC	NF	2,500,000	tons	Manganese	1.94E-07	lb/ton	0%	2.43E-04
						Mercury	1.33E-10	lb/ton	0%	1.67E-07
						Nickel	1.77E-08	lb/ton	0%	2.21E-05
						Selenium	1.64E-09	lb/ton	0%	2.05E-06
						Cobalt	8.82E-09	lb/ton	0%	1.10E-05
						Lead	1.50E-08	lb/ton	0%	1.88E-05
						Manganese	1.42E-07	lb/ton	0%	1.77E-04
						Mercury	9.72E-11	lb/ton	0%	1.22E-07
						Nickel	1.29E-08	lb/ton	0%	1.61E-05
009-12	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	NMTrPrt	NF	2,500,000	tons	Selenium	1.20E-09	lb/ton	0%	1.50E-06
						Antimony	3.56E-09	lb/ton	0%	4.46E-06
						Arsenic	7.97E-09	lb/ton	0%	9.96E-06
						Beryllium	6.48E-10	lb/ton	0%	8.10E-07
						Cadmium	2.54E-10	lb/ton	0%	3.17E-07
						Chromium	1.91E-08	lb/ton	0%	2.38E-05
						Cobalt	8.82E-09	lb/ton	0%	1.10E-05
						Lead	1.50E-08	lb/ton	0%	1.88E-05
						Manganese	1.42E-07	lb/ton	0%	1.77E-04
009-13	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	NMTrPrt	NF	2,500,000	tons	Nickel	8.93E-10	lb/ton	90%	1.12E-07
						Selenium	8.29E-11	lb/ton	90%	1.04E-08
						Antimony	2.46E-10	lb/ton	90%	3.08E-08
						Arsenic	5.51E-10	lb/ton	90%	6.88E-08
						Beryllium	4.48E-11	lb/ton	90%	5.60E-09
						Cadmium	1.75E-11	lb/ton	90%	2.19E-09
						Chromium	1.32E-09	lb/ton	90%	1.65E-07
						Cobalt	6.10E-10	lb/ton	90%	7.62E-08
						Lead	1.04E-09	lb/ton	90%	1.30E-07
009-14	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	TDSScreen C	NF	2,500,000	tons	Manganese	9.80E-09	lb/ton	90%	1.22E-06
						Mercury	6.72E-12	lb/ton	90%	8.40E-10
						Nickel	8.93E-10	lb/ton	90%	1.12E-07
						Selenium	8.29E-11	lb/ton	90%	1.04E-07
						Antimony	4.88E-09	lb/ton	0%	6.11E-06
						Arsenic	1.09E-08	lb/ton	0%	1.36E-05
						Beryllium	8.88E-10	lb/ton	0%	1.11E-06
						Cadmium	3.48E-10	lb/ton	0%	4.35E-07
						Chromium	2.61E-08	lb/ton	0%	3.27E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-13 (cont'd)	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening (cont'd)	TDSscreen C (cont'd)	NF (cont'd)	2,500,000	tons (cont'd)	Cobalt	1.21E-08	lb/ton	0%	1.51E-05
						Lead	2.06E-08	lb/ton	0%	2.58E-05
						Manganese	1.94E-07	lb/ton	0%	2.43E-04
						Mercury	1.33E-10	lb/ton	0%	1.67E-07
						Nickel	1.77E-08	lb/ton	0%	2.21E-05
						Selenium	1.64E-09	lb/ton	0%	2.05E-06
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsized), or Triple Deck Screen Discharge Conveyor (Undersize)	NMTPrT	NF	2,500,000	tons	Antimony	2.46E-10	lb/ton	0%	3.08E-07
						Arsenic	5.51E-10	lb/ton	0%	6.88E-07
						Beryllium	4.48E-11	lb/ton	0%	5.60E-08
						Cadmium	1.75E-11	lb/ton	0%	2.19E-08
						Chromium	1.32E-09	lb/ton	0%	1.65E-06
						Cobalt	6.10E-10	lb/ton	0%	7.62E-07
						Lead	1.04E-09	lb/ton	0%	1.30E-06
						Manganese	9.80E-09	lb/ton	0%	1.22E-05
						Mercury	6.72E-12	lb/ton	0%	8.40E-09
						Nickel	8.93E-10	lb/ton	0%	1.12E-06
						Selenium	8.29E-11	lb/ton	0%	1.04E-07
						Antimony	3.56E-09	lb/ton	0%	4.46E-06
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	CSSCrushC	NF	2,500,000	tons	Arsenic	7.97E-09	lb/ton	0%	9.96E-06
						Beryllium	6.48E-10	lb/ton	0%	8.10E-07
						Cadmium	2.54E-10	lb/ton	0%	3.17E-07
						Chromium	1.91E-08	lb/ton	0%	2.38E-05
						Cobalt	8.82E-09	lb/ton	0%	1.10E-05
						Lead	1.50E-08	lb/ton	0%	1.88E-05
						Manganese	1.42E-07	lb/ton	0%	1.77E-04
						Mercury	9.72E-11	lb/ton	0%	1.22E-07
						Nickel	1.29E-08	lb/ton	0%	1.61E-05
						Selenium	1.20E-09	lb/ton	0%	1.50E-06
						Antimony	2.46E-10	lb/ton	90%	3.08E-08
						Arsenic	5.51E-10	lb/ton	90%	6.88E-08
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	NMTPrT	NF	2,500,000	tons	Beryllium	4.48E-11	lb/ton	90%	5.60E-09
						Cadmium	1.75E-11	lb/ton	90%	2.19E-09
						Chromium	1.32E-09	lb/ton	90%	1.65E-07
						Cobalt	6.10E-10	lb/ton	90%	7.62E-08
						Lead	1.04E-09	lb/ton	90%	1.30E-07
						Manganese	9.80E-09	lb/ton	90%	1.22E-06
						Mercury	6.72E-12	lb/ton	90%	8.40E-10
						Nickel	8.93E-10	lb/ton	90%	1.12E-07
						Selenium	8.29E-11	lb/ton	90%	1.04E-08
						Antimony	2.46E-10	lb/ton	90%	3.08E-08
						Arsenic	5.51E-10	lb/ton	90%	6.88E-08
						Beryllium	4.48E-11	lb/ton	90%	5.60E-09
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	NMTPrT	NF	2,500,000	tons	Cadmium	1.75E-11	lb/ton	90%	2.19E-09
						Chromium	1.32E-09	lb/ton	90%	1.65E-07
						Cobalt	6.10E-10	lb/ton	90%	7.62E-08
						Lead	1.04E-09	lb/ton	90%	1.30E-07
						Manganese	9.80E-09	lb/ton	90%	1.22E-06
						Mercury	6.72E-12	lb/ton	90%	8.40E-10
						Nickel	8.93E-10	lb/ton	90%	1.12E-07
						Selenium	8.29E-11	lb/ton	90%	1.04E-08
						Antimony	2.30E-09	lb/ton	90%	2.88E-07
						Arsenic	5.15E-09	lb/ton	90%	6.43E-07
						Beryllium	4.19E-10	lb/ton	90%	5.23E-08
						Cadmium	1.64E-10	lb/ton	90%	2.05E-08
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	NMTUnprt	F	2,500,000	tons	Chromium	1.23E-08	lb/ton	90%	1.54E-06
						Cobalt	5.70E-09	lb/ton	90%	7.13E-07
						Lead	9.73E-09	lb/ton	90%	1.22E-06
						Manganese	9.16E-08	lb/ton	90%	1.14E-05
						Mercury	6.28E-11	lb/ton	90%	7.85E-09
						Nickel	8.34E-09	lb/ton	90%	1.04E-06
						Selenium	7.75E-10	lb/ton	90%	9.68E-08
						Antimony	2.30E-09	lb/ton	0%	2.88E-06
						Arsenic	5.15E-09	lb/ton	0%	6.43E-06
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	NMTUnprt	F	2,500,000	tons	Antimony	2.30E-09	lb/ton	0%	2.88E-06
						Arsenic	5.15E-09	lb/ton	0%	6.43E-06

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-19 (cont'd)	Coarse and Fine Aggregate Stockpiles to Trucks (cont'd)	NMTrUnprt (cont'd)	F (cont'd)	2,500,000	tons (cont'd)	Beryllium	4.19E-10	lb/ton	0%	5.23E-07
						Cadmium	1.64E-10	lb/ton	0%	2.05E-07
						Chromium	1.23E-08	lb/ton	0%	1.54E-05
						Cobalt	5.70E-09	lb/ton	0%	7.13E-06
						Lead	9.73E-09	lb/ton	0%	1.22E-05
						Manganese	9.16E-08	lb/ton	0%	1.14E-04
						Mercury	6.28E-11	lb/ton	0%	7.85E-08
						Nickel	8.34E-09	lb/ton	0%	1.04E-05
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	AWindPAS	F	0.23	acre-yr	Selenium	7.75E-10	lb/ton	0%	9.68E-07
						Antimony	1.05E-02	lb/acre-yr	0%	1.21E-06
						Arsenic	2.35E-02	lb/acre-yr	0%	2.71E-06
						Beryllium	1.91E-03	lb/acre-yr	0%	2.20E-07
						Cadmium	7.50E-04	lb/acre-yr	0%	8.62E-08
						Chromium	5.63E-02	lb/acre-yr	0%	6.48E-06
						Cobalt	2.61E-02	lb/acre-yr	0%	3.00E-06
						Lead	4.44E-02	lb/acre-yr	0%	5.11E-06
						Manganese	4.19E-01	lb/acre-yr	0%	4.81E-05
						Mercury	2.87E-04	lb/acre-yr	0%	3.30E-08
						Nickel	3.81E-02	lb/acre-yr	0%	4.39E-06
						Selenium	3.54E-03	lb/acre-yr	0%	4.07E-07
Total of Non-Fugitive Emissions for Portable Aggregate System:										1.29E-03
Total of Fugitive Emissions for Portable Aggregate System:										4.30E-04
Total of Non-Fugitive and Fugitive Emissions for Portable Aggregate System:										1.72E-03
Supplemental Portable Aggregate System										
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	VGFScreen C	NF	4,400,000	tons	Antimony	4.88E-09	lb/ton	0%	1.07E-05
						Arsenic	1.09E-08	lb/ton	0%	2.40E-05
						Beryllium	8.88E-10	lb/ton	0%	1.95E-06
						Cadmium	3.48E-10	lb/ton	0%	7.65E-07
						Chromium	2.61E-08	lb/ton	0%	5.75E-05
						Cobalt	1.21E-08	lb/ton	0%	2.66E-05
						Lead	2.06E-08	lb/ton	0%	4.54E-05
						Manganese	1.94E-07	lb/ton	0%	4.27E-04
						Mercury	1.33E-10	lb/ton	0%	2.93E-07
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	JCCrushC	NF	4,400,000	tons	Nickel	1.77E-08	lb/ton	0%	3.89E-05
						Selenium	1.64E-09	lb/ton	0%	3.61E-06
						Antimony	3.56E-09	lb/ton	0%	7.84E-06
						Arsenic	7.97E-09	lb/ton	0%	1.75E-05
						Beryllium	6.48E-10	lb/ton	0%	1.43E-06
						Cadmium	2.54E-10	lb/ton	0%	5.58E-07
						Chromium	1.91E-08	lb/ton	0%	4.20E-05
						Cobalt	8.82E-09	lb/ton	0%	1.94E-05
						Lead	1.50E-08	lb/ton	0%	3.31E-05
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	NMTrPrt	NF	4,400,000	tons	Manganese	1.42E-07	lb/ton	0%	3.12E-04
						Mercury	9.72E-11	lb/ton	0%	2.14E-07
						Nickel	1.29E-08	lb/ton	0%	2.84E-05
						Selenium	1.20E-09	lb/ton	0%	2.64E-06
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	NMTrPrt	NF	6,400,000	tons	Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
						Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
						Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	90%	7.88E-08
						Arsenic	5.51E-10	lb/ton	90%	1.76E-07
						Beryllium	4.48E-11	lb/ton	90%	1.43E-08
Cadmium	1.75E-11	lb/ton	90%	5.61E-09						
Chromium	1.32E-09	lb/ton	90%	4.22E-07						
Cobalt	6.10E-10	lb/ton	90%	1.95E-07						

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-25 (cont'd)	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80 (cont'd)	NMTrPrt (cont'd)	NF (cont'd)	6,400,000	tons (cont'd)	Lead	1.04E-09	lb/ton	90%	3.33E-07
						Manganese	9.80E-09	lb/ton	90%	3.14E-06
						Mercury	6.72E-12	lb/ton	90%	2.15E-09
						Nickel	8.93E-10	lb/ton	90%	2.86E-07
						Selenium	8.29E-11	lb/ton	90%	2.65E-08
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	TDSscreen C	NF	6,400,000	tons	Antimony	4.88E-09	lb/ton	0%	1.56E-05
						Arsenic	1.09E-08	lb/ton	0%	3.49E-05
						Beryllium	8.88E-10	lb/ton	0%	2.84E-06
						Cadmium	3.48E-10	lb/ton	0%	1.11E-06
						Chromium	2.61E-08	lb/ton	0%	8.36E-05
						Cobalt	1.21E-08	lb/ton	0%	3.87E-05
						Lead	2.06E-08	lb/ton	0%	6.60E-05
						Manganese	1.94E-07	lb/ton	0%	6.22E-04
						Mercury	1.33E-10	lb/ton	0%	4.26E-07
						Nickel	1.77E-08	lb/ton	0%	5.66E-05
						Selenium	1.64E-09	lb/ton	0%	5.26E-06
						Antimony	2.46E-10	lb/ton	0%	5.42E-07
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	NMTrPrt	NF	4,400,000	tons	Arsenic	5.51E-10	lb/ton	0%	1.21E-06
						Beryllium	4.48E-11	lb/ton	0%	9.85E-08
						Cadmium	1.75E-11	lb/ton	0%	3.86E-08
						Chromium	1.32E-09	lb/ton	0%	2.90E-06
						Cobalt	6.10E-10	lb/ton	0%	1.34E-06
						Lead	1.04E-09	lb/ton	0%	2.29E-06
						Manganese	9.80E-09	lb/ton	0%	2.16E-05
						Mercury	6.72E-12	lb/ton	0%	1.48E-08
						Nickel	8.93E-10	lb/ton	0%	1.96E-06
						Selenium	8.29E-11	lb/ton	0%	1.82E-07
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	NMTrPrt	NF	4,400,000	tons	Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
						Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
						Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	NMTrPrt	NF	4,400,000	tons	Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
						Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
						Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	NMTrPrt	NF	4,400,000	tons	Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
						Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
						Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	4,400,000	tons	Cobalt	6.10E-10	lb/ton	0%	7.84E-06
						Lead	7.97E-09	lb/ton	0%	1.75E-05
						Beryllium	6.48E-10	lb/ton	0%	1.43E-06

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-31 (cont'd)	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher (cont'd)	CSSCrushC (cont'd)	NF (cont'd)	4,400,000	tons (cont'd)	Cadmium	2.54E-10	lb/ton	0%	5.58E-07
						Chromium	1.91E-08	lb/ton	0%	4.20E-05
						Cobalt	8.82E-09	lb/ton	0%	1.94E-05
						Lead	1.50E-08	lb/ton	0%	3.31E-05
						Manganese	1.42E-07	lb/ton	0%	3.12E-04
						Mercury	9.72E-11	lb/ton	0%	2.14E-07
						Nickel	1.29E-08	lb/ton	0%	2.84E-05
						Selenium	1.20E-09	lb/ton	0%	2.64E-06
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	NMTrPrt	NF	4,400,000	tons	Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
						Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	NMTrPrt	NF	4,400,000	tons	Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	0%	5.42E-07
						Arsenic	5.51E-10	lb/ton	0%	1.21E-06
						Beryllium	4.48E-11	lb/ton	0%	9.85E-08
						Cadmium	1.75E-11	lb/ton	0%	3.86E-08
						Chromium	1.32E-09	lb/ton	0%	2.90E-06
						Cobalt	6.10E-10	lb/ton	0%	1.34E-06
						Lead	1.04E-09	lb/ton	0%	2.29E-06
						Manganese	9.80E-09	lb/ton	0%	2.16E-05
						Mercury	6.72E-12	lb/ton	0%	1.48E-08
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	NMTrPrt	NF	4,400,000	tons	Nickel	8.93E-10	lb/ton	0%	1.96E-06
						Selenium	8.29E-11	lb/ton	0%	1.82E-07
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07
						Lead	1.04E-09	lb/ton	90%	2.29E-07
						Manganese	9.80E-09	lb/ton	90%	2.16E-06
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	NMTrPrt	NF	4,400,000	tons	Mercury	6.72E-12	lb/ton	90%	1.48E-09
						Nickel	8.93E-10	lb/ton	90%	1.96E-07
						Selenium	8.29E-11	lb/ton	90%	1.82E-08
						Antimony	2.46E-10	lb/ton	0%	5.42E-07
						Arsenic	5.51E-10	lb/ton	0%	1.21E-06
						Beryllium	4.48E-11	lb/ton	0%	9.85E-08
						Cadmium	1.75E-11	lb/ton	0%	3.86E-08
						Chromium	1.32E-09	lb/ton	0%	2.90E-06
						Cobalt	6.10E-10	lb/ton	0%	1.34E-06
						Lead	1.04E-09	lb/ton	0%	2.29E-06
009-36	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	NMTrPrt	NF	4,400,000	tons	Manganese	9.80E-09	lb/ton	0%	2.16E-05
						Mercury	6.72E-12	lb/ton	0%	1.48E-08
						Nickel	8.93E-10	lb/ton	0%	1.96E-06
						Selenium	8.29E-11	lb/ton	0%	1.82E-07
						Antimony	2.46E-10	lb/ton	90%	5.42E-08
						Arsenic	5.51E-10	lb/ton	90%	1.21E-07
						Beryllium	4.48E-11	lb/ton	90%	9.85E-09
						Cadmium	1.75E-11	lb/ton	90%	3.86E-09
						Chromium	1.32E-09	lb/ton	90%	2.90E-07
						Cobalt	6.10E-10	lb/ton	90%	1.34E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units								
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	NMTrUnprt	F	4,400,000	tons	Antimony	2.30E-09	lb/ton	0%	5.07E-06						
						Arsenic	5.15E-09	lb/ton	0%	1.13E-05						
						Beryllium	4.19E-10	lb/ton	0%	9.21E-07						
						Cadmium	1.64E-10	lb/ton	0%	3.61E-07						
						Chromium	1.23E-08	lb/ton	0%	2.71E-05						
						Cobalt	5.70E-09	lb/ton	0%	1.25E-05						
						Lead	9.73E-09	lb/ton	0%	2.14E-05						
						Manganese	9.16E-08	lb/ton	0%	2.02E-04						
						Mercury	6.28E-11	lb/ton	0%	1.38E-07						
						Nickel	8.34E-09	lb/ton	0%	1.84E-05						
009-38	SPAS Stockpiles to Trucks	NMTrUnprt	F	4,400,000	tons	Selenium	7.75E-10	lb/ton	0%	1.70E-06						
						Antimony	2.30E-09	lb/ton	0%	5.07E-06						
						Arsenic	5.15E-09	lb/ton	0%	1.13E-05						
						Beryllium	4.19E-10	lb/ton	0%	9.21E-07						
						Cadmium	1.64E-10	lb/ton	0%	3.61E-07						
						Chromium	1.23E-08	lb/ton	0%	2.71E-05						
						Cobalt	5.70E-09	lb/ton	0%	1.25E-05						
						Lead	9.73E-09	lb/ton	0%	2.14E-05						
						Manganese	9.16E-08	lb/ton	0%	2.02E-04						
						Mercury	6.28E-11	lb/ton	0%	1.38E-07						
009-39	Wind Erosion of the SPAS Stockpiles	AWindSPAS	F	3.31	acre-yr	Nickel	8.34E-09	lb/ton	0%	1.84E-05						
						Selenium	7.75E-10	lb/ton	0%	1.70E-06						
						Antimony	1.05E-02	lb/acre-yr	0%	1.74E-05						
						Arsenic	2.35E-02	lb/acre-yr	0%	3.89E-05						
						Beryllium	1.91E-03	lb/acre-yr	0%	3.16E-06						
						Cadmium	7.50E-04	lb/acre-yr	0%	1.24E-06						
						Chromium	5.63E-02	lb/acre-yr	0%	9.31E-05						
						Cobalt	2.61E-02	lb/acre-yr	0%	4.31E-05						
						Lead	4.44E-02	lb/acre-yr	0%	7.35E-05						
						Manganese	4.19E-01	lb/acre-yr	0%	6.92E-04						
						Mercury	2.87E-04	lb/acre-yr	0%	4.74E-07						
						Nickel	3.81E-02	lb/acre-yr	0%	6.30E-05						
						Selenium	3.54E-03	lb/acre-yr	0%	5.85E-06						
						Total of Non-Fugitive Emissions for Supplemental Portable Aggregate System:					2.62E-03					
						Total of Fugitive Emissions for Supplemental Portable Aggregate System:					1.63E-03					
						Total of Non-Fugitive and Fugitive Emissions for Supplemental Portable Aggregate System:					4.25E-03					
						Storage Tanks and Parts Cleaning										
						033-3	Gasoline Storage Tank 150 (GDF1)	GST-150	NF	8,760	hours	Benzene	4.57E-03	lb/hr	0%	2.00E-02
												Ethylbenzene	2.08E-04	lb/hr	0%	9.12E-04
												n-Hexane	6.91E-03	lb/hr	0%	3.03E-02
Naphthalene	1.11E-06	lb/hr	0%	4.88E-06												
Cumene	1.47E-04	lb/hr	0%	6.42E-04												
Toluene	5.37E-03	lb/hr	0%	2.35E-02												
m-Xylene	8.31E-04	lb/hr	0%	3.64E-03												
033-2	Gasoline Storage Tank FT-3 (GDF2)	GST-FT-3	NF	8,760	hours	Benzene	4.57E-03	lb/hr	0%	2.00E-02						
						Ethylbenzene	2.08E-04	lb/hr	0%	9.12E-04						
						n-Hexane	6.91E-03	lb/hr	0%	3.03E-02						
						Naphthalene	1.11E-06	lb/hr	0%	4.88E-06						
						Cumene	1.47E-04	lb/hr	0%	6.42E-04						
						Toluene	5.37E-03	lb/hr	0%	2.35E-02						
						m-Xylene	8.31E-04	lb/hr	0%	3.64E-03						
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	GST-FF	NF	8,760	hours	Benzene	4.27E-03	lb/hr	0%	1.87E-02						
						Ethylbenzene	1.95E-04	lb/hr	0%	8.53E-04						
						n-Hexane	6.47E-03	lb/hr	0%	2.83E-02						
						Naphthalene	1.04E-06	lb/hr	0%	4.56E-06						
						Cumene	1.37E-04	lb/hr	0%	6.01E-04						
						Toluene	5.03E-03	lb/hr	0%	2.20E-02						
						m-Xylene	7.78E-04	lb/hr	0%	3.41E-03						
033-5	Gasoline Storage Tank Mine Operations (GDF4)	GST-MO	NF	8,760	hours	Benzene	4.27E-03	lb/hr	0%	1.87E-02						
						Ethylbenzene	1.95E-04	lb/hr	0%	8.53E-04						
						n-Hexane	6.47E-03	lb/hr	0%	2.83E-02						
						Naphthalene	1.04E-06	lb/hr	0%	4.56E-06						
						Cumene	1.37E-04	lb/hr	0%	6.01E-04						

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
033-5 (cont'd)	Gasoline Storage Tank Mine Operations (GDF4) (cont'd)	GST-MO (cont'd)	NF (cont'd)	8,760	hours (cont'd)	Toluene	5.03E-03	lb/hr	0%	2.20E-02
						m-Xylene	7.78E-04	lb/hr	0%	3.41E-03
053-1	Xanthate Mixing and Storage Tanks	XMS	NF	1,231.88	tons	Carbon Disulfide	1.23E+01	lb/ton	0%	7.60E+00
Total of Non-Fugitive Emissions for Storage Tanks and Parts Cleaning:										7.91E+00
Total of Fugitive Emissions for Storage Tanks and Parts Cleaning:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Storage Tanks and Parts Cleaning:										7.91E+00
Diesel Emergency ICE										
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	607,000	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	1.65E-03
						Toluene	1.97E-06	lb/hp-hr	0%	5.97E-04
						Xylenes	1.35E-06	lb/hp-hr	0%	4.10E-04
						Formaldehyde	5.52E-07	lb/hp-hr	0%	1.68E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	5.35E-05
						Acrolein	5.52E-08	lb/hp-hr	0%	1.67E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	2.76E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	1.96E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	9.94E-06
						Fluorene	8.96E-08	lb/hp-hr	0%	2.72E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	8.67E-05
						Anthracene	8.61E-09	lb/hp-hr	0%	2.61E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	8.56E-06
						Pyrene	2.60E-08	lb/hp-hr	0%	7.88E-06
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	1.32E-06
						Chrysene	1.07E-08	lb/hp-hr	0%	3.25E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	2.36E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	4.63E-07
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	5.46E-07
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	8.80E-07
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	29,500	hp-hr	Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	7.35E-07
						Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	1.18E-06
						Benzene	6.53E-06	lb/hp-hr	0%	9.63E-05
						Toluene	2.86E-06	lb/hp-hr	0%	4.22E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	2.94E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	4.04E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.22E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	7.92E-05
						Acrolein	6.48E-07	lb/hp-hr	0%	9.55E-06
						Naphthalene	5.94E-07	lb/hp-hr	0%	8.76E-06
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	5.22E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.47E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	3.01E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	3.04E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	1.93E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	7.86E-07
						Pyrene	3.35E-08	lb/hp-hr	0%	4.94E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.73E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	3.64E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.02E-08
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	381,000	hp-hr	Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.60E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.94E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.87E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	6.02E-08
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	5.05E-08
						Benzene	5.43E-06	lb/hp-hr	0%	1.03E-03
						Toluene	1.97E-06	lb/hp-hr	0%	3.75E-04
						Xylenes	1.35E-06	lb/hp-hr	0%	2.57E-04
						Formaldehyde	5.52E-07	lb/hp-hr	0%	1.05E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	3.36E-05
						Acrolein	5.52E-08	lb/hp-hr	0%	1.05E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	1.73E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	1.23E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	6.24E-06
						Fluorene	8.96E-08	lb/hp-hr	0%	1.71E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	5.44E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-28 (cont'd)	Diesel Emergency Generator IA24-D (762 hp engine) (cont'd)	IA24-D (cont'd)	NF (cont'd)	381,000	hp-hr (cont'd)	Anthracene	8.61E-09	lb/hp-hr	0%	1.64E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	5.37E-06
						Pyrene	2.60E-08	lb/hp-hr	0%	4.95E-06
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	8.29E-07
						Chrysene	1.07E-08	lb/hp-hr	0%	2.04E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	1.48E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	2.91E-07
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	3.43E-07
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	5.52E-07
						Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	4.61E-07
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	45,000	hp-hr	Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	7.41E-07
						Benzene	6.53E-06	lb/hp-hr	0%	1.47E-04
						Toluene	2.86E-06	lb/hp-hr	0%	6.44E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	4.49E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	6.16E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.86E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.21E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.46E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.34E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	7.97E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.24E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	4.60E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	4.63E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	2.95E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.20E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	7.53E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	2.65E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	5.56E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.56E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	2.44E-08
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	450,000	hp-hr	Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	2.96E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	5.91E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	9.18E-08
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	7.70E-08
						Benzene	4.97E-06	lb/hp-hr	0%	1.12E-03
						Toluene	1.80E-06	lb/hp-hr	0%	4.05E-04
						Xylenes	1.24E-06	lb/hp-hr	0%	2.78E-04
						Formaldehyde	5.06E-07	lb/hp-hr	0%	1.14E-04
						Acetaldehyde	1.61E-07	lb/hp-hr	0%	3.63E-05
						Acrolein	5.05E-08	lb/hp-hr	0%	1.14E-05
						Naphthalene	8.33E-07	lb/hp-hr	0%	1.87E-04
						Acenaphthylene	5.91E-08	lb/hp-hr	0%	1.33E-05
						Acenaphthene	3.00E-08	lb/hp-hr	0%	6.75E-06
						Fluorene	8.20E-08	lb/hp-hr	0%	1.85E-05
						Phenanthrene	2.61E-07	lb/hp-hr	0%	5.88E-05
						Anthracene	7.88E-09	lb/hp-hr	0%	1.77E-06
						Fluoranthene	2.58E-08	lb/hp-hr	0%	5.81E-06
						Pyrene	2.38E-08	lb/hp-hr	0%	5.35E-06
						Benzo(a)anthracene	3.99E-09	lb/hp-hr	0%	8.97E-07
						Chrysene	9.80E-09	lb/hp-hr	0%	2.21E-06
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	80,500	hp-hr	Benzo(b)fluoranthene	7.11E-09	lb/hp-hr	0%	1.60E-06
						Benzo(k)fluoranthene	1.40E-09	lb/hp-hr	0%	3.14E-07
						Benzo(a)pyrene	1.65E-09	lb/hp-hr	0%	3.71E-07
						Indeno(1,2,3-cd)pyrene	2.65E-09	lb/hp-hr	0%	5.97E-07
						Dibenz(a,h)anthracene	2.22E-09	lb/hp-hr	0%	4.99E-07
						Benzo(g,h,i)perylene	3.56E-09	lb/hp-hr	0%	8.02E-07
						Benzene	6.53E-06	lb/hp-hr	0%	2.63E-04
						Toluene	2.86E-06	lb/hp-hr	0%	1.15E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	8.03E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.10E-05
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	80,500	hp-hr	Formaldehyde	8.26E-06	lb/hp-hr	0%	3.32E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	2.16E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	2.61E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-42 (cont'd)	Diesel Emergency Generator IA36-D (161 hp engine) (cont'd)	Tier3-75/130-D (cont'd)	NF (cont'd)	80,500	hp-hr (cont'd)	Naphthalene	5.94E-07	lb/hp-hr	0%	2.39E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.43E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	4.00E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	8.23E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	8.28E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	5.27E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	2.14E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	1.35E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	4.73E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	9.95E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	2.79E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	4.37E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	5.30E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.06E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.64E-07
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	37,500	hp-hr	Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.38E-07
						Benzene	6.53E-06	lb/hp-hr	0%	1.22E-04
						Toluene	2.86E-06	lb/hp-hr	0%	5.37E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	3.74E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	5.13E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.55E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.01E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.21E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.11E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	6.64E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.86E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	3.83E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	3.86E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	2.45E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	9.99E-07
						Pyrene	3.35E-08	lb/hp-hr	0%	6.27E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	2.21E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	4.63E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.30E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	2.03E-08
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	50,000	hp-hr	Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	2.47E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	4.92E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	7.65E-08
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	6.42E-08
						Benzene	6.53E-06	lb/hp-hr	0%	1.63E-04
						Toluene	2.86E-06	lb/hp-hr	0%	7.16E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	4.99E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	6.84E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	2.07E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.34E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.62E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.48E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	8.86E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.49E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	5.11E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	5.15E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	3.27E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.33E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	8.37E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	2.94E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	6.18E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.73E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	2.71E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	3.29E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	6.56E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.02E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	8.56E-08

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	240,000	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	7.84E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.44E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.39E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.28E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	9.91E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	6.44E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	7.77E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.12E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.25E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.19E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.45E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.47E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.57E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	6.39E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.02E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.41E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	2.97E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	8.32E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.30E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.58E-07
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	42,900	hp-hr	Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.15E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	4.90E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.11E-07
						Benzene	6.53E-06	lb/hp-hr	0%	1.40E-04
						Toluene	2.86E-06	lb/hp-hr	0%	6.14E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	4.28E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	5.87E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.77E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.15E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.39E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.27E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	7.60E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.13E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	4.38E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	4.41E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	2.81E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.14E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	7.18E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	2.52E-07
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	199,000	hp-hr	Chrysene	2.47E-09	lb/hp-hr	0%	5.30E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.49E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	2.33E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	2.82E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	5.63E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	8.75E-08
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	7.34E-08
						Benzene	6.53E-06	lb/hp-hr	0%	6.50E-04
						Toluene	2.86E-06	lb/hp-hr	0%	2.85E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	1.99E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.72E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	8.22E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	5.34E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	6.44E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	5.91E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	3.52E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	9.89E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	2.03E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.05E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.30E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	5.30E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	3.33E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.17E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	2.46E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-58 (cont'd)	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine) (cont'd)	IA48-D (cont'd)	NF (cont'd)	199,000	hp-hr (cont'd)	Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	6.90E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.08E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.31E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	2.61E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	4.06E-07
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	16,750	hp-hr	Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	3.41E-07
						Benzene	6.53E-06	lb/hp-hr	0%	5.47E-05
						Toluene	2.86E-06	lb/hp-hr	0%	2.40E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	1.67E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.29E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	6.92E-05
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	4.50E-05
						Acrolein	6.48E-07	lb/hp-hr	0%	5.42E-06
						Naphthalene	5.94E-07	lb/hp-hr	0%	4.97E-06
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.97E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	8.32E-08
						Fluorene	2.04E-07	lb/hp-hr	0%	1.71E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.72E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	1.10E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	4.46E-07
						Pyrene	3.35E-08	lb/hp-hr	0%	2.80E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	9.85E-08
						Chrysene	2.47E-09	lb/hp-hr	0%	2.07E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	5.81E-09
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	9.09E-09
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.10E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	2.20E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	3.42E-08
Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	2.87E-08						
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	240,000	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	7.84E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.44E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.39E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.28E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	9.91E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	6.44E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	7.77E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.12E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.25E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.19E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.45E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.47E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.57E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	6.39E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.02E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.41E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	2.97E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	8.32E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.30E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.58E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.15E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	4.90E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.11E-07
Total of Non-Fugitive Emissions for Diesel Emergency ICE:										2.10E-02
Total of Fugitive Emissions for Diesel Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:										2.10E-02
Propane Emergency ICE										
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	6,500	hp-hr	1,1,2,2-Tetrachloroethane	2.53E-07	lb/hp-hr	0%	8.22E-07
						1,1,2-Trichloroethane	1.53E-07	lb/hp-hr	0%	4.97E-07
						1,1-Dichloroethane	1.13E-07	lb/hp-hr	0%	3.67E-07
						1,2-Dichloroethane	1.13E-07	lb/hp-hr	0%	3.67E-07
						1,2-Dichloropropane	1.30E-07	lb/hp-hr	0%	4.23E-07
						1,3-Butadiene	6.63E-06	lb/hp-hr	0%	2.16E-05
						1,3-Dichloropropene	1.27E-07	lb/hp-hr	0%	4.13E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-17 (cont'd)	Propane Emergency Generator IA16-P (13 hp engine) (cont'd)	IA16-P (cont'd)	NF (cont'd)	6,500	hp-hr (cont'd)	Acetaldehyde	2.79E-05	lb/hp-hr	0%	9.07E-05
						Acrolein	2.63E-05	lb/hp-hr	0%	8.55E-05
						Benzene	1.58E-05	lb/hp-hr	0%	5.14E-05
						Carbon Tetrachloride	1.77E-07	lb/hp-hr	0%	5.75E-07
						Chlorobenzene	1.29E-07	lb/hp-hr	0%	4.19E-07
						Chloroform	1.37E-07	lb/hp-hr	0%	4.45E-07
						Ethylbenzene	2.48E-07	lb/hp-hr	0%	8.06E-07
						Ethylene Dibromide	2.13E-07	lb/hp-hr	0%	6.92E-07
						Formaldehyde	2.05E-04	lb/hp-hr	0%	6.66E-04
						Methanol	3.06E-05	lb/hp-hr	0%	9.95E-05
						Methylene Chloride	4.12E-07	lb/hp-hr	0%	1.34E-06
						Naphthalene	9.71E-07	lb/hp-hr	0%	3.16E-06
						Polycyclic Aromatic Hydrocarbons	1.41E-06	lb/hp-hr	0%	4.58E-06
						Styrene	1.19E-07	lb/hp-hr	0%	3.87E-07
						Toluene	5.58E-06	lb/hp-hr	0%	1.81E-05
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	30,000	hp-hr	Vinyl Chloride	7.18E-08	lb/hp-hr	0%	2.33E-07
						Xylene	1.95E-06	lb/hp-hr	0%	6.34E-06
						1,1,2,2-Tetrachloroethane	2.55E-07	lb/hp-hr	0%	3.83E-06
						1,1,2-Trichloroethane	1.54E-07	lb/hp-hr	0%	2.31E-06
						1,1-Dichloroethane	1.14E-07	lb/hp-hr	0%	1.71E-06
						1,2-Dichloroethane	1.14E-07	lb/hp-hr	0%	1.71E-06
						1,2-Dichloropropane	1.31E-07	lb/hp-hr	0%	1.97E-06
						1,3-Butadiene	6.68E-06	lb/hp-hr	0%	1.00E-04
						1,3-Dichloropropene	1.28E-07	lb/hp-hr	0%	1.92E-06
						Acetaldehyde	2.81E-05	lb/hp-hr	0%	4.22E-04
						Acrolein	2.65E-05	lb/hp-hr	0%	3.98E-04
						Benzene	1.59E-05	lb/hp-hr	0%	2.39E-04
						Carbon Tetrachloride	1.78E-07	lb/hp-hr	0%	2.68E-06
						Chlorobenzene	1.30E-07	lb/hp-hr	0%	1.95E-06
						Chloroform	1.38E-07	lb/hp-hr	0%	2.07E-06
						Ethylbenzene	2.50E-07	lb/hp-hr	0%	3.75E-06
						Ethylene Dibromide	2.15E-07	lb/hp-hr	0%	3.22E-06
						Formaldehyde	2.07E-04	lb/hp-hr	0%	3.10E-03
						Methanol	3.08E-05	lb/hp-hr	0%	4.63E-04
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	40,000	hp-hr	Methylene Chloride	4.15E-07	lb/hp-hr	0%	6.23E-06
						Naphthalene	9.79E-07	lb/hp-hr	0%	1.47E-05
						Polycyclic Aromatic Hydrocarbons	1.42E-06	lb/hp-hr	0%	2.13E-05
						Styrene	1.20E-07	lb/hp-hr	0%	1.80E-06
						Toluene	5.62E-06	lb/hp-hr	0%	8.44E-05
						Vinyl Chloride	7.24E-08	lb/hp-hr	0%	1.09E-06
						Xylene	1.97E-06	lb/hp-hr	0%	2.95E-05
						1,1,2,2-Tetrachloroethane	2.34E-07	lb/hp-hr	0%	4.67E-06
						1,1,2-Trichloroethane	1.41E-07	lb/hp-hr	0%	2.83E-06
						1,1-Dichloroethane	1.04E-07	lb/hp-hr	0%	2.09E-06
						1,2-Dichloroethane	1.04E-07	lb/hp-hr	0%	2.09E-06
						1,2-Dichloropropane	1.20E-07	lb/hp-hr	0%	2.40E-06
						1,3-Butadiene	6.12E-06	lb/hp-hr	0%	1.22E-04
						1,3-Dichloropropene	1.17E-07	lb/hp-hr	0%	2.35E-06
						Acetaldehyde	2.58E-05	lb/hp-hr	0%	5.15E-04
						Acrolein	2.43E-05	lb/hp-hr	0%	4.86E-04
						Benzene	1.46E-05	lb/hp-hr	0%	2.92E-04
						Carbon Tetrachloride	1.63E-07	lb/hp-hr	0%	3.27E-06
						Chlorobenzene	1.19E-07	lb/hp-hr	0%	2.38E-06
						Chloroform	1.27E-07	lb/hp-hr	0%	2.53E-06
						Ethylbenzene	2.29E-07	lb/hp-hr	0%	4.58E-06
						Ethylene Dibromide	1.97E-07	lb/hp-hr	0%	3.93E-06
						Formaldehyde	1.89E-04	lb/hp-hr	0%	3.79E-03
						Methanol	2.83E-05	lb/hp-hr	0%	5.65E-04
						Methylene Chloride	3.81E-07	lb/hp-hr	0%	7.61E-06
						Naphthalene	8.97E-07	lb/hp-hr	0%	1.79E-05
						Polycyclic Aromatic Hydrocarbons	1.30E-06	lb/hp-hr	0%	2.60E-05
						Styrene	1.10E-07	lb/hp-hr	0%	2.20E-06
						Toluene	5.15E-06	lb/hp-hr	0%	1.03E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-30 (cont'd)	Propane Emergency Generator IA21-P (80 hp engine) (cont'd)	IA21-P (cont'd)	NF (cont'd)	40,000	hp-hr (cont'd)	Vinyl Chloride	6.63E-08	lb/hp-hr	0%	1.33E-06
						Xylene	1.80E-06	lb/hp-hr	0%	3.60E-05
						1,1,2,2-Tetrachloroethane	2.72E-07	lb/hp-hr	0%	2.07E-06
						1,1,2-Trichloroethane	1.64E-07	lb/hp-hr	0%	1.25E-06
						1,1-Dichloroethane	1.21E-07	lb/hp-hr	0%	9.25E-07
						1,2-Dichloroethane	1.21E-07	lb/hp-hr	0%	9.25E-07
						1,2-Dichloropropane	1.40E-07	lb/hp-hr	0%	1.06E-06
						1,3-Butadiene	7.12E-06	lb/hp-hr	0%	5.43E-05
						1,3-Dichloropropene	1.36E-07	lb/hp-hr	0%	1.04E-06
						Acetaldehyde	2.99E-05	lb/hp-hr	0%	2.29E-04
						Acrolein	2.82E-05	lb/hp-hr	0%	2.15E-04
						Benzene	1.70E-05	lb/hp-hr	0%	1.29E-04
						Carbon Tetrachloride	1.90E-07	lb/hp-hr	0%	1.45E-06
						Chlorobenzene	1.38E-07	lb/hp-hr	0%	1.06E-06
						Chloroform	1.47E-07	lb/hp-hr	0%	1.12E-06
						Ethylbenzene	2.66E-07	lb/hp-hr	0%	2.03E-06
						Ethylene Dibromide	2.29E-07	lb/hp-hr	0%	1.74E-06
						Formaldehyde	2.20E-04	lb/hp-hr	0%	1.68E-03
						Methanol	3.28E-05	lb/hp-hr	0%	2.51E-04
						Methylene Chloride	4.42E-07	lb/hp-hr	0%	3.37E-06
						Naphthalene	1.04E-06	lb/hp-hr	0%	7.95E-06
						Polycyclic Aromatic Hydrocarbons	1.51E-06	lb/hp-hr	0%	1.15E-05
						Styrene	1.28E-07	lb/hp-hr	0%	9.75E-07
						Toluene	5.99E-06	lb/hp-hr	0%	4.57E-05
						Vinyl Chloride	7.71E-08	lb/hp-hr	0%	5.88E-07
						Xylene	2.09E-06	lb/hp-hr	0%	1.60E-05
						1,1,2,2-Tetrachloroethane	1.87E-07	lb/hp-hr	0%	1.50E-06
						1,1,2-Trichloroethane	1.13E-07	lb/hp-hr	0%	9.06E-07
						1,1-Dichloroethane	8.36E-08	lb/hp-hr	0%	6.69E-07
						1,2-Dichloroethane	8.36E-08	lb/hp-hr	0%	6.69E-07
						1,2-Dichloropropane	9.62E-08	lb/hp-hr	0%	7.70E-07
						1,3-Butadiene	4.91E-06	lb/hp-hr	0%	3.93E-05
						1,3-Dichloropropene	9.40E-08	lb/hp-hr	0%	7.52E-07
						Acetaldehyde	2.07E-05	lb/hp-hr	0%	1.65E-04
						Acrolein	1.95E-05	lb/hp-hr	0%	1.56E-04
						Benzene	1.17E-05	lb/hp-hr	0%	9.36E-05
						Carbon Tetrachloride	1.31E-07	lb/hp-hr	0%	1.05E-06
						Chlorobenzene	9.55E-08	lb/hp-hr	0%	7.64E-07
						Chloroform	1.01E-07	lb/hp-hr	0%	8.11E-07
						Ethylbenzene	1.84E-07	lb/hp-hr	0%	1.47E-06
						Ethylene Dibromide	1.58E-07	lb/hp-hr	0%	1.26E-06
						Formaldehyde	1.52E-04	lb/hp-hr	0%	1.21E-03
						Methanol	2.27E-05	lb/hp-hr	0%	1.81E-04
						Methylene Chloride	3.05E-07	lb/hp-hr	0%	2.44E-06
						Naphthalene	7.19E-07	lb/hp-hr	0%	5.75E-06
						Polycyclic Aromatic Hydrocarbons	1.04E-06	lb/hp-hr	0%	8.35E-06
						Styrene	8.81E-08	lb/hp-hr	0%	7.05E-07
						Toluene	4.13E-06	lb/hp-hr	0%	3.30E-05
						Vinyl Chloride	5.31E-08	lb/hp-hr	0%	4.25E-07
						Xylene	1.44E-06	lb/hp-hr	0%	1.15E-05
						1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	0%	4.59E-06
						1,1,2-Trichloroethane	9.81E-08	lb/hp-hr	0%	2.78E-06
						1,1-Dichloroethane	7.25E-08	lb/hp-hr	0%	2.05E-06
						1,2-Dichloroethane	7.25E-08	lb/hp-hr	0%	2.05E-06
						1,2-Dichloropropane	8.34E-08	lb/hp-hr	0%	2.36E-06
						1,3-Butadiene	4.25E-06	lb/hp-hr	0%	1.20E-04
						1,3-Dichloropropene	8.14E-08	lb/hp-hr	0%	2.30E-06
						Acetaldehyde	1.79E-05	lb/hp-hr	0%	5.06E-04
						Acrolein	1.69E-05	lb/hp-hr	0%	4.77E-04
						Benzene	1.01E-05	lb/hp-hr	0%	2.87E-04
						Carbon Tetrachloride	1.13E-07	lb/hp-hr	0%	3.21E-06
						Chlorobenzene	8.27E-08	lb/hp-hr	0%	2.34E-06
						Chloroform	8.78E-08	lb/hp-hr	0%	2.49E-06

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-43 (cont'd)	Propane Emergency Generator IA37-P (113.18 hp engine) (cont'd)	IA37-P (cont'd)	NF (cont'd)	56,591	hp-hr (cont'd)	Ethylbenzene	1.59E-07	lb/hp-hr	0%	4.50E-06
						Ethylene Dibromide	1.37E-07	lb/hp-hr	0%	3.86E-06
						Formaldehyde	1.31E-04	lb/hp-hr	0%	3.72E-03
						Methanol	1.96E-05	lb/hp-hr	0%	5.55E-04
						Methylene Chloride	2.64E-07	lb/hp-hr	0%	7.48E-06
						Naphthalene	6.23E-07	lb/hp-hr	0%	1.76E-05
						Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr	0%	2.56E-05
						Styrene	7.63E-08	lb/hp-hr	0%	2.16E-06
						Toluene	3.58E-06	lb/hp-hr	0%	1.01E-04
						Vinyl Chloride	4.60E-08	lb/hp-hr	0%	1.30E-06
						Xylene	1.25E-06	lb/hp-hr	0%	3.54E-05
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	56,591	hp-hr	1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	0%	4.59E-06
						1,1,2-Trichloroethane	9.81E-08	lb/hp-hr	0%	2.78E-06
						1,1-Dichloroethane	7.25E-08	lb/hp-hr	0%	2.05E-06
						1,2-Dichloroethane	7.25E-08	lb/hp-hr	0%	2.05E-06
						1,2-Dichloropropane	8.34E-08	lb/hp-hr	0%	2.36E-06
						1,3-Butadiene	4.25E-06	lb/hp-hr	0%	1.20E-04
						1,3-Dichloropropene	8.14E-08	lb/hp-hr	0%	2.30E-06
						Acetaldehyde	1.79E-05	lb/hp-hr	0%	5.06E-04
						Acrolein	1.69E-05	lb/hp-hr	0%	4.77E-04
						Benzene	1.01E-05	lb/hp-hr	0%	2.87E-04
						Carbon Tetrachloride	1.13E-07	lb/hp-hr	0%	3.21E-06
						Chlorobenzene	8.27E-08	lb/hp-hr	0%	2.34E-06
						Chloroform	8.78E-08	lb/hp-hr	0%	2.49E-06
						Ethylbenzene	1.59E-07	lb/hp-hr	0%	4.50E-06
						Ethylene Dibromide	1.37E-07	lb/hp-hr	0%	3.86E-06
						Formaldehyde	1.31E-04	lb/hp-hr	0%	3.72E-03
						Methanol	1.96E-05	lb/hp-hr	0%	5.55E-04
						Methylene Chloride	2.64E-07	lb/hp-hr	0%	7.48E-06
						Naphthalene	6.23E-07	lb/hp-hr	0%	1.76E-05
						Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr	0%	2.56E-05
						Styrene	7.63E-08	lb/hp-hr	0%	2.16E-06
						Toluene	3.58E-06	lb/hp-hr	0%	1.01E-04
						Vinyl Chloride	4.60E-08	lb/hp-hr	0%	1.30E-06
						Xylene	1.25E-06	lb/hp-hr	0%	3.54E-05
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	51,500	hp-hr	1,1,2,2-Tetrachloroethane	2.09E-07	lb/hp-hr	0%	5.37E-06
						1,1,2-Trichloroethane	1.26E-07	lb/hp-hr	0%	3.25E-06
						1,1-Dichloroethane	9.32E-08	lb/hp-hr	0%	2.40E-06
						1,2-Dichloroethane	9.32E-08	lb/hp-hr	0%	2.40E-06
						1,2-Dichloropropane	1.07E-07	lb/hp-hr	0%	2.76E-06
						1,3-Butadiene	5.47E-06	lb/hp-hr	0%	1.41E-04
						1,3-Dichloropropene	1.05E-07	lb/hp-hr	0%	2.70E-06
						Acetaldehyde	2.30E-05	lb/hp-hr	0%	5.92E-04
						Acrolein	2.17E-05	lb/hp-hr	0%	5.58E-04
						Benzene	1.30E-05	lb/hp-hr	0%	3.35E-04
						Carbon Tetrachloride	1.46E-07	lb/hp-hr	0%	3.76E-06
						Chlorobenzene	1.06E-07	lb/hp-hr	0%	2.74E-06
						Chloroform	1.13E-07	lb/hp-hr	0%	2.91E-06
						Ethylbenzene	2.04E-07	lb/hp-hr	0%	5.27E-06
						Ethylene Dibromide	1.76E-07	lb/hp-hr	0%	4.52E-06
						Formaldehyde	1.69E-04	lb/hp-hr	0%	4.35E-03
						Methanol	2.52E-05	lb/hp-hr	0%	6.50E-04
						Methylene Chloride	3.40E-07	lb/hp-hr	0%	8.75E-06
						Naphthalene	8.01E-07	lb/hp-hr	0%	2.06E-05
						Polycyclic Aromatic Hydrocarbons	1.16E-06	lb/hp-hr	0%	2.99E-05
						Styrene	9.81E-08	lb/hp-hr	0%	2.53E-06
						Toluene	4.60E-06	lb/hp-hr	0%	1.18E-04
						Vinyl Chloride	5.92E-08	lb/hp-hr	0%	1.52E-06
						Xylene	1.61E-06	lb/hp-hr	0%	4.14E-05
Total of Non-Fugitive Emissions for Propane Emergency ICE:										3.52E-02
Total of Fugitive Emissions for Propane Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:										3.52E-02

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Natural Gas Emergency ICE										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	8,500	hp-hr	1,1,2,2-Tetrachloroethane	3.34E-07	lb/hp-hr	0%	1.42E-06
						1,1,2-Trichloroethane	2.02E-07	lb/hp-hr	0%	8.58E-07
						1,1-Dichloroethane	1.49E-07	lb/hp-hr	0%	6.34E-07
						1,2-Dichloroethane	1.49E-07	lb/hp-hr	0%	6.34E-07
						1,2-Dichloropropane	1.72E-07	lb/hp-hr	0%	7.29E-07
						1,3-Butadiene	8.75E-06	lb/hp-hr	0%	3.72E-05
						1,3-Dichloropropene	1.68E-07	lb/hp-hr	0%	7.12E-07
						Acetaldehyde	3.68E-05	lb/hp-hr	0%	1.57E-04
						Acrolein	3.47E-05	lb/hp-hr	0%	1.48E-04
						Benzene	2.09E-05	lb/hp-hr	0%	8.86E-05
						Carbon Tetrachloride	2.34E-07	lb/hp-hr	0%	9.93E-07
						Chlorobenzene	1.70E-07	lb/hp-hr	0%	7.24E-07
						Chloroform	1.81E-07	lb/hp-hr	0%	7.69E-07
						Ethylbenzene	3.27E-07	lb/hp-hr	0%	1.39E-06
						Ethylene Dibromide	2.81E-07	lb/hp-hr	0%	1.19E-06
						Formaldehyde	2.71E-04	lb/hp-hr	0%	1.15E-03
						Methanol	4.04E-05	lb/hp-hr	0%	1.72E-04
						Methylene Chloride	5.44E-07	lb/hp-hr	0%	2.31E-06
						Naphthalene	1.28E-06	lb/hp-hr	0%	5.45E-06
						Polycyclic Aromatic Hydrocarbons	1.86E-06	lb/hp-hr	0%	7.91E-06
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	99,500	hp-hr	Styrene	1.57E-07	lb/hp-hr	0%	6.68E-07
						Toluene	7.37E-06	lb/hp-hr	0%	3.13E-05
						Vinyl Chloride	9.48E-08	lb/hp-hr	0%	4.03E-07
						Xylene	2.57E-06	lb/hp-hr	0%	1.09E-05
						1,1,2,2-Tetrachloroethane	1.82E-07	lb/hp-hr	0%	9.03E-06
						1,1,2-Trichloroethane	1.10E-07	lb/hp-hr	0%	5.46E-06
						1,1-Dichloroethane	8.11E-08	lb/hp-hr	0%	4.03E-06
						1,2-Dichloroethane	8.11E-08	lb/hp-hr	0%	4.03E-06
						1,2-Dichloropropane	9.33E-08	lb/hp-hr	0%	4.64E-06
						1,3-Butadiene	4.76E-06	lb/hp-hr	0%	2.37E-04
						1,3-Dichloropropene	9.11E-08	lb/hp-hr	0%	4.53E-06
						Acetaldehyde	2.00E-05	lb/hp-hr	0%	9.96E-04
						Acrolein	1.89E-05	lb/hp-hr	0%	9.39E-04
						Benzene	1.13E-05	lb/hp-hr	0%	5.64E-04
						Carbon Tetrachloride	1.27E-07	lb/hp-hr	0%	6.32E-06
						Chlorobenzene	9.26E-08	lb/hp-hr	0%	4.61E-06
						Chloroform	9.83E-08	lb/hp-hr	0%	4.89E-06
						Ethylbenzene	1.78E-07	lb/hp-hr	0%	8.85E-06
						Ethylene Dibromide	1.53E-07	lb/hp-hr	0%	7.60E-06
						Formaldehyde	1.47E-04	lb/hp-hr	0%	7.32E-03
Methanol	2.20E-05	lb/hp-hr	0%	1.09E-03						
Methylene Chloride	2.96E-07	lb/hp-hr	0%	1.47E-05						
Naphthalene	6.97E-07	lb/hp-hr	0%	3.47E-05						
Polycyclic Aromatic Hydrocarbons	1.01E-06	lb/hp-hr	0%	5.03E-05						
Styrene	8.54E-08	lb/hp-hr	0%	4.25E-06						
Toluene	4.00E-06	lb/hp-hr	0%	1.99E-04						
Vinyl Chloride	5.15E-08	lb/hp-hr	0%	2.56E-06						
Xylene	1.40E-06	lb/hp-hr	0%	6.96E-05						
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	96,000	hp-hr	1,1,2,2-Tetrachloroethane	2.40E-07	lb/hp-hr	0%	1.15E-05
						1,1,2-Trichloroethane	1.45E-07	lb/hp-hr	0%	6.97E-06
						1,1-Dichloroethane	1.07E-07	lb/hp-hr	0%	5.15E-06
						1,2-Dichloroethane	1.07E-07	lb/hp-hr	0%	5.15E-06
						1,2-Dichloropropane	1.23E-07	lb/hp-hr	0%	5.92E-06
						1,3-Butadiene	6.29E-06	lb/hp-hr	0%	3.02E-04
						1,3-Dichloropropene	1.20E-07	lb/hp-hr	0%	5.78E-06
						Acetaldehyde	2.65E-05	lb/hp-hr	0%	1.27E-03
						Acrolein	2.50E-05	lb/hp-hr	0%	1.20E-03
						Benzene	1.50E-05	lb/hp-hr	0%	7.20E-04
						Carbon Tetrachloride	1.68E-07	lb/hp-hr	0%	8.06E-06
						Chlorobenzene	1.22E-07	lb/hp-hr	0%	5.88E-06
						Chloroform	1.30E-07	lb/hp-hr	0%	6.24E-06
						Ethylbenzene	2.35E-07	lb/hp-hr	0%	1.13E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-16 (cont'd)	Natural Gas Emergency Generator IA23-NG (192 hp engine) (cont'd)	IA23-NG (cont'd)	NF (cont'd)	96,000	hp-hr (cont'd)	Ethylene Dibromide	2.02E-07	lb/hp-hr	0%	9.70E-06
						Formaldehyde	1.95E-04	lb/hp-hr	0%	9.34E-03
						Methanol	2.90E-05	lb/hp-hr	0%	1.39E-03
						Methylene Chloride	3.91E-07	lb/hp-hr	0%	1.88E-05
						Naphthalene	9.21E-07	lb/hp-hr	0%	4.42E-05
						Polycyclic Aromatic Hydrocarbons	1.34E-06	lb/hp-hr	0%	6.42E-05
						Styrene	1.13E-07	lb/hp-hr	0%	5.42E-06
						Toluene	5.29E-06	lb/hp-hr	0%	2.54E-04
						Vinyl Chloride	6.81E-08	lb/hp-hr	0%	3.27E-06
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	20,000	hp-hr	Xylene	1.85E-06	lb/hp-hr	0%	8.88E-05
						1,1,2,2-Tetrachloroethane	1.67E-07	lb/hp-hr	0%	1.67E-06
						1,1,2-Trichloroethane	1.01E-07	lb/hp-hr	0%	1.01E-06
						1,1-Dichloroethane	7.48E-08	lb/hp-hr	0%	7.48E-07
						1,2-Dichloroethane	7.48E-08	lb/hp-hr	0%	7.48E-07
						1,2-Dichloropropane	8.61E-08	lb/hp-hr	0%	8.61E-07
						1,3-Butadiene	4.39E-06	lb/hp-hr	0%	4.39E-05
						1,3-Dichloropropene	8.41E-08	lb/hp-hr	0%	8.41E-07
						Acetaldehyde	1.85E-05	lb/hp-hr	0%	1.85E-04
						Acrolein	1.74E-05	lb/hp-hr	0%	1.74E-04
						Benzene	1.05E-05	lb/hp-hr	0%	1.05E-04
						Carbon Tetrachloride	1.17E-07	lb/hp-hr	0%	1.17E-06
						Chlorobenzene	8.54E-08	lb/hp-hr	0%	8.54E-07
						Chloroform	9.07E-08	lb/hp-hr	0%	9.07E-07
						Ethylbenzene	1.64E-07	lb/hp-hr	0%	1.64E-06
						Ethylene Dibromide	1.41E-07	lb/hp-hr	0%	1.41E-06
						Formaldehyde	1.36E-04	lb/hp-hr	0%	1.36E-03
						Methanol	2.03E-05	lb/hp-hr	0%	2.03E-04
						Methylene Chloride	2.73E-07	lb/hp-hr	0%	2.73E-06
						Naphthalene	6.43E-07	lb/hp-hr	0%	6.43E-06
						Polycyclic Aromatic Hydrocarbons	9.33E-07	lb/hp-hr	0%	9.33E-06
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	15,915	hp-hr	Styrene	7.88E-08	lb/hp-hr	0%	7.88E-07
						Toluene	3.69E-06	lb/hp-hr	0%	3.69E-05
						Vinyl Chloride	4.75E-08	lb/hp-hr	0%	4.75E-07
						Xylene	1.29E-06	lb/hp-hr	0%	1.29E-05
						1,1,2,2-Tetrachloroethane	2.75E-07	lb/hp-hr	0%	2.19E-06
						1,1,2-Trichloroethane	1.67E-07	lb/hp-hr	0%	1.33E-06
						1,1-Dichloroethane	1.23E-07	lb/hp-hr	0%	9.79E-07
						1,2-Dichloroethane	1.23E-07	lb/hp-hr	0%	9.79E-07
						1,2-Dichloropropane	1.41E-07	lb/hp-hr	0%	1.13E-06
						1,3-Butadiene	7.22E-06	lb/hp-hr	0%	5.74E-05
						1,3-Dichloropropene	1.38E-07	lb/hp-hr	0%	1.10E-06
						Acetaldehyde	3.04E-05	lb/hp-hr	0%	2.42E-04
						Acrolein	2.86E-05	lb/hp-hr	0%	2.28E-04
						Benzene	1.72E-05	lb/hp-hr	0%	1.37E-04
						Carbon Tetrachloride	1.93E-07	lb/hp-hr	0%	1.53E-06
						Chlorobenzene	1.40E-07	lb/hp-hr	0%	1.12E-06
						Chloroform	1.49E-07	lb/hp-hr	0%	1.19E-06
						Ethylbenzene	2.70E-07	lb/hp-hr	0%	2.15E-06
						Ethylene Dibromide	2.32E-07	lb/hp-hr	0%	1.84E-06
						Formaldehyde	2.23E-04	lb/hp-hr	0%	1.78E-03
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	16,000	hp-hr	Methanol	3.33E-05	lb/hp-hr	0%	2.65E-04
						Methylene Chloride	4.48E-07	lb/hp-hr	0%	3.57E-06
						Naphthalene	1.06E-06	lb/hp-hr	0%	8.41E-06
						Polycyclic Aromatic Hydrocarbons	1.53E-06	lb/hp-hr	0%	1.22E-05
						Styrene	1.30E-07	lb/hp-hr	0%	1.03E-06
						Toluene	6.07E-06	lb/hp-hr	0%	4.83E-05
						Vinyl Chloride	7.81E-08	lb/hp-hr	0%	6.22E-07
						Xylene	2.12E-06	lb/hp-hr	0%	1.69E-05
						1,1,2,2-Tetrachloroethane	2.76E-07	lb/hp-hr	0%	2.21E-06
						1,1,2-Trichloroethane	1.67E-07	lb/hp-hr	0%	1.33E-06
						1,1-Dichloroethane	1.23E-07	lb/hp-hr	0%	9.85E-07
						1,2-Dichloroethane	1.23E-07	lb/hp-hr	0%	9.85E-07
						1,2-Dichloropropane	1.42E-07	lb/hp-hr	0%	1.13E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units							
049-40 (cont'd)	Natural Gas Emergency Generator IA34-NG (32 hp engine) (cont'd)	IA34-NG (cont'd)	NF (cont'd)	16,000	hp-hr (cont'd)	1,3-Butadiene	7.23E-06	lb/hp-hr	0%	5.78E-05					
						1,3-Dichloropropene	1.38E-07	lb/hp-hr	0%	1.11E-06					
						Acetaldehyde	3.04E-05	lb/hp-hr	0%	2.43E-04					
						Acrolein	2.87E-05	lb/hp-hr	0%	2.29E-04					
						Benzene	1.72E-05	lb/hp-hr	0%	1.38E-04					
						Carbon Tetrachloride	1.93E-07	lb/hp-hr	0%	1.54E-06					
						Chlorobenzene	1.41E-07	lb/hp-hr	0%	1.13E-06					
						Chloroform	1.49E-07	lb/hp-hr	0%	1.19E-06					
						Ethylbenzene	2.70E-07	lb/hp-hr	0%	2.16E-06					
						Ethylene Dibromide	2.32E-07	lb/hp-hr	0%	1.86E-06					
						Formaldehyde	2.23E-04	lb/hp-hr	0%	1.79E-03					
						Methanol	3.34E-05	lb/hp-hr	0%	2.67E-04					
						Methylene Chloride	4.49E-07	lb/hp-hr	0%	3.59E-06					
						Naphthalene	1.06E-06	lb/hp-hr	0%	8.47E-06					
						Polycyclic Aromatic Hydrocarbons	1.54E-06	lb/hp-hr	0%	1.23E-05					
Styrene	1.30E-07	lb/hp-hr	0%	1.04E-06											
Toluene	6.08E-06	lb/hp-hr	0%	4.87E-05											
Vinyl Chloride	7.83E-08	lb/hp-hr	0%	6.26E-07											
Xylene	2.13E-06	lb/hp-hr	0%	1.70E-05	Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:					3.60E-02					
Total of Fugitive Emissions for Natural Gas Emergency ICE:										0.00E+00					
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:										3.60E-02					
Diesel Non-Emergency ICE															
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	1,121,280	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	3.66E-03					
						Toluene	2.86E-06	lb/hp-hr	0%	1.61E-03					
						Xylenes	2.00E-06	lb/hp-hr	0%	1.12E-03					
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.53E-04					
						Formaldehyde	8.26E-06	lb/hp-hr	0%	4.63E-03					
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	3.01E-03					
						Acrolein	6.48E-07	lb/hp-hr	0%	3.63E-04					
						Naphthalene	5.94E-07	lb/hp-hr	0%	3.33E-04					
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.99E-05					
						Acenaphthene	9.94E-09	lb/hp-hr	0%	5.57E-06					
						Fluorene	2.04E-07	lb/hp-hr	0%	1.15E-04					
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.15E-04					
						Anthracene	1.31E-08	lb/hp-hr	0%	7.34E-06					
						Fluoranthene	5.33E-08	lb/hp-hr	0%	2.99E-05					
						Pyrene	3.35E-08	lb/hp-hr	0%	1.88E-05					
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	6.59E-06					
						Chrysene	2.47E-09	lb/hp-hr	0%	1.39E-06					
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	3.89E-07					
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	6.08E-07					
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	7.38E-07					
Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.47E-06											
Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	2.29E-06											
Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.92E-06	049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	1,138,800	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	3.72E-03
Toluene	2.86E-06	lb/hp-hr	0%	1.63E-03											
Xylenes	2.00E-06	lb/hp-hr	0%	1.14E-03											
1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.56E-04											
Formaldehyde	8.26E-06	lb/hp-hr	0%	4.70E-03											
Acetaldehyde	5.37E-06	lb/hp-hr	0%	3.06E-03											
Acrolein	6.48E-07	lb/hp-hr	0%	3.69E-04											
Naphthalene	5.94E-07	lb/hp-hr	0%	3.38E-04											
Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.02E-05											
Acenaphthene	9.94E-09	lb/hp-hr	0%	5.66E-06											
Fluorene	2.04E-07	lb/hp-hr	0%	1.16E-04											
Phenanthrene	2.06E-07	lb/hp-hr	0%	1.17E-04											
Anthracene	1.31E-08	lb/hp-hr	0%	7.45E-06											
Fluoranthene	5.33E-08	lb/hp-hr	0%	3.03E-05											
Pyrene	3.35E-08	lb/hp-hr	0%	1.91E-05											
Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	6.70E-06											
Chrysene	2.47E-09	lb/hp-hr	0%	1.41E-06											

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-12 (cont'd)	Diesel Non-Emergency Generator IA15-DN (130 hp engine) (cont'd)	IA15-DN (cont'd)	NF (cont'd)	1,138,800	hp-hr (cont'd)	Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	3.95E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	6.18E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	7.49E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.49E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	2.32E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.95E-06
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	247,032	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	8.07E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.54E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.46E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.38E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.02E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	6.63E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	8.00E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.33E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.37E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.23E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.52E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.54E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.62E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	6.58E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.13E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.45E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	3.05E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	8.57E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.34E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.63E-07
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	1,182,600	hp-hr	Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.24E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	5.04E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.23E-07
						Benzene	6.53E-06	lb/hp-hr	0%	3.86E-03
						Toluene	2.86E-06	lb/hp-hr	0%	1.69E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	1.18E-03
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.62E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	4.88E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	3.17E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	3.83E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	3.51E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.09E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	5.88E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	1.21E-04
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.22E-04
						Anthracene	1.31E-08	lb/hp-hr	0%	7.74E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	3.15E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.98E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	6.95E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	1.46E-06
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	5,054,520	hp-hr	Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	4.10E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	6.42E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	7.78E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.55E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	2.41E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	2.02E-06
						Benzene	6.53E-06	lb/hp-hr	0%	1.65E-02
						Toluene	2.86E-06	lb/hp-hr	0%	7.24E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	5.04E-03
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	6.92E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	2.09E-02
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.36E-02
						Acrolein	6.48E-07	lb/hp-hr	0%	1.64E-03
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.50E-03
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	8.95E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.51E-05
						Fluorene	2.04E-07	lb/hp-hr	0%	5.17E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-67 (cont'd)	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine) (cont'd)	IA53-DN (cont'd)	NF (cont'd)	5,054,520	hp-hr (cont'd)	Phenanthrene	2.06E-07	lb/hp-hr	0%	5.20E-04
						Anthracene	1.31E-08	lb/hp-hr	0%	3.31E-05
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.35E-04
						Pyrene	3.35E-08	lb/hp-hr	0%	8.46E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	2.97E-05
						Chrysene	2.47E-09	lb/hp-hr	0%	6.24E-06
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.75E-06
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	2.74E-06
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	3.33E-06
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	6.63E-06
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	2,628,000	hp-hr	Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.03E-05
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	8.65E-06
						Benzene	6.53E-06	lb/hp-hr	0%	8.58E-03
						Toluene	2.86E-06	lb/hp-hr	0%	3.76E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	2.62E-03
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.60E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.09E-02
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	7.05E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	8.51E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.80E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.65E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.31E-05
						Fluorene	2.04E-07	lb/hp-hr	0%	2.69E-04
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.70E-04
						Anthracene	1.31E-08	lb/hp-hr	0%	1.72E-05
						Fluoranthene	5.33E-08	lb/hp-hr	0%	7.00E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	4.40E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.55E-05
						Chrysene	2.47E-09	lb/hp-hr	0%	3.25E-06
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	9.12E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.43E-06
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.73E-06
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.45E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	5.36E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.50E-06
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:										1.54E-01
Total of Fugitive Emissions for Diesel Non-Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:										1.54E-01
Propane Non-Emergency ICE										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	236,520	hp-hr	1,1,2,2-Tetrachloroethane	2.95E-07	lb/hp-hr	0%	3.49E-05
						1,1,2-Trichloroethane	1.79E-07	lb/hp-hr	0%	2.11E-05
						1,1-Dichloroethane	1.32E-07	lb/hp-hr	0%	1.56E-05
						1,2-Dichloroethane	1.32E-07	lb/hp-hr	0%	1.56E-05
						1,2-Dichloropropane	1.52E-07	lb/hp-hr	0%	1.79E-05
						1,3-Butadiene	7.74E-06	lb/hp-hr	0%	9.15E-04
						1,3-Dichloropropene	1.48E-07	lb/hp-hr	0%	1.75E-05
						Acetaldehyde	3.26E-05	lb/hp-hr	0%	3.85E-03
						Acrolein	3.07E-05	lb/hp-hr	0%	3.63E-03
						Benzene	1.84E-05	lb/hp-hr	0%	2.18E-03
						Carbon Tetrachloride	2.07E-07	lb/hp-hr	0%	2.44E-05
						Chlorobenzene	1.51E-07	lb/hp-hr	0%	1.78E-05
						Chloroform	1.60E-07	lb/hp-hr	0%	1.89E-05
						Ethylbenzene	2.89E-07	lb/hp-hr	0%	3.42E-05
						Ethylene Dibromide	2.49E-07	lb/hp-hr	0%	2.94E-05
						Formaldehyde	2.39E-04	lb/hp-hr	0%	2.83E-02
						Methanol	3.57E-05	lb/hp-hr	0%	4.22E-03
						Methylene Chloride	4.81E-07	lb/hp-hr	0%	5.68E-05
						Naphthalene	1.13E-06	lb/hp-hr	0%	1.34E-04
						Polycyclic Aromatic Hydrocarbons	1.65E-06	lb/hp-hr	0%	1.95E-04
						Styrene	1.39E-07	lb/hp-hr	0%	1.64E-05
						Toluene	6.51E-06	lb/hp-hr	0%	7.70E-04
						Vinyl Chloride	8.38E-08	lb/hp-hr	0%	9.91E-06
						Xylene	2.28E-06	lb/hp-hr	0%	2.69E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	175,200	hp-hr	1,1,2,2-Tetrachloroethane	3.51E-07	lb/hp-hr	0%	3.07E-05
						1,1,2-Trichloroethane	2.12E-07	lb/hp-hr	0%	1.86E-05
						1,1-Dichloroethane	1.57E-07	lb/hp-hr	0%	1.37E-05
						1,2-Dichloroethane	1.57E-07	lb/hp-hr	0%	1.37E-05
						1,2-Dichloropropane	1.80E-07	lb/hp-hr	0%	1.58E-05
						1,3-Butadiene	9.19E-06	lb/hp-hr	0%	8.05E-04
						1,3-Dichloropropene	1.76E-07	lb/hp-hr	0%	1.54E-05
						Acetaldehyde	3.87E-05	lb/hp-hr	0%	3.39E-03
						Acrolein	3.65E-05	lb/hp-hr	0%	3.19E-03
						Benzene	2.19E-05	lb/hp-hr	0%	1.92E-03
						Carbon Tetrachloride	2.45E-07	lb/hp-hr	0%	2.15E-05
						Chlorobenzene	1.79E-07	lb/hp-hr	0%	1.57E-05
						Chloroform	1.90E-07	lb/hp-hr	0%	1.66E-05
						Ethylbenzene	3.44E-07	lb/hp-hr	0%	3.01E-05
						Ethylene Dibromide	2.95E-07	lb/hp-hr	0%	2.59E-05
						Formaldehyde	2.84E-04	lb/hp-hr	0%	2.49E-02
						Methanol	4.24E-05	lb/hp-hr	0%	3.72E-03
						Methylene Chloride	5.71E-07	lb/hp-hr	0%	5.00E-05
						Naphthalene	1.35E-06	lb/hp-hr	0%	1.18E-04
						Polycyclic Aromatic Hydrocarbons	1.95E-06	lb/hp-hr	0%	1.71E-04
Styrene	1.65E-07	lb/hp-hr	0%	1.44E-05						
Toluene	7.73E-06	lb/hp-hr	0%	6.77E-04						
Vinyl Chloride	9.95E-08	lb/hp-hr	0%	8.72E-06						
Xylene	2.70E-06	lb/hp-hr	0%	2.37E-04						
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:										8.42E-02
Total of Fugitive Emissions for Propane Non-Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:										8.42E-02
Miscellaneous Fuel Burning Equipment										
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	3,003.80	MMBtu	Lead	9.00E-06	lb/MMBtu	0%	1.35E-05
						POM	2.41E-05	lb/MMBtu	0%	3.62E-05
						Formaldehyde	4.45E-04	lb/MMBtu	0%	6.69E-04
						Arsenic	4.00E-06	lb/MMBtu	0%	6.01E-06
						Beryllium	3.00E-06	lb/MMBtu	0%	4.51E-06
						Cadmium	3.00E-06	lb/MMBtu	0%	4.51E-06
						Chromium	3.00E-06	lb/MMBtu	0%	4.51E-06
						Mercury	3.00E-06	lb/MMBtu	0%	4.51E-06
						Manganese	6.00E-06	lb/MMBtu	0%	9.01E-06
						Nickel	3.00E-06	lb/MMBtu	0%	4.51E-06
Selenium	1.50E-05	lb/MMBtu	0%	2.25E-05						
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	4,292.40	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.05E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.05E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	3.79E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.37E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	5.05E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Benzene	2.06E-06	lb/MMBtu	0%	4.42E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.52E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	6.31E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	5.89E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.58E-04
						Hexane	1.76E-03	lb/MMBtu	0%	3.79E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.28E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	3.58E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	1.05E-08

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-46 (cont'd)	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr) (cont'd)	NGC	NF (cont'd)	4,292.40	MMBtu (cont'd)	Toluene	3.33E-06	lb/MMBtu	0%	7.15E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	4.21E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	2.52E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	2.31E-06
						Chromium	1.37E-06	lb/MMBtu	0%	2.95E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	1.77E-07
						Manganese	3.73E-07	lb/MMBtu	0%	8.00E-07
						Mercury	2.55E-07	lb/MMBtu	0%	5.47E-07
						Nickel	2.06E-06	lb/MMBtu	0%	4.42E-06
						Selenium	2.35E-08	lb/MMBtu	0%	5.05E-08
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	4,292.40	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.05E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.05E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	3.79E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.37E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	5.05E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Benzene	2.06E-06	lb/MMBtu	0%	4.42E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.52E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.52E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	6.31E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	5.89E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.58E-04
						Hexane	1.76E-03	lb/MMBtu	0%	3.79E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	3.79E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.28E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	3.58E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	1.05E-08
						Toluene	3.33E-06	lb/MMBtu	0%	7.15E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	4.21E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	2.52E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	2.31E-06
						Chromium	1.37E-06	lb/MMBtu	0%	2.95E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	1.77E-07
						Manganese	3.73E-07	lb/MMBtu	0%	8.00E-07
						Mercury	2.55E-07	lb/MMBtu	0%	5.47E-07
						Nickel	2.06E-06	lb/MMBtu	0%	4.42E-06
						Selenium	2.35E-08	lb/MMBtu	0%	5.05E-08
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	83,211	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	2.04E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	9.79E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	7.34E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	6.53E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	9.79E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Benzene	2.06E-06	lb/MMBtu	0%	8.57E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	4.89E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	4.89E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	4.89E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	4.89E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.22E-07
						Fluorene	2.75E-09	lb/MMBtu	0%	1.14E-07
						Formaldehyde	7.35E-05	lb/MMBtu	0%	3.06E-03

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-13 (cont'd)	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total) (cont'd)	NGC (cont'd)	NF (cont'd)	83,211	MMBtu (cont'd)	Hexane	1.76E-03	lb/MMBtu	0%	7.34E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	7.34E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.49E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	6.93E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	2.04E-07
						Toluene	3.33E-06	lb/MMBtu	0%	1.39E-04
						Arsenic	1.96E-07	lb/MMBtu	0%	8.16E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	4.89E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	4.49E-05
						Chromium	1.37E-06	lb/MMBtu	0%	5.71E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	3.43E-06
						Manganese	3.73E-07	lb/MMBtu	0%	1.55E-05
						Mercury	2.55E-07	lb/MMBtu	0%	1.06E-05
						Nickel	2.06E-06	lb/MMBtu	0%	8.57E-05
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	8,322	MMBtu	Selenium	2.35E-08	lb/MMBtu	0%	9.79E-07
						Lead	4.90E-07	lb/MMBtu	0%	2.04E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	9.79E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	7.34E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	6.53E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	9.79E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Benzene	2.06E-06	lb/MMBtu	0%	8.57E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	4.90E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	4.90E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	4.90E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	4.90E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.22E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	1.14E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	3.06E-04
						Hexane	1.76E-03	lb/MMBtu	0%	7.34E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	7.34E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.49E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	6.94E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	2.04E-08
						Toluene	3.33E-06	lb/MMBtu	0%	1.39E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	8.16E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	4.90E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	4.49E-06
						Chromium	1.37E-06	lb/MMBtu	0%	5.71E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	3.43E-07
						Manganese	3.73E-07	lb/MMBtu	0%	1.55E-06
						Mercury	2.55E-07	lb/MMBtu	0%	1.06E-06
						Nickel	2.06E-06	lb/MMBtu	0%	8.57E-06
						Selenium	2.35E-08	lb/MMBtu	0%	9.79E-08
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	6,311	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.55E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	7.42E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	5.57E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	4.95E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	7.42E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Benzene	2.06E-06	lb/MMBtu	0%	6.50E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	3.71E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	3.71E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	5.57E-09

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-65 (cont'd)	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	6,311	MMBtu (cont'd)	Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	3.71E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	3.71E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	9.28E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	8.66E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.32E-04
						Hexane	1.76E-03	lb/MMBtu	0%	5.57E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	5.57E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.89E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	5.26E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	1.55E-08
						Toluene	3.33E-06	lb/MMBtu	0%	1.05E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	6.19E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	3.71E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	3.40E-06
						Chromium	1.37E-06	lb/MMBtu	0%	4.33E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	2.60E-07
						Manganese	3.73E-07	lb/MMBtu	0%	1.18E-06
						Mercury	2.55E-07	lb/MMBtu	0%	8.04E-07
						Nickel	2.06E-06	lb/MMBtu	0%	6.50E-06
						049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	4,371
Lead	4.90E-07	lb/MMBtu	0%	1.07E-06						
2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.14E-08						
3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	3.86E-09						
7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.43E-08						
Acenaphthene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Acenaphthylene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Anthracene	2.35E-09	lb/MMBtu	0%	5.14E-09						
Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Benzene	2.06E-06	lb/MMBtu	0%	4.50E-06						
Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.57E-09						
Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.57E-09						
Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Chrysene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.57E-09						
Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.57E-06						
Fluoranthene	2.94E-09	lb/MMBtu	0%	6.43E-09						
Fluorene	2.75E-09	lb/MMBtu	0%	6.00E-09						
Formaldehyde	7.35E-05	lb/MMBtu	0%	1.61E-04						
Hexane	1.76E-03	lb/MMBtu	0%	3.86E-03						
Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	3.86E-09						
Naphthalene	5.98E-07	lb/MMBtu	0%	1.31E-06						
Phenanthrene	1.67E-08	lb/MMBtu	0%	3.64E-08						
Pyrene	4.90E-09	lb/MMBtu	0%	1.07E-08						
Toluene	3.33E-06	lb/MMBtu	0%	7.29E-06						
Arsenic	1.96E-07	lb/MMBtu	0%	4.29E-07						
Beryllium	1.18E-08	lb/MMBtu	0%	2.57E-08						
Cadmium	1.08E-06	lb/MMBtu	0%	2.36E-06						
Chromium	1.37E-06	lb/MMBtu	0%	3.00E-06						
Cobalt	8.24E-08	lb/MMBtu	0%	1.80E-07						
Manganese	3.73E-07	lb/MMBtu	0%	8.14E-07						
Mercury	2.55E-07	lb/MMBtu	0%	5.57E-07						
Nickel	2.06E-06	lb/MMBtu	0%	4.50E-06						
Selenium	2.35E-08	lb/MMBtu	0%	5.14E-08						
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										1.03E-01
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										1.03E-01
Copper Decant Solids Handling Operations										
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	AWindDSH 1	F	3.00	acre-yr	Antimony	1.19E+00	lb/acre-yr	0%	1.79E-03
						Arsenic	2.08E+00	lb/acre-yr	0%	3.13E-03
						Beryllium	3.09E-03	lb/acre-yr	0%	4.64E-06
						Cadmium	1.85E-02	lb/acre-yr	0%	2.78E-05
						Chromium	2.01E-02	lb/acre-vr	0%	3.01E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
054-1 (cont'd)	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (cont'd)	AWindDSH 1 (cont'd)	F (cont'd)	3.00	acre-yr (cont'd)	Cobalt	3.71E-02	lb/acre-yr	0%	5.56E-05
						Lead	2.26E-01	lb/acre-yr	0%	3.39E-04
						Manganese	3.40E-02	lb/acre-yr	0%	5.10E-05
						Mercury	1.81E-02	lb/acre-yr	0%	2.71E-05
						Nickel	2.94E-02	lb/acre-yr	0%	4.41E-05
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	DSH1TrUnprt	F	18,000	tons	Selenium	5.10E-02	lb/acre-yr	0%	7.65E-05
						Antimony	1.00E-06	lb/ton	0%	9.04E-06
						Arsenic	1.76E-06	lb/ton	0%	1.58E-05
						Beryllium	2.61E-09	lb/ton	0%	2.35E-08
						Cadmium	1.57E-08	lb/ton	0%	1.41E-07
						Chromium	1.70E-08	lb/ton	0%	1.53E-07
						Cobalt	3.13E-08	lb/ton	0%	2.82E-07
						Lead	1.90E-07	lb/ton	0%	1.71E-06
						Manganese	2.87E-08	lb/ton	0%	2.58E-07
						Mercury	1.52E-08	lb/ton	0%	1.37E-07
						Nickel	2.48E-08	lb/ton	0%	2.23E-07
						Selenium	4.31E-08	lb/ton	0%	3.87E-07
						Total of Non-Fugitive Emissions for Copper Decant Solids Handling Operations:				
Total of Fugitive Emissions for Copper Decant Solids Handling Operations:										5.59E-03
Total of Non-Fugitive and Fugitive Emissions for Copper Decant Solids Handling Operations:										5.59E-03
AOS1: Two Concentrator Operations										
Mining Operations (AOS1)										
026-3 (AOS1)	Drilling (AOS1)	Drilling (AOS1)	F	106,219	holes	Antimony	1.05E-05	lb/hole	0%	5.57E-04
						Arsenic	1.81E-05	lb/hole	0%	9.63E-04
						Beryllium	9.45E-07	lb/hole	0%	5.02E-05
						Cadmium	4.24E-07	lb/hole	0%	2.25E-05
						Chromium	2.56E-05	lb/hole	0%	1.36E-03
						Cobalt	2.27E-05	lb/hole	0%	1.21E-03
						Lead	1.92E-05	lb/hole	0%	1.02E-03
						Manganese	2.07E-04	lb/hole	0%	1.10E-02
						Mercury	2.02E-07	lb/hole	0%	1.07E-05
026-2 (AOS1)	Blasting (AOS1)	ABlasting (AOS1)	F	260	blasts	Nickel	1.67E-05	lb/hole	0%	8.87E-04
						Selenium	1.80E-06	lb/hole	0%	9.56E-05
						Lead	5.46E-02	lb/blast	0%	7.09E-03
						POM	1.78E-02	lb/blast	0%	2.32E-03
						Formaldehyde	3.29E-01	lb/blast	0%	4.28E-02
						Antimony	2.62E-02	lb/blast	0%	3.40E-03
						Arsenic	4.82E-02	lb/blast	0%	6.27E-03
						Beryllium	4.56E-03	lb/blast	0%	5.93E-04
						Cadmium	3.26E-03	lb/blast	0%	4.24E-04
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	ATravel (AOS1)	F	7,099,653	VMT	Chromium	6.62E-02	lb/blast	0%	8.60E-03
						Cobalt	5.67E-02	lb/blast	0%	7.36E-03
						Manganese	5.22E-01	lb/blast	0%	6.78E-02
						Mercury	2.71E-03	lb/blast	0%	3.52E-04
						Nickel	4.39E-02	lb/blast	0%	5.70E-03
						Selenium	1.55E-02	lb/blast	0%	2.02E-03
						Antimony	4.02E-05	lb/VMT	90%	1.43E-02
						Arsenic	6.94E-05	lb/VMT	90%	2.46E-02
						Beryllium	3.62E-06	lb/VMT	90%	1.28E-03
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	ATravel (AOS1)	F	2,366,551	VMT	Cadmium	1.62E-06	lb/VMT	90%	5.76E-04
						Chromium	9.81E-05	lb/VMT	90%	3.48E-02
						Cobalt	8.69E-05	lb/VMT	90%	3.08E-02
						Lead	7.36E-05	lb/VMT	90%	2.61E-02
						Manganese	7.94E-04	lb/VMT	90%	2.82E-01
						Mercury	7.72E-07	lb/VMT	90%	2.74E-04
						Nickel	6.39E-05	lb/VMT	90%	2.27E-02
						Selenium	6.89E-06	lb/VMT	90%	2.45E-03
						Antimony	4.02E-05	lb/VMT	90%	4.75E-03
Arsenic	6.94E-05	lb/VMT	90%	8.21E-03						
Beryllium	3.62E-06	lb/VMT	90%	4.28E-04						
Cadmium	1.62E-06	lb/VMT	90%	1.92E-04						
Chromium	9.81E-05	lb/VMT	90%	1.16E-02						
Cobalt	8.69E-05	lb/VMT	90%	1.03E-02						

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
022-2 (AOS1) (cont'd)	Haul Truck Travel Outside the Pit (AOS1) (cont'd)	ATravel (AOS1) (cont'd)	F (cont'd)	2,366,551	VMT (cont'd)	Lead	7.36E-05	lb/VMT	90%	8.70E-03
						Manganese	7.94E-04	lb/VMT	90%	9.39E-02
						Mercury	7.72E-07	lb/VMT	90%	9.13E-05
						Nickel	6.39E-05	lb/VMT	90%	7.56E-03
						Selenium	6.89E-06	lb/VMT	90%	8.16E-04
023-3 (AOS1)	Other Vehicle Travel (AOS1)	ATravel (AOS1)	F	14,070,600	VMT	Antimony	4.02E-05	lb/VMT	90%	2.83E-02
						Arsenic	6.94E-05	lb/VMT	90%	4.88E-02
						Beryllium	3.62E-06	lb/VMT	90%	2.54E-03
						Cadmium	1.62E-06	lb/VMT	90%	1.14E-03
						Chromium	9.81E-05	lb/VMT	90%	6.90E-02
						Cobalt	8.69E-05	lb/VMT	90%	6.11E-02
						Lead	7.36E-05	lb/VMT	90%	5.17E-02
						Manganese	7.94E-04	lb/VMT	90%	5.58E-01
						Mercury	7.72E-07	lb/VMT	90%	5.43E-04
						Nickel	6.39E-05	lb/VMT	90%	4.49E-02
						Selenium	6.89E-06	lb/VMT	90%	4.85E-03
						Antimony	2.16E-05	lb/hr	0%	1.44E-03
023-1 (AOS1)	Dozer Operation (AOS1)	Dozer (AOS1)	F	133,221	hours	Arsenic	3.73E-05	lb/hr	0%	2.49E-03
						Beryllium	1.94E-06	lb/hr	0%	1.30E-04
						Cadmium	8.73E-07	lb/hr	0%	5.82E-05
						Chromium	5.28E-05	lb/hr	0%	3.52E-03
						Cobalt	4.67E-05	lb/hr	0%	3.11E-03
						Lead	3.96E-05	lb/hr	0%	2.64E-03
						Manganese	4.27E-04	lb/hr	0%	2.84E-02
						Mercury	4.15E-07	lb/hr	0%	2.77E-05
						Nickel	3.44E-05	lb/hr	0%	2.29E-03
						Selenium	3.71E-06	lb/hr	0%	2.47E-04
023-2 (AOS1)	Road Grader Operation (AOS1)	Grader (AOS1)	F	420,480	VMT	Antimony	1.48E-05	lb/VMT	90%	3.12E-04
						Arsenic	2.56E-05	lb/VMT	90%	5.39E-04
						Beryllium	1.33E-06	lb/VMT	90%	2.81E-05
						Cadmium	5.99E-07	lb/VMT	90%	1.26E-05
						Chromium	3.62E-05	lb/VMT	90%	7.61E-04
						Cobalt	3.21E-05	lb/VMT	90%	6.74E-04
						Lead	2.71E-05	lb/VMT	90%	5.71E-04
						Manganese	2.93E-04	lb/VMT	90%	6.16E-03
						Mercury	2.85E-07	lb/VMT	90%	5.99E-06
						Nickel	2.36E-05	lb/VMT	90%	4.96E-04
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Ore1TrUnpr t (AOS1)	F	254,833,922	tons	Selenium	2.54E-06	lb/VMT	90%	5.35E-05
						Antimony	1.73E-08	lb/ton	0%	2.20E-03
						Arsenic	2.98E-08	lb/ton	0%	3.80E-03
						Beryllium	1.55E-09	lb/ton	0%	1.98E-04
						Cadmium	6.98E-10	lb/ton	0%	8.89E-05
						Chromium	4.22E-08	lb/ton	0%	5.37E-03
						Cobalt	3.74E-08	lb/ton	0%	4.76E-03
						Lead	3.16E-08	lb/ton	0%	4.03E-03
						Manganese	3.41E-07	lb/ton	0%	4.35E-02
						Mercury	3.32E-10	lb/ton	0%	4.23E-05
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Ore2TrUnpr t	F	44,433,881	tons	Nickel	2.75E-08	lb/ton	0%	3.50E-03
						Selenium	2.96E-09	lb/ton	0%	3.78E-04
						Antimony	3.86E-08	lb/ton	0%	8.57E-04
						Arsenic	5.71E-08	lb/ton	0%	1.27E-03
						Beryllium	1.35E-09	lb/ton	0%	2.99E-05
						Cadmium	9.88E-10	lb/ton	0%	2.20E-05
						Chromium	3.96E-08	lb/ton	0%	8.80E-04
						Cobalt	7.64E-08	lb/ton	0%	1.70E-03
						Lead	2.44E-08	lb/ton	0%	5.42E-04
						Manganese	3.64E-07	lb/ton	0%	8.08E-03
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Ore2TrUnpr t	F	32,632,000	tons	Mercury	5.65E-10	lb/ton	0%	1.25E-05
						Nickel	2.26E-08	lb/ton	0%	5.03E-04
						Selenium	3.57E-09	lb/ton	0%	7.93E-05
						Antimony	3.86E-08	lb/ton	0%	6.29E-04
						Arsenic	5.71E-08	lb/ton	0%	9.32E-04
						Beryllium	1.35E-09	lb/ton	0%	2.20E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
001-7 (AOS1) (cont'd)	Unloading Ore to Primary Crusher 2 (AOS1) (cont'd)	Ore2TrUnprt (cont'd)	F (cont'd)	32,632,000	tons (cont'd)	Cadmium	9.88E-10	lb/ton	0%	1.61E-05
						Chromium	3.96E-08	lb/ton	0%	6.46E-04
						Cobalt	7.64E-08	lb/ton	0%	1.25E-03
						Lead	2.44E-08	lb/ton	0%	3.98E-04
						Manganese	3.64E-07	lb/ton	0%	5.93E-03
						Mercury	5.65E-10	lb/ton	0%	9.21E-06
						Nickel	2.26E-08	lb/ton	0%	3.69E-04
						Selenium	3.57E-09	lb/ton	0%	5.82E-05
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Ore3TrUnprt	F	9,230,000	tons	Antimony	0.00E+00	lb/ton	0%	0.00E+00
						Arsenic	1.54E-09	lb/ton	0%	7.11E-06
						Beryllium	3.54E-09	lb/ton	0%	1.63E-05
						Cadmium	0.00E+00	lb/ton	0%	0.00E+00
						Chromium	6.16E-09	lb/ton	0%	2.84E-05
						Cobalt	1.10E-08	lb/ton	0%	5.09E-05
						Lead	1.64E-08	lb/ton	0%	7.58E-05
						Manganese	2.34E-07	lb/ton	0%	1.08E-03
						Mercury	2.31E-10	lb/ton	0%	1.07E-06
						Nickel	8.98E-09	lb/ton	0%	4.15E-05
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Ore4TrUnprt	F	168,538,041	tons	Selenium	0.00E+00	lb/ton	0%	0.00E+00
						Antimony	8.47E-09	lb/ton	0%	7.14E-04
						Arsenic	1.89E-08	lb/ton	0%	1.60E-03
						Beryllium	1.54E-09	lb/ton	0%	1.30E-04
						Cadmium	6.03E-10	lb/ton	0%	5.08E-05
						Chromium	4.53E-08	lb/ton	0%	3.82E-03
						Cobalt	2.10E-08	lb/ton	0%	1.77E-03
						Lead	3.58E-08	lb/ton	0%	3.01E-03
						Manganese	3.37E-07	lb/ton	0%	2.84E-02
						Mercury	2.31E-10	lb/ton	0%	1.95E-05
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	C51 (AOS1)	NF	7,884,000,000	dscf	Nickel	3.07E-08	lb/ton	0%	2.59E-03
						Selenium	2.85E-09	lb/ton	0%	2.40E-04
						Antimony	5.80E-11	lb/dscf	0%	2.29E-04
						Arsenic	8.58E-11	lb/dscf	0%	3.38E-04
						Beryllium	2.03E-12	lb/dscf	0%	7.98E-06
						Cadmium	1.49E-12	lb/dscf	0%	5.85E-06
						Chromium	5.95E-11	lb/dscf	0%	2.35E-04
						Cobalt	1.15E-10	lb/dscf	0%	4.52E-04
						Lead	3.66E-11	lb/dscf	0%	1.44E-04
						Manganese	5.46E-10	lb/dscf	0%	2.15E-03
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	Mercury	8.49E-13	lb/dscf	0%	3.35E-06
						Nickel	3.40E-11	lb/dscf	0%	1.34E-04
						Selenium	5.36E-12	lb/dscf	0%	2.11E-05
						Antimony	4.13E-09	lb/ton	90%	1.37E-05
						Arsenic	6.11E-09	lb/ton	90%	2.03E-05
						Beryllium	1.44E-10	lb/ton	90%	4.80E-07
						Cadmium	1.06E-10	lb/ton	90%	3.52E-07
						Chromium	4.24E-09	lb/ton	90%	1.41E-05
						Cobalt	8.17E-09	lb/ton	90%	2.72E-05
						Lead	2.61E-09	lb/ton	90%	8.68E-06
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	Manganese	3.89E-08	lb/ton	90%	1.29E-04
						Mercury	6.04E-11	lb/ton	90%	2.01E-07
						Nickel	2.42E-09	lb/ton	90%	8.06E-06
						Selenium	3.82E-10	lb/ton	90%	1.27E-06
						Lead	8.17E-09	lb/ton	90%	2.72E-05
						Cobalt	8.17E-09	lb/ton	90%	2.72E-05
						Chromium	4.24E-09	lb/ton	90%	1.41E-05
						Cadmium	1.06E-10	lb/ton	90%	3.52E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
001-8 (AOS1) (cont'd)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1) (cont'd)	Ore2TrPrt (cont'd)	NF (cont'd)	66,576,000	tons (cont'd)	Mercury	6.04E-11	lb/ton	90%	2.01E-07
						Nickel	2.42E-09	lb/ton	90%	8.06E-06
						Selenium	3.82E-10	lb/ton	90%	1.27E-06
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Ore2TrPrt	NF	66,576,000	tons	Antimony	4.13E-09	lb/ton	90%	1.37E-05
						Arsenic	6.11E-09	lb/ton	90%	2.03E-05
						Beryllium	1.44E-10	lb/ton	90%	4.80E-07
						Cadmium	1.06E-10	lb/ton	90%	3.52E-07
						Chromium	4.24E-09	lb/ton	90%	1.41E-05
						Cobalt	8.17E-09	lb/ton	90%	2.72E-05
						Lead	2.61E-09	lb/ton	90%	8.68E-06
						Manganese	3.89E-08	lb/ton	90%	1.29E-04
						Mercury	6.04E-11	lb/ton	90%	2.01E-07
						Nickel	2.42E-09	lb/ton	90%	8.06E-06
Selenium	3.82E-10	lb/ton	90%	1.27E-06						
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Ore2TrUnprt	F	53,260,800	tons	Antimony	3.86E-08	lb/ton	0%	1.03E-03
						Arsenic	5.71E-08	lb/ton	0%	1.52E-03
						Beryllium	1.35E-09	lb/ton	0%	3.59E-05
						Cadmium	9.88E-10	lb/ton	0%	2.63E-05
						Chromium	3.96E-08	lb/ton	0%	1.05E-03
						Cobalt	7.64E-08	lb/ton	0%	2.03E-03
						Lead	2.44E-08	lb/ton	0%	6.49E-04
						Manganese	3.64E-07	lb/ton	0%	9.68E-03
						Mercury	5.65E-10	lb/ton	0%	1.50E-05
						Nickel	2.26E-08	lb/ton	0%	6.03E-04
Selenium	3.57E-09	lb/ton	0%	9.50E-05						
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Ore2TrUnprt	F	13,315,200	tons	Antimony	3.86E-08	lb/ton	0%	2.57E-04
						Arsenic	5.71E-08	lb/ton	0%	3.80E-04
						Beryllium	1.35E-09	lb/ton	0%	8.97E-06
						Cadmium	9.88E-10	lb/ton	0%	6.58E-06
						Chromium	3.96E-08	lb/ton	0%	2.64E-04
						Cobalt	7.64E-08	lb/ton	0%	5.08E-04
						Lead	2.44E-08	lb/ton	0%	1.62E-04
						Manganese	3.64E-07	lb/ton	0%	2.42E-03
						Mercury	5.65E-10	lb/ton	0%	3.76E-06
						Nickel	2.26E-08	lb/ton	0%	1.51E-04
Selenium	3.57E-09	lb/ton	0%	2.38E-05						
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Ore2TrUnprt	F	13,315,200	tons	Antimony	3.86E-08	lb/ton	0%	2.57E-04
						Arsenic	5.71E-08	lb/ton	0%	3.80E-04
						Beryllium	1.35E-09	lb/ton	0%	8.97E-06
						Cadmium	9.88E-10	lb/ton	0%	6.58E-06
						Chromium	3.96E-08	lb/ton	0%	2.64E-04
						Cobalt	7.64E-08	lb/ton	0%	5.08E-04
						Lead	2.44E-08	lb/ton	0%	1.62E-04
						Manganese	3.64E-07	lb/ton	0%	2.42E-03
						Mercury	5.65E-10	lb/ton	0%	3.76E-06
						Nickel	2.26E-08	lb/ton	0%	1.51E-04
Selenium	3.57E-09	lb/ton	0%	2.38E-05						
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	AWindCOS 1/5 (AOS1)	F	6.18	acre-yr	Antimony	2.95E-02	lb/acre-yr	0%	9.12E-05
						Arsenic	4.37E-02	lb/acre-yr	0%	1.35E-04
						Beryllium	1.03E-03	lb/acre-yr	0%	3.18E-06
						Cadmium	7.56E-04	lb/acre-yr	0%	2.34E-06
						Chromium	3.03E-02	lb/acre-yr	0%	9.36E-05
						Cobalt	5.84E-02	lb/acre-yr	0%	1.80E-04
						Lead	1.86E-02	lb/acre-yr	0%	5.76E-05
						Manganese	2.78E-01	lb/acre-yr	0%	8.59E-04
						Mercury	4.32E-04	lb/acre-yr	0%	1.33E-06
						Nickel	1.73E-02	lb/acre-yr	0%	5.35E-05
Selenium	2.73E-03	lb/acre-yr	0%	8.43E-06						
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)										
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	SDC1 (AOS1)	NF	7,621,200,000	dscf	Antimony	9.88E-12	lb/dscf	0%	3.76E-05
						Arsenic	1.46E-11	lb/dscf	0%	5.57E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.31E-06
						Cadmium	2.53E-13	lb/dscf	0%	9.64E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
001-12 (AOS1) (cont'd)	Processes Controlled by PC1 Dust Collector 1 (AOS1) (cont'd)	SDC1 (AOS1) (cont'd)	NF (cont'd)	7,621,200,000	dscf (cont'd)	Chromium	1.01E-11	lb/dscf	0%	3.86E-05
						Cobalt	1.96E-11	lb/dscf	0%	7.45E-05
						Lead	6.24E-12	lb/dscf	0%	2.38E-05
						Manganese	9.31E-11	lb/dscf	0%	3.55E-04
						Mercury	1.45E-13	lb/dscf	0%	5.51E-07
						Nickel	5.80E-12	lb/dscf	0%	2.21E-05
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	SDC2 (AOS1)	NF	8,777,520,000	dscf	Selenium	9.13E-13	lb/dscf	0%	3.48E-06
						Antimony	9.88E-12	lb/dscf	0%	4.33E-05
						Arsenic	1.46E-11	lb/dscf	0%	6.42E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.51E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.11E-06
						Chromium	1.01E-11	lb/dscf	0%	4.45E-05
						Cobalt	1.96E-11	lb/dscf	0%	8.58E-05
						Lead	6.24E-12	lb/dscf	0%	2.74E-05
						Manganese	9.31E-11	lb/dscf	0%	4.08E-04
						Mercury	1.45E-13	lb/dscf	0%	6.34E-07
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	SDC3 (AOS1)	NF	8,777,520,000	dscf	Nickel	5.80E-12	lb/dscf	0%	2.54E-05
						Selenium	9.13E-13	lb/dscf	0%	4.01E-06
						Antimony	9.88E-12	lb/dscf	0%	4.33E-05
						Arsenic	1.46E-11	lb/dscf	0%	6.42E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.51E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.11E-06
						Chromium	1.01E-11	lb/dscf	0%	4.45E-05
						Cobalt	1.96E-11	lb/dscf	0%	8.58E-05
						Lead	6.24E-12	lb/dscf	0%	2.74E-05
						Manganese	9.31E-11	lb/dscf	0%	4.08E-04
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	SDC4 (AOS1)	NF	8,777,520,000	dscf	Mercury	1.45E-13	lb/dscf	0%	6.34E-07
						Nickel	5.80E-12	lb/dscf	0%	2.54E-05
						Selenium	9.13E-13	lb/dscf	0%	4.01E-06
						Antimony	9.88E-12	lb/dscf	0%	4.33E-05
						Arsenic	1.46E-11	lb/dscf	0%	6.42E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.51E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.11E-06
						Chromium	1.01E-11	lb/dscf	0%	4.45E-05
						Cobalt	1.96E-11	lb/dscf	0%	8.58E-05
						Lead	6.24E-12	lb/dscf	0%	2.74E-05
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Ore2TrUnpr t	F	70,080,000	tons	Manganese	9.31E-11	lb/dscf	0%	4.08E-04
						Mercury	1.45E-13	lb/dscf	0%	6.34E-07
						Nickel	5.80E-12	lb/dscf	0%	2.54E-05
						Selenium	9.13E-13	lb/dscf	0%	4.01E-06
						Antimony	3.86E-08	lb/ton	0%	1.35E-03
						Arsenic	5.71E-08	lb/ton	0%	2.00E-03
						Beryllium	1.35E-09	lb/ton	0%	4.72E-05
						Cadmium	9.88E-10	lb/ton	0%	3.46E-05
						Chromium	3.96E-08	lb/ton	0%	1.39E-03
						Cobalt	7.64E-08	lb/ton	0%	2.68E-03
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	AWindCOS 6 (AOS1)	F	3.04	acre-yr	Lead	2.44E-08	lb/ton	0%	8.54E-04
						Manganese	3.64E-07	lb/ton	0%	1.27E-02
						Mercury	5.65E-10	lb/ton	0%	1.98E-05
						Nickel	2.26E-08	lb/ton	0%	7.93E-04
						Selenium	3.57E-09	lb/ton	0%	1.25E-04
						Antimony	2.95E-02	lb/acre-yr	0%	4.48E-05
						Arsenic	4.37E-02	lb/acre-yr	0%	6.64E-05
						Beryllium	1.03E-03	lb/acre-yr	0%	1.57E-06
						Cadmium	7.56E-04	lb/acre-yr	0%	1.15E-06
						Chromium	3.03E-02	lb/acre-yr	0%	4.60E-05
						Cobalt	5.84E-02	lb/acre-yr	0%	8.88E-05
						Lead	1.86E-02	lb/acre-yr	0%	2.83E-05
						Manganese	2.78E-01	lb/acre-yr	0%	4.23E-04
						Mercury	4.32E-04	lb/acre-yr	0%	6.56E-07
						Nickel	1.73E-02	lb/acre-yr	0%	2.63E-05
						Selenium	2.73E-03	lb/acre-yr	0%	4.15E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
Second Concentrator Milling Operations (AOS1)										
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	SDC5 (AOS1)	NF	11,563,200,000	dscf	Antimony	9.88E-12	lb/dscf	0%	5.71E-05
						Arsenic	1.46E-11	lb/dscf	0%	8.45E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.99E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.46E-06
						Chromium	1.01E-11	lb/dscf	0%	5.86E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.13E-04
						Lead	6.24E-12	lb/dscf	0%	3.61E-05
						Manganese	9.31E-11	lb/dscf	0%	5.38E-04
						Mercury	1.45E-13	lb/dscf	0%	8.36E-07
						Nickel	5.80E-12	lb/dscf	0%	3.35E-05
						Selenium	9.13E-13	lb/dscf	0%	5.28E-06
						Antimony	9.88E-12	lb/dscf	0%	5.71E-05
						Arsenic	1.46E-11	lb/dscf	0%	8.45E-05
						Beryllium	3.45E-13	lb/dscf	0%	1.99E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.46E-06
						Chromium	1.01E-11	lb/dscf	0%	5.86E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.13E-04
						Lead	6.24E-12	lb/dscf	0%	3.61E-05
						Manganese	9.31E-11	lb/dscf	0%	5.38E-04
						Mercury	1.45E-13	lb/dscf	0%	8.36E-07
						Nickel	5.80E-12	lb/dscf	0%	3.35E-05
						Selenium	9.13E-13	lb/dscf	0%	5.28E-06
						Antimony	9.88E-12	lb/dscf	0%	5.97E-05
						Arsenic	1.46E-11	lb/dscf	0%	8.84E-05
						Beryllium	3.45E-13	lb/dscf	0%	2.09E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.53E-06
						Chromium	1.01E-11	lb/dscf	0%	6.13E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.18E-04
						Lead	6.24E-12	lb/dscf	0%	3.77E-05
						Manganese	9.31E-11	lb/dscf	0%	5.63E-04
						Mercury	1.45E-13	lb/dscf	0%	8.74E-07
						Nickel	5.80E-12	lb/dscf	0%	3.50E-05
						Selenium	9.13E-13	lb/dscf	0%	5.52E-06
						Antimony	9.88E-12	lb/dscf	0%	7.01E-05
						Arsenic	1.46E-11	lb/dscf	0%	1.04E-04
						Beryllium	3.45E-13	lb/dscf	0%	2.45E-06
						Cadmium	2.53E-13	lb/dscf	0%	1.80E-06
						Chromium	1.01E-11	lb/dscf	0%	7.20E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.39E-04
						Lead	6.24E-12	lb/dscf	0%	4.43E-05
						Manganese	9.31E-11	lb/dscf	0%	6.60E-04
						Mercury	1.45E-13	lb/dscf	0%	1.03E-06
						Nickel	5.80E-12	lb/dscf	0%	4.11E-05
						Selenium	9.13E-13	lb/dscf	0%	6.48E-06
Arsenic	1.46E-11	lb/dscf	0%	9.61E-05						
Beryllium	3.45E-13	lb/dscf	0%	2.27E-06						
Cadmium	2.53E-13	lb/dscf	0%	1.66E-06						
Chromium	1.01E-11	lb/dscf	0%	6.66E-05						
Cobalt	1.96E-11	lb/dscf	0%	1.28E-04						
Lead	6.24E-12	lb/dscf	0%	4.10E-05						
Manganese	9.31E-11	lb/dscf	0%	6.11E-04						
Mercury	1.45E-13	lb/dscf	0%	9.50E-07						
						Nickel	5.80E-12	lb/dscf	0%	3.81E-05
						Selenium	9.13E-13	lb/dscf	0%	6.00E-06
						Antimony	9.88E-12	lb/dscf	0%	2.60E-05
						Arsenic	1.46E-11	lb/dscf	0%	3.84E-05
						Beryllium	3.45E-13	lb/dscf	0%	9.07E-07
						Cadmium	2.53E-13	lb/dscf	0%	6.65E-07
						Chromium	1.01E-11	lb/dscf	0%	2.67E-05
						Cobalt	1.96E-11	lb/dscf	0%	5.14E-05
						Lead	6.24E-12	lb/dscf	0%	1.64E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
002-12 (AOS1) (cont'd)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1) (cont'd)	SDC10 (AOS1) (cont'd)	NF (cont'd)	5,256,000,000	dscf (cont'd)	Manganese	9.31E-11	lb/dscf	0%	2.45E-04
						Mercury	1.45E-13	lb/dscf	0%	3.80E-07
						Nickel	5.80E-12	lb/dscf	0%	1.52E-05
						Selenium	9.13E-13	lb/dscf	0%	2.40E-06
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	SDC11 (AOS1)	NF	5,256,000,000	dscf	Antimony	9.88E-12	lb/dscf	0%	2.60E-05
						Arsenic	1.46E-11	lb/dscf	0%	3.84E-05
						Beryllium	3.45E-13	lb/dscf	0%	9.07E-07
						Cadmium	2.53E-13	lb/dscf	0%	6.65E-07
						Chromium	1.01E-11	lb/dscf	0%	2.67E-05
						Cobalt	1.96E-11	lb/dscf	0%	5.14E-05
						Lead	6.24E-12	lb/dscf	0%	1.64E-05
						Manganese	9.31E-11	lb/dscf	0%	2.45E-04
						Mercury	1.45E-13	lb/dscf	0%	3.80E-07
						Nickel	5.80E-12	lb/dscf	0%	1.52E-05
						Selenium	9.13E-13	lb/dscf	0%	2.40E-06
						Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)				
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	MFE	F	517,716	tons	Benzene	8.67E-06	lb/ton	0%	2.24E-03
						Ethylbenzene	1.46E-05	lb/ton	0%	3.78E-03
						n-Hexane	1.83E-06	lb/ton	0%	4.72E-04
						Toluene	1.04E-04	lb/ton	0%	2.70E-02
						m-Xylene	2.72E-04	lb/ton	0%	7.05E-02
Second Concentrator Concentrate Handling Operations (AOS1)										
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	CCTrPrt	F	499,320	tons	Antimony	4.85E-08	lb/ton	0%	1.21E-05
						Arsenic	8.06E-08	lb/ton	0%	2.01E-05
						Beryllium	2.37E-10	lb/ton	0%	5.91E-08
						Cadmium	8.88E-10	lb/ton	0%	2.22E-07
						Chromium	4.97E-10	lb/ton	0%	1.24E-07
						Cobalt	3.12E-09	lb/ton	0%	7.78E-07
						Lead	1.99E-08	lb/ton	0%	4.97E-06
						Manganese	1.54E-09	lb/ton	0%	3.84E-07
						Mercury	8.03E-10	lb/ton	0%	2.00E-07
						Nickel	2.25E-09	lb/ton	0%	5.61E-07
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	CCTrPrt	F	499,320	tons	Selenium	3.91E-09	lb/ton	0%	9.75E-07
						Antimony	4.85E-08	lb/ton	0%	1.21E-05
						Arsenic	8.06E-08	lb/ton	0%	2.01E-05
						Beryllium	2.37E-10	lb/ton	0%	5.91E-08
						Cadmium	8.88E-10	lb/ton	0%	2.22E-07
						Chromium	4.97E-10	lb/ton	0%	1.24E-07
						Cobalt	3.12E-09	lb/ton	0%	7.78E-07
						Lead	1.99E-08	lb/ton	0%	4.97E-06
						Manganese	1.54E-09	lb/ton	0%	3.84E-07
						Mercury	8.03E-10	lb/ton	0%	2.00E-07
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	CCTrPrt	F	499,320	tons	Nickel	2.25E-09	lb/ton	0%	5.61E-07
						Selenium	3.91E-09	lb/ton	0%	9.75E-07
						Antimony	4.85E-08	lb/ton	0%	1.21E-05
						Arsenic	8.06E-08	lb/ton	0%	2.01E-05
						Beryllium	2.37E-10	lb/ton	0%	5.91E-08
						Cadmium	8.88E-10	lb/ton	0%	2.22E-07
						Chromium	4.97E-10	lb/ton	0%	1.24E-07
						Cobalt	3.12E-09	lb/ton	0%	7.78E-07
						Lead	1.99E-08	lb/ton	0%	4.97E-06
						Manganese	1.54E-09	lb/ton	0%	3.84E-07
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	AWindSCC (AOS1)	F	0.30	acre-yr	Mercury	8.03E-10	lb/ton	0%	2.00E-07
						Nickel	2.25E-09	lb/ton	0%	5.61E-07
						Selenium	3.91E-09	lb/ton	0%	9.75E-07
						Antimony	4.83E+01	lb/acre-yr	75%	1.81E-03
						Arsenic	8.02E+01	lb/acre-yr	75%	3.01E-03
						Beryllium	2.36E-01	lb/acre-yr	75%	8.83E-06
						Cadmium	8.83E-01	lb/acre-yr	75%	3.31E-05
						Chromium	4.95E-01	lb/acre-yr	75%	1.85E-05
						Cobalt	3.10E+00	lb/acre-yr	75%	1.16E-04
						Lead	1.98E+01	lb/acre-yr	75%	7.43E-04
Manganese	1.53E+00	lb/acre-yr	75%	5.74E-05						

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
027-8 (AOS1) (cont'd)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (cont'd)	AWindSCC (AOS1) (cont'd)	F (cont'd)	0.30	acre-yr (cont'd)	Mercury	7.99E-01	lb/acre-yr	75%	3.00E-05
						Nickel	2.24E+00	lb/acre-yr	75%	8.39E-05
						Selenium	3.89E+00	lb/acre-yr	75%	1.46E-04
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	8,760	hours	Antimony	1.29E-04	lb/hr	0%	5.66E-04
						Arsenic	1.41E-04	lb/hr	0%	6.17E-04
						Beryllium	6.31E-07	lb/hr	0%	2.76E-06
						Cadmium	2.36E-06	lb/hr	0%	1.04E-05
						Chromium	1.32E-06	lb/hr	0%	5.80E-06
						Cobalt	8.30E-06	lb/hr	0%	3.64E-05
						Lead	1.44E-05	lb/hr	0%	6.29E-05
						Manganese	4.10E-06	lb/hr	0%	1.80E-05
						Mercury	2.14E-06	lb/hr	0%	9.37E-06
						Nickel	5.99E-06	lb/hr	0%	2.62E-05
						Selenium	1.61E-05	lb/hr	0%	7.04E-05
						Benzene	3.48E-03	lb/hr	0%	1.52E-02
						Ethylbenzene	5.86E-03	lb/hr	0%	2.56E-02
						Hexane	7.32E-04	lb/hr	0%	3.21E-03
						Toluene	4.19E-02	lb/hr	0%	1.84E-01
						m-Xylene	1.09E-01	lb/hr	0%	4.79E-01
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	MC4TrPrt	NF	18,396	tons	Antimony	2.11E-06	lb/ton	0%	1.94E-05
						Arsenic	2.30E-06	lb/ton	0%	2.12E-05
						Beryllium	1.03E-08	lb/ton	0%	9.47E-08
						Cadmium	3.86E-08	lb/ton	0%	3.55E-07
						Chromium	2.16E-08	lb/ton	0%	1.99E-07
						Cobalt	1.36E-07	lb/ton	0%	1.25E-06
						Lead	2.35E-07	lb/ton	0%	2.16E-06
						Manganese	6.70E-08	lb/ton	0%	6.16E-07
						Mercury	3.49E-08	lb/ton	0%	3.21E-07
						Nickel	9.79E-08	lb/ton	0%	9.00E-07
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	MC4TrPrt	F	18,396	tons	Selenium	2.63E-07	lb/ton	0%	2.42E-06
						Antimony	2.11E-06	lb/ton	0%	1.94E-05
						Arsenic	2.30E-06	lb/ton	0%	2.12E-05
						Beryllium	1.03E-08	lb/ton	0%	9.47E-08
						Cadmium	3.86E-08	lb/ton	0%	3.55E-07
						Chromium	2.16E-08	lb/ton	0%	1.99E-07
						Cobalt	1.36E-07	lb/ton	0%	1.25E-06
						Lead	2.35E-07	lb/ton	0%	2.16E-06
						Manganese	6.70E-08	lb/ton	0%	6.16E-07
						Mercury	3.49E-08	lb/ton	0%	3.21E-07
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	SXMS	NF	213.11	tons	Carbon Disulfide	1.23E+01	lb/ton	0%	1.31E+00
Second Concentrator Emergency ICE (AOS1)										
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	304,500	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	8.27E-04
						Toluene	1.97E-06	lb/hp-hr	0%	2.99E-04
						Xylenes	1.35E-06	lb/hp-hr	0%	2.06E-04
						Formaldehyde	5.52E-07	lb/hp-hr	0%	8.41E-05
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	2.69E-05
						Acrolein	5.52E-08	lb/hp-hr	0%	8.40E-06
						Naphthalene	9.10E-07	lb/hp-hr	0%	1.39E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	9.84E-06
						Acenaphthene	3.28E-08	lb/hp-hr	0%	4.99E-06
						Fluorene	8.96E-08	lb/hp-hr	0%	1.36E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	4.35E-05
						Anthracene	8.61E-09	lb/hp-hr	0%	1.31E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	4.29E-06
						Pyrene	2.60E-08	lb/hp-hr	0%	3.95E-06
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	6.63E-07
						Chrysene	1.07E-08	lb/hp-hr	0%	1.63E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	1.18E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	2.32E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-59 (AOS1) (cont'd)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine) (cont'd)	Tier3-450/560-D (cont'd)	NF (cont'd)	304,500	hp-hr (cont'd)	Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	2.74E-07
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	4.41E-07
						Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	3.69E-07
						Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	5.93E-07
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	381,000	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	1.03E-03
						Toluene	1.97E-06	lb/hp-hr	0%	3.75E-04
						Xylenes	1.35E-06	lb/hp-hr	0%	2.57E-04
						Formaldehyde	5.52E-07	lb/hp-hr	0%	1.05E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	3.36E-05
						Acrolein	5.52E-08	lb/hp-hr	0%	1.05E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	1.73E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	1.23E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	6.24E-06
						Fluorene	8.96E-08	lb/hp-hr	0%	1.71E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	5.44E-05
						Anthracene	8.61E-09	lb/hp-hr	0%	1.64E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	5.37E-06
						Pyrene	2.60E-08	lb/hp-hr	0%	4.95E-06
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	8.29E-07
						Chrysene	1.07E-08	lb/hp-hr	0%	2.04E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	1.48E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	2.91E-07
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	3.43E-07
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	5.52E-07
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	4.61E-07
						Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	7.41E-07
						1,1,2,2-Tetrachloroethane	2.66E-07	lb/hp-hr	0%	5.63E-06
						1,1,2-Trichloroethane	1.61E-07	lb/hp-hr	0%	3.40E-06
						1,1-Dichloroethane	1.19E-07	lb/hp-hr	0%	2.51E-06
						1,2-Dichloroethane	1.19E-07	lb/hp-hr	0%	2.51E-06
						1,2-Dichloropropane	1.37E-07	lb/hp-hr	0%	2.89E-06
						1,3-Butadiene	6.96E-06	lb/hp-hr	0%	1.47E-04
						1,3-Dichloropropene	1.33E-07	lb/hp-hr	0%	2.82E-06
						Acetaldehyde	2.93E-05	lb/hp-hr	0%	6.20E-04
						Acrolein	2.76E-05	lb/hp-hr	0%	5.85E-04
						Benzene	1.66E-05	lb/hp-hr	0%	3.51E-04
						Carbon Tetrachloride	1.86E-07	lb/hp-hr	0%	3.94E-06
						Chlorobenzene	1.35E-07	lb/hp-hr	0%	2.87E-06
						Chloroform	1.44E-07	lb/hp-hr	0%	3.05E-06
						Ethylbenzene	2.60E-07	lb/hp-hr	0%	5.51E-06
						Ethylene Dibromide	2.24E-07	lb/hp-hr	0%	4.74E-06
						Formaldehyde	2.15E-04	lb/hp-hr	0%	4.56E-03
						Methanol	3.21E-05	lb/hp-hr	0%	6.80E-04
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	42,350	hp-hr	Methylene Chloride	4.33E-07	lb/hp-hr	0%	9.16E-06
						Naphthalene	1.02E-06	lb/hp-hr	0%	2.16E-05
						Polycyclic Aromatic Hydrocarbons	1.48E-06	lb/hp-hr	0%	3.13E-05
						Styrene	1.25E-07	lb/hp-hr	0%	2.65E-06
						Toluene	5.86E-06	lb/hp-hr	0%	1.24E-04
						Vinyl Chloride	7.54E-08	lb/hp-hr	0%	1.60E-06
						Xylene	2.05E-06	lb/hp-hr	0%	4.34E-05
						1,1,2,2-Tetrachloroethane	2.66E-07	lb/hp-hr	0%	5.63E-06
						1,1,2-Trichloroethane	1.61E-07	lb/hp-hr	0%	3.40E-06
						1,1-Dichloroethane	1.19E-07	lb/hp-hr	0%	2.51E-06
						1,2-Dichloroethane	1.19E-07	lb/hp-hr	0%	2.51E-06
						1,2-Dichloropropane	1.37E-07	lb/hp-hr	0%	2.89E-06
						1,3-Butadiene	6.96E-06	lb/hp-hr	0%	1.47E-04
						1,3-Dichloropropene	1.33E-07	lb/hp-hr	0%	2.82E-06
						Acetaldehyde	2.93E-05	lb/hp-hr	0%	6.20E-04
						Acrolein	2.76E-05	lb/hp-hr	0%	5.85E-04
						Benzene	1.66E-05	lb/hp-hr	0%	3.51E-04
						Carbon Tetrachloride	1.86E-07	lb/hp-hr	0%	3.94E-06
						Chlorobenzene	1.35E-07	lb/hp-hr	0%	2.87E-06
						Chloroform	1.44E-07	lb/hp-hr	0%	3.05E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-62 (AOS1) (cont'd)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine) (cont'd)	SEG-P (cont'd)	NF (cont'd)	42,350	hp-hr (cont'd)	Ethylbenzene	2.60E-07	lb/hp-hr	0%	5.51E-06
						Ethylene Dibromide	2.24E-07	lb/hp-hr	0%	4.74E-06
						Formaldehyde	2.15E-04	lb/hp-hr	0%	4.56E-03
						Methanol	3.21E-05	lb/hp-hr	0%	6.80E-04
						Methylene Chloride	4.33E-07	lb/hp-hr	0%	9.16E-06
						Naphthalene	1.02E-06	lb/hp-hr	0%	2.16E-05
						Polycyclic Aromatic Hydrocarbons	1.48E-06	lb/hp-hr	0%	3.13E-05
						Styrene	1.25E-07	lb/hp-hr	0%	2.65E-06
						Toluene	5.86E-06	lb/hp-hr	0%	1.24E-04
Vinyl Chloride	7.54E-08	lb/hp-hr	0%	1.60E-06						
Xylene	2.05E-06	lb/hp-hr	0%	4.34E-05						
Total of Non-Fugitive Emissions for AOS1:										2.05E+00
Total of Fugitive Emissions for AOS1:										1.98E+00
Total of Non-Fugitive and Fugitive Emissions for AOS1:										4.03E+00
AOS5: Emergency Grizzly Systems										
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	BGScreenC	F	43,800,000	tons	Antimony	2.22E-08	lb/ton	0%	4.87E-04
						Arsenic	3.29E-08	lb/ton	0%	7.21E-04
						Beryllium	7.77E-10	lb/ton	0%	1.70E-05
						Cadmium	5.70E-10	lb/ton	0%	1.25E-05
						Chromium	2.28E-08	lb/ton	0%	5.00E-04
						Cobalt	4.40E-08	lb/ton	0%	9.64E-04
						Lead	1.41E-08	lb/ton	0%	3.08E-04
						Manganese	2.10E-07	lb/ton	0%	4.59E-03
						Mercury	3.26E-10	lb/ton	0%	7.13E-06
Nickel	1.31E-08	lb/ton	0%	2.86E-04						
Selenium	2.06E-09	lb/ton	0%	4.51E-05						
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Ore2TrUnprt	F	43,800,000	tons	Antimony	3.86E-08	lb/ton	90%	8.45E-05
						Arsenic	5.71E-08	lb/ton	90%	1.25E-04
						Beryllium	1.35E-09	lb/ton	90%	2.95E-06
						Cadmium	9.88E-10	lb/ton	90%	2.16E-06
						Chromium	3.96E-08	lb/ton	90%	8.68E-05
						Cobalt	7.64E-08	lb/ton	90%	1.67E-04
						Lead	2.44E-08	lb/ton	90%	5.34E-05
						Manganese	3.64E-07	lb/ton	90%	7.96E-04
						Mercury	5.65E-10	lb/ton	90%	1.24E-06
Nickel	2.26E-08	lb/ton	90%	4.96E-05						
Selenium	3.57E-09	lb/ton	90%	7.81E-06						
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	AWindTOS	F	1.00	acre-yr	Antimony	2.95E-02	lb/acre-yr	0%	1.48E-05
						Arsenic	4.37E-02	lb/acre-yr	0%	2.18E-05
						Beryllium	1.03E-03	lb/acre-yr	0%	5.15E-07
						Cadmium	7.56E-04	lb/acre-yr	0%	3.78E-07
						Chromium	3.03E-02	lb/acre-yr	0%	1.51E-05
						Cobalt	5.84E-02	lb/acre-yr	0%	2.92E-05
						Lead	1.86E-02	lb/acre-yr	0%	9.32E-06
						Manganese	2.78E-01	lb/acre-yr	0%	1.39E-04
						Mercury	4.32E-04	lb/acre-yr	0%	2.16E-07
Nickel	1.73E-02	lb/acre-yr	0%	8.66E-06						
Selenium	2.73E-03	lb/acre-yr	0%	1.36E-06						
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Ore2TrUnprt	F	43,800,000	tons	Antimony	3.86E-08	lb/ton	0%	8.45E-04
						Arsenic	5.71E-08	lb/ton	0%	1.25E-03
						Beryllium	1.35E-09	lb/ton	0%	2.95E-05
						Cadmium	9.88E-10	lb/ton	0%	2.16E-05
						Chromium	3.96E-08	lb/ton	0%	8.68E-04
						Cobalt	7.64E-08	lb/ton	0%	1.67E-03
						Lead	2.44E-08	lb/ton	0%	5.34E-04
						Manganese	3.64E-07	lb/ton	0%	7.96E-03
						Mercury	5.65E-10	lb/ton	0%	1.24E-05
Nickel	2.26E-08	lb/ton	0%	4.96E-04						
Selenium	3.57E-09	lb/ton	0%	7.81E-05						
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Ore2TrPrt	NF	43,800,000	tons	Antimony	4.13E-09	lb/ton	0%	9.04E-05
						Arsenic	6.11E-09	lb/ton	0%	1.34E-04
						Beryllium	1.44E-10	lb/ton	0%	3.16E-06
						Cadmium	1.06E-10	lb/ton	0%	2.32E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
048-3 (AOS5) (cont'd)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5) (cont'd)	Ore2TrPrt (cont'd)	NF (cont'd)	43,800,000	tons (cont'd)	Chromium	4.24E-09	lb/ton	0%	9.28E-05
						Cobalt	8.17E-09	lb/ton	0%	1.79E-04
						Lead	2.61E-09	lb/ton	0%	5.71E-05
						Manganese	3.89E-08	lb/ton	0%	8.52E-04
						Mercury	6.04E-11	lb/ton	0%	1.32E-06
						Nickel	2.42E-09	lb/ton	0%	5.30E-05
						Selenium	3.82E-10	lb/ton	0%	8.36E-06
048-5 (AOS5)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOS5)	Ore2TrPrt	NF	43,800,000	tons	Antimony	4.13E-09	lb/ton	0%	9.04E-05
						Arsenic	6.11E-09	lb/ton	0%	1.34E-04
						Beryllium	1.44E-10	lb/ton	0%	3.16E-06
						Cadmium	1.06E-10	lb/ton	0%	2.32E-06
						Chromium	4.24E-09	lb/ton	0%	9.28E-05
						Cobalt	8.17E-09	lb/ton	0%	1.79E-04
						Lead	2.61E-09	lb/ton	0%	5.71E-05
						Manganese	3.89E-08	lb/ton	0%	8.52E-04
						Mercury	6.04E-11	lb/ton	0%	1.32E-06
						Nickel	2.42E-09	lb/ton	0%	5.30E-05
						Selenium	3.82E-10	lb/ton	0%	8.36E-06
						048-4 (AOS5)	Belt Conveyors 1/2 to Overland Conveyors (AOS5)	Ore2TrPrt	NF	43,800,000
Arsenic	6.11E-09	lb/ton	0%	1.34E-04						
Beryllium	1.44E-10	lb/ton	0%	3.16E-06						
Cadmium	1.06E-10	lb/ton	0%	2.32E-06						
Chromium	4.24E-09	lb/ton	0%	9.28E-05						
Cobalt	8.17E-09	lb/ton	0%	1.79E-04						
Lead	2.61E-09	lb/ton	0%	5.71E-05						
Manganese	3.89E-08	lb/ton	0%	8.52E-04						
Mercury	6.04E-11	lb/ton	0%	1.32E-06						
Nickel	2.42E-09	lb/ton	0%	5.30E-05						
Selenium	3.82E-10	lb/ton	0%	8.36E-06						
Total of Non-Fugitive Emissions for AOS5:										
Total of Fugitive Emissions for AOS5:										2.33E-02
Total of Non-Fugitive and Fugitive Emissions for AOS5:										2.77E-02
HAP Summary										
Greatest Single HAP Emissions Under the Primary Operating Scenario:						Carbon Disulfide				7.73E+00
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:										9.40E+00
Total of Fugitive Emissions Under the Primary Operating Scenario:										5.15E+00
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:										1.45E+01
Greatest Single HAP Emissions Under AOS1:						Carbon Disulfide				9.04E+00
Total of Non-Fugitive Emissions Under AOS1:										1.14E+01
Total of Fugitive Emissions Under AOS1:										6.17E+00
Total of Non-Fugitive and Fugitive Emissions Under AOS1:										1.76E+01

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Mining Operations										
026-3	Drilling	Drilling	F	200	holes	Antimony	9.90E-06	lb/hole	0%	1.98E-03
						Arsenic	1.70E-05	lb/hole	0%	3.40E-03
						Beryllium	1.07E-06	lb/hole	0%	2.13E-04
						Cadmium	3.86E-07	lb/hole	0%	7.73E-05
						Chromium	2.33E-05	lb/hole	0%	4.65E-03
						Cobalt	2.20E-05	lb/hole	0%	4.39E-03
						Lead	1.81E-05	lb/hole	0%	3.61E-03
						Manganese	2.01E-04	lb/hole	0%	4.02E-02
						Mercury	2.01E-07	lb/hole	0%	4.02E-05
						Nickel	1.54E-05	lb/hole	0%	3.08E-03
						Selenium	1.63E-06	lb/hole	0%	3.25E-04
						Lead	1.72E-02	lb/blast	0%	1.72E-02
						POM	5.67E-03	lb/blast	0%	5.67E-03
						Formaldehyde	1.05E-01	lb/blast	0%	1.05E-01
						Antimony	8.27E-03	lb/blast	0%	8.27E-03
						Arsenic	1.51E-02	lb/blast	0%	1.51E-02
						Beryllium	1.59E-03	lb/blast	0%	1.59E-03
						Cadmium	1.02E-03	lb/blast	0%	1.02E-03
026-2	Blasting	HBlasting	F	1	blasts	Chromium	2.01E-02	lb/blast	0%	2.01E-02
						Cobalt	1.83E-02	lb/blast	0%	1.83E-02
						Manganese	1.69E-01	lb/blast	0%	1.69E-01
						Mercury	8.70E-04	lb/blast	0%	8.70E-04
						Nickel	1.36E-02	lb/blast	0%	1.36E-02
						Selenium	4.87E-03	lb/blast	0%	4.87E-03
						Antimony	3.62E-05	lb/VMT	90%	1.71E-03
						Arsenic	6.22E-05	lb/VMT	90%	2.94E-03
						Beryllium	3.91E-06	lb/VMT	90%	1.85E-04
022-1	Haul Truck Travel Inside the Pit	HTravel	F	473	VMT	Cadmium	1.41E-06	lb/VMT	90%	6.68E-05
						Chromium	8.51E-05	lb/VMT	90%	4.02E-03
						Cobalt	8.04E-05	lb/VMT	90%	3.80E-03
						Lead	6.61E-05	lb/VMT	90%	3.13E-03
						Manganese	7.36E-04	lb/VMT	90%	3.48E-02
						Mercury	7.35E-07	lb/VMT	90%	3.47E-05
						Nickel	5.63E-05	lb/VMT	90%	2.66E-03
						Selenium	5.95E-06	lb/VMT	90%	2.81E-04
Arsenic	6.22E-05	lb/VMT	90%	9.79E-04						
Beryllium	3.91E-06	lb/VMT	90%	6.15E-05						
Cadmium	1.41E-06	lb/VMT	90%	2.23E-05						
Chromium	8.51E-05	lb/VMT	90%	1.34E-03						
Cobalt	8.04E-05	lb/VMT	90%	1.27E-03						
Lead	6.61E-05	lb/VMT	90%	1.04E-03						
Manganese	7.36E-04	lb/VMT	90%	1.16E-02						
Mercury	7.35E-07	lb/VMT	90%	1.16E-05						
022-2	Haul Truck Travel Outside the Pit	HTravel	F	158	VMT	Nickel	5.63E-05	lb/VMT	90%	8.87E-04
						Selenium	5.95E-06	lb/VMT	90%	9.37E-05
						Antimony	3.62E-05	lb/VMT	90%	6.80E-03
						Arsenic	6.22E-05	lb/VMT	90%	1.17E-02
						Beryllium	3.91E-06	lb/VMT	90%	7.33E-04
						Cadmium	1.41E-06	lb/VMT	90%	2.65E-04
						Chromium	8.51E-05	lb/VMT	90%	1.60E-02
						Cobalt	8.04E-05	lb/VMT	90%	1.51E-02
						Lead	6.61E-05	lb/VMT	90%	1.24E-02
023-3	Other Vehicle Travel	HTravel	F	1,877.44	VMT	Manganese	7.36E-04	lb/VMT	90%	1.38E-01
						Mercury	7.35E-07	lb/VMT	90%	1.38E-04
						Nickel	5.63E-05	lb/VMT	90%	1.06E-02
						Selenium	5.95E-06	lb/VMT	90%	1.12E-03
						Antimony	3.62E-05	lb/VMT	90%	6.80E-03
						Arsenic	6.22E-05	lb/VMT	90%	1.17E-02
						Beryllium	3.91E-06	lb/VMT	90%	7.33E-04
						Cadmium	1.41E-06	lb/VMT	90%	2.65E-04
						Chromium	8.51E-05	lb/VMT	90%	1.60E-02
023-1	Dozer Operation	Dozer	F	16	hours	Cobalt	8.04E-05	lb/VMT	90%	1.51E-02
						Lead	6.61E-05	lb/VMT	90%	1.24E-02
						Manganese	7.36E-04	lb/VMT	90%	1.38E-01
						Mercury	7.35E-07	lb/VMT	90%	1.38E-04
						Nickel	5.63E-05	lb/VMT	90%	1.06E-02
						Selenium	5.95E-06	lb/VMT	90%	1.12E-03
						Antimony	2.04E-05	lb/hr	0%	3.26E-04
						Arsenic	3.50E-05	lb/hr	0%	5.59E-04
						Beryllium	2.20E-06	lb/hr	0%	3.52E-05
						Cadmium	7.95E-07	lb/hr	0%	1.27E-05
						Chromium	4.79E-05	lb/hr	0%	7.66E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
023-1 (cont'd)	Dozer Operation (cont'd)	Dozer (cont'd)	F (cont'd)	16	hours (cont'd)	Cobalt	4.52E-05	lb/hr	0%	7.23E-04
						Lead	3.72E-05	lb/hr	0%	5.95E-04
						Manganese	4.14E-04	lb/hr	0%	6.62E-03
						Mercury	4.14E-07	lb/hr	0%	6.62E-06
						Nickel	3.17E-05	lb/hr	0%	5.07E-04
023-2	Road Grader Operation	Grader	F	30	VMT	Selenium	3.35E-06	lb/hr	0%	5.35E-05
						Antimony	1.40E-05	lb/VMT	90%	4.20E-05
						Arsenic	2.40E-05	lb/VMT	90%	7.20E-05
						Beryllium	1.51E-06	lb/VMT	90%	4.52E-06
						Cadmium	5.46E-07	lb/VMT	90%	1.64E-06
						Chromium	3.29E-05	lb/VMT	90%	9.86E-05
						Cobalt	3.10E-05	lb/VMT	90%	9.30E-05
						Lead	2.55E-05	lb/VMT	90%	7.66E-05
						Manganese	2.84E-04	lb/VMT	90%	8.52E-04
						Mercury	2.84E-07	lb/VMT	90%	8.51E-07
021-1	Loading Mined Material into Haul Trucks	Ore1TrUnpr t	F	30,515	tons	Nickel	2.17E-05	lb/VMT	90%	6.52E-05
						Selenium	2.30E-06	lb/VMT	90%	6.89E-06
						Antimony	1.63E-08	lb/ton	0%	4.97E-04
						Arsenic	2.79E-08	lb/ton	0%	8.53E-04
						Beryllium	1.76E-09	lb/ton	0%	5.36E-05
						Cadmium	6.36E-10	lb/ton	0%	1.94E-05
						Chromium	3.83E-08	lb/ton	0%	1.17E-03
						Cobalt	3.61E-08	lb/ton	0%	1.10E-03
						Lead	2.97E-08	lb/ton	0%	9.07E-04
						Manganese	3.31E-07	lb/ton	0%	1.01E-02
001-6 / 001-7	Unloading Ore to Primary Crusher 1 and Primary Crusher 2	Ore2TrUnpr t	F	12,865	tons	Mercury	3.31E-10	lb/ton	0%	1.01E-05
						Nickel	2.53E-08	lb/ton	0%	7.73E-04
						Selenium	2.67E-09	lb/ton	0%	8.16E-05
						Antimony	3.86E-08	lb/ton	0%	4.96E-04
						Arsenic	5.71E-08	lb/ton	0%	7.35E-04
						Beryllium	1.35E-09	lb/ton	0%	1.73E-05
						Cadmium	9.88E-10	lb/ton	0%	1.27E-05
						Chromium	3.96E-08	lb/ton	0%	5.10E-04
						Cobalt	7.64E-08	lb/ton	0%	9.82E-04
						Lead	2.44E-08	lb/ton	0%	3.14E-04
045-3	Unloading Ore to Leaching Areas	Ore3TrUnpr t	F	3,433.33	tons	Manganese	3.64E-07	lb/ton	0%	4.68E-03
						Mercury	5.65E-10	lb/ton	0%	7.26E-06
						Nickel	2.26E-08	lb/ton	0%	2.91E-04
						Selenium	3.57E-09	lb/ton	0%	4.59E-05
						Antimony	0.00E+00	lb/ton	0%	0.00E+00
						Arsenic	1.54E-09	lb/ton	0%	5.29E-06
						Beryllium	3.54E-09	lb/ton	0%	1.22E-05
						Cadmium	0.00E+00	lb/ton	0%	0.00E+00
						Chromium	6.16E-09	lb/ton	0%	2.12E-05
						Cobalt	1.10E-08	lb/ton	0%	3.79E-05
045-1	Unloading Overburden/Low Grade Ore to Storage Areas	Ore4TrUnpr t	F	14,216.67	tons	Lead	1.64E-08	lb/ton	0%	5.64E-05
						Manganese	2.34E-07	lb/ton	0%	8.05E-04
						Mercury	2.31E-10	lb/ton	0%	7.93E-07
						Nickel	8.98E-09	lb/ton	0%	3.08E-05
						Selenium	0.00E+00	lb/ton	0%	0.00E+00
						Antimony	8.47E-09	lb/ton	0%	1.20E-04
						Arsenic	1.89E-08	lb/ton	0%	2.69E-04
						Beryllium	1.54E-09	lb/ton	0%	2.19E-05
						Cadmium	6.03E-10	lb/ton	0%	8.58E-06
						Chromium	4.53E-08	lb/ton	0%	6.44E-04
Total of Non-Fugitive Emissions for Mining Operations:										0.00E+00
Total of Fugitive Emissions for Mining Operations:										7.70E-01

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Total of Non-Fugitive and Fugitive Emissions for Mining Operations:										7.70E-01
Primary Crushing and Overland Conveying Operations										
001-1	Processes Controlled by Scrubber C18	C18	NF	660,000	dscf	Antimony	5.80E-11	lb/dscf	0%	3.83E-05
						Arsenic	8.58E-11	lb/dscf	0%	5.66E-05
						Beryllium	2.03E-12	lb/dscf	0%	1.34E-06
						Cadmium	1.49E-12	lb/dscf	0%	9.80E-07
						Chromium	5.95E-11	lb/dscf	0%	3.93E-05
						Cobalt	1.15E-10	lb/dscf	0%	7.57E-05
						Lead	3.66E-11	lb/dscf	0%	2.42E-05
						Manganese	5.46E-10	lb/dscf	0%	3.61E-04
						Mercury	8.49E-13	lb/dscf	0%	5.60E-07
001-5	Processes Controlled by Dust Collector C51	C51	NF	900,000	dscf	Nickel	3.40E-11	lb/dscf	0%	2.25E-05
						Selenium	5.36E-12	lb/dscf	0%	3.54E-06
						Antimony	5.80E-11	lb/dscf	0%	5.22E-05
						Arsenic	8.58E-11	lb/dscf	0%	7.72E-05
						Beryllium	2.03E-12	lb/dscf	0%	1.82E-06
						Cadmium	1.49E-12	lb/dscf	0%	1.34E-06
						Chromium	5.95E-11	lb/dscf	0%	5.36E-05
						Cobalt	1.15E-10	lb/dscf	0%	1.03E-04
						Lead	3.66E-11	lb/dscf	0%	3.30E-05
001-11 / 001-2	Overland Conveyor 2 to Overland Conveyor 3 and/or Overland Conveyor 3A to Overland Conveyor 3	Ore2TrPrt	NF	7,600	tons	Manganese	5.46E-10	lb/dscf	0%	4.92E-04
						Mercury	8.49E-13	lb/dscf	0%	7.64E-07
						Nickel	3.40E-11	lb/dscf	0%	3.06E-05
						Selenium	5.36E-12	lb/dscf	0%	4.83E-06
						Antimony	4.13E-09	lb/ton	0%	3.14E-05
						Arsenic	6.11E-09	lb/ton	0%	4.64E-05
						Beryllium	1.44E-10	lb/ton	0%	1.10E-06
						Cadmium	1.06E-10	lb/ton	0%	8.03E-07
						Chromium	4.24E-09	lb/ton	0%	3.22E-05
001-8	Overland Conveyor 3 to Overland Conveyor 4	Ore2TrPrt	NF	7,600	tons	Cobalt	8.17E-09	lb/ton	0%	6.21E-05
						Lead	2.61E-09	lb/ton	0%	1.98E-05
						Manganese	3.89E-08	lb/ton	0%	2.96E-04
						Mercury	6.04E-11	lb/ton	0%	4.59E-07
						Nickel	2.42E-09	lb/ton	0%	1.84E-05
						Selenium	3.82E-10	lb/ton	0%	2.90E-06
						Antimony	4.13E-09	lb/ton	0%	3.14E-05
						Arsenic	6.11E-09	lb/ton	0%	4.64E-05
						Beryllium	1.44E-10	lb/ton	0%	1.10E-06
001-9	Overland Conveyor 4 to Radial Stacker 5	Ore2TrPrt	NF	7,600	tons	Cadmium	1.06E-10	lb/ton	0%	8.03E-07
						Chromium	4.24E-09	lb/ton	0%	3.22E-05
						Cobalt	8.17E-09	lb/ton	0%	6.21E-05
						Lead	2.61E-09	lb/ton	0%	1.98E-05
						Manganese	3.89E-08	lb/ton	0%	2.96E-04
						Mercury	6.04E-11	lb/ton	0%	4.59E-07
						Nickel	2.42E-09	lb/ton	0%	1.84E-05
						Selenium	3.82E-10	lb/ton	0%	2.90E-06
						Antimony	4.13E-09	lb/ton	0%	3.14E-05
001-4	Radial Stacker 5 to Coarse Ore Stockpiles 1/4	Ore2TrUnpr t	F	0	tons	Beryllium	1.44E-10	lb/ton	0%	1.10E-06
						Cadmium	1.06E-10	lb/ton	0%	8.03E-07
						Chromium	4.24E-09	lb/ton	0%	3.22E-05
						Cobalt	8.17E-09	lb/ton	0%	6.21E-05
						Lead	2.61E-09	lb/ton	0%	1.98E-05
						Manganese	3.89E-08	lb/ton	0%	2.96E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units								
001-4 (cont'd)	Radial Stacker 5 to Coarse Ore Stockpiles 1/4 (cont'd)	Ore2TrUnpr t (cont'd)	F (cont'd)	0	tons (cont'd)	Lead	2.44E-08	lb/ton	0%	0.00E+00						
						Manganese	3.64E-07	lb/ton	0%	0.00E+00						
						Mercury	5.65E-10	lb/ton	0%	0.00E+00						
						Nickel	2.26E-08	lb/ton	0%	0.00E+00						
						Selenium	3.57E-09	lb/ton	0%	0.00E+00						
001-10	Radial Stacker 5 to Free-Standing Stacker 6	Ore2TrUnpr t	F	7,600	tons	Antimony	3.86E-08	lb/ton	0%	2.93E-04						
						Arsenic	5.71E-08	lb/ton	0%	4.34E-04						
						Beryllium	1.35E-09	lb/ton	0%	1.02E-05						
						Cadmium	9.88E-10	lb/ton	0%	7.51E-06						
						Chromium	3.96E-08	lb/ton	0%	3.01E-04						
						Cobalt	7.64E-08	lb/ton	0%	5.80E-04						
						Lead	2.44E-08	lb/ton	0%	1.85E-04						
						Manganese	3.64E-07	lb/ton	0%	2.76E-03						
						Mercury	5.65E-10	lb/ton	0%	4.29E-06						
						Nickel	2.26E-08	lb/ton	0%	1.72E-04						
						Selenium	3.57E-09	lb/ton	0%	2.71E-05						
						001-3	Free-Standing Stacker 6 to Coarse Ore Stockpile 5	Ore2TrUnpr t	F	7,600	tons	Antimony	3.86E-08	lb/ton	0%	2.93E-04
												Arsenic	5.71E-08	lb/ton	0%	4.34E-04
Beryllium	1.35E-09	lb/ton	0%	1.02E-05												
Cadmium	9.88E-10	lb/ton	0%	7.51E-06												
Chromium	3.96E-08	lb/ton	0%	3.01E-04												
Cobalt	7.64E-08	lb/ton	0%	5.80E-04												
Lead	2.44E-08	lb/ton	0%	1.85E-04												
Manganese	3.64E-07	lb/ton	0%	2.76E-03												
Mercury	5.65E-10	lb/ton	0%	4.29E-06												
Nickel	2.26E-08	lb/ton	0%	1.72E-04												
Selenium	3.57E-09	lb/ton	0%	2.71E-05												
027-1	Wind Erosion of Coarse Ore Stockpiles 1/5	HWindCOS 1/5	F	9.22	acre-yr	Antimony	3.37E-06	lb/acre-hr	0%	3.10E-05						
						Arsenic	4.99E-06	lb/acre-hr	0%	4.60E-05						
						Beryllium	1.18E-07	lb/acre-hr	0%	1.08E-06						
						Cadmium	8.63E-08	lb/acre-hr	0%	7.95E-07						
						Chromium	3.46E-06	lb/acre-hr	0%	3.19E-05						
						Cobalt	6.67E-06	lb/acre-hr	0%	6.15E-05						
						Lead	2.13E-06	lb/acre-hr	0%	1.96E-05						
						Manganese	3.17E-05	lb/acre-hr	0%	2.93E-04						
						Mercury	4.93E-08	lb/acre-hr	0%	4.55E-07						
						Nickel	1.98E-06	lb/acre-hr	0%	1.82E-05						
						Selenium	3.11E-07	lb/acre-hr	0%	2.87E-06						
Total of Non-Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										3.01E-03						
Total of Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										1.01E-02						
Total of Non-Fugitive and Fugitive Emissions for Primary Crushing and Overland Conveying Operations:										1.31E-02						
Milling Operations																
002-1	Processes Controlled by GL1 Dust Collector C1	C1	NF	900,000	dscf	Antimony	5.32E-11	lb/dscf	0%	4.79E-05						
						Arsenic	7.88E-11	lb/dscf	0%	7.09E-05						
						Beryllium	1.86E-12	lb/dscf	0%	1.67E-06						
						Cadmium	1.36E-12	lb/dscf	0%	1.23E-06						
						Chromium	5.47E-11	lb/dscf	0%	4.92E-05						
						Cobalt	1.05E-10	lb/dscf	0%	9.49E-05						
						Lead	3.37E-11	lb/dscf	0%	3.03E-05						
						Manganese	5.02E-10	lb/dscf	0%	4.52E-04						
						Mercury	7.79E-13	lb/dscf	0%	7.01E-07						
						Nickel	3.12E-11	lb/dscf	0%	2.81E-05						
002-2	Processes Controlled by GL2 Dust Collector C2	C2	NF	900,000	dscf	Selenium	4.92E-12	lb/dscf	0%	4.43E-06						
						Antimony	5.32E-11	lb/dscf	0%	4.79E-05						
						Arsenic	7.88E-11	lb/dscf	0%	7.09E-05						
						Beryllium	1.86E-12	lb/dscf	0%	1.67E-06						
						Cadmium	1.36E-12	lb/dscf	0%	1.23E-06						
						Chromium	5.47E-11	lb/dscf	0%	4.92E-05						
						Cobalt	1.05E-10	lb/dscf	0%	9.49E-05						
						Lead	3.37E-11	lb/dscf	0%	3.03E-05						
						Manganese	5.02E-10	lb/dscf	0%	4.52E-04						
Mercury	7.79E-13	lb/dscf	0%	7.01E-07												

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
002-2 (cont'd)	Processes Controlled by GL2 Dust Collector C2 (cont'd)	C2 (cont'd)	NF (cont'd)	900,000	dscf (cont'd)	Nickel	3.12E-11	lb/dscf	0%	2.81E-05
002-3	Processes Controlled by GL3 Dust Collector DC3	DC3	NF	900,000	dscf	Selenium	4.92E-12	lb/dscf	0%	4.43E-06
						Antimony	5.32E-11	lb/dscf	0%	4.79E-05
						Arsenic	7.88E-11	lb/dscf	0%	7.09E-05
						Beryllium	1.86E-12	lb/dscf	0%	1.67E-06
						Cadmium	1.36E-12	lb/dscf	0%	1.23E-06
						Chromium	5.47E-11	lb/dscf	0%	4.92E-05
						Cobalt	1.05E-10	lb/dscf	0%	9.49E-05
						Lead	3.37E-11	lb/dscf	0%	3.03E-05
						Manganese	5.02E-10	lb/dscf	0%	4.52E-04
						Mercury	7.79E-13	lb/dscf	0%	7.01E-07
002-4	Processes Controlled by GL4 Dust Collector DC4	DC4	NF	900,000	dscf	Nickel	3.12E-11	lb/dscf	0%	2.81E-05
						Selenium	4.92E-12	lb/dscf	0%	4.43E-06
						Antimony	5.32E-11	lb/dscf	0%	4.79E-05
						Arsenic	7.88E-11	lb/dscf	0%	7.09E-05
						Beryllium	1.86E-12	lb/dscf	0%	1.67E-06
						Cadmium	1.36E-12	lb/dscf	0%	1.23E-06
						Chromium	5.47E-11	lb/dscf	0%	4.92E-05
						Cobalt	1.05E-10	lb/dscf	0%	9.49E-05
						Lead	3.37E-11	lb/dscf	0%	3.03E-05
						Manganese	5.02E-10	lb/dscf	0%	4.52E-04
002-6	Processes Controlled by GL5 Dust Collector DC5	DC5	NF	900,000	dscf	Mercury	7.79E-13	lb/dscf	0%	7.01E-07
						Nickel	3.12E-11	lb/dscf	0%	2.81E-05
						Selenium	4.92E-12	lb/dscf	0%	4.43E-06
						Antimony	1.72E-11	lb/dscf	0%	1.55E-05
						Arsenic	2.54E-11	lb/dscf	0%	2.29E-05
						Beryllium	6.00E-13	lb/dscf	0%	5.40E-07
						Cadmium	4.40E-13	lb/dscf	0%	3.96E-07
						Chromium	1.76E-11	lb/dscf	0%	1.59E-05
						Cobalt	3.40E-11	lb/dscf	0%	3.06E-05
						Lead	1.09E-11	lb/dscf	0%	9.77E-06
Total of Non-Fugitive Emissions for Milling Operations:										3.38E-03
Total of Fugitive Emissions for Milling Operations:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Milling Operations:										3.38E-03
Bulk and Molybdenum Flotation Operations										
044-1	Bulk and Molybdenum Flotation Equipment	MFE	F	255.50	tons	Benzene	8.67E-06	lb/ton	0%	2.21E-03
						Ethylbenzene	1.46E-05	lb/ton	0%	3.73E-03
						n-Hexane	1.83E-06	lb/ton	0%	4.66E-04
						Toluene	1.04E-04	lb/ton	0%	2.67E-02
Total of Non-Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										0.00E+00
Total of Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										1.03E-01
Total of Non-Fugitive and Fugitive Emissions for Bulk and Molybdenum Flotation Operations:										1.03E-01
Copper Concentrate Processing and Loading Operations										
006-4	Copper Concentrate Filters 1/2 to Concentrate Filter Conveyors 1/2	CCTrPrt	NF	240	tons	Antimony	4.85E-08	lb/ton	0%	1.16E-05
						Arsenic	8.06E-08	lb/ton	0%	1.93E-05
						Beryllium	2.37E-10	lb/ton	0%	5.68E-08
						Cadmium	8.88E-10	lb/ton	0%	2.13E-07
						Chromium	4.97E-10	lb/ton	0%	1.19E-07
						Cobalt	3.12E-09	lb/ton	0%	7.48E-07
						Lead	1.99E-08	lb/ton	0%	4.78E-06
						Manganese	1.54E-09	lb/ton	0%	3.69E-07
						Mercury	8.03E-10	lb/ton	0%	1.93E-07
006-5	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor	CCTrPrt	NF	240	tons	Nickel	2.25E-09	lb/ton	0%	5.40E-07
						Selenium	3.91E-09	lb/ton	0%	9.37E-07
						Antimony	4.85E-08	lb/ton	0%	1.16E-05
						Arsenic	8.06E-08	lb/ton	0%	1.93E-05
Total of Non-Fugitive and Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										1.68E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
006-5 (cont'd)	Concentrate Filter Conveyors 1/2 to Filtered Concentrate Transfer Conveyor (cont'd)	CCTrPrt (cont'd)	NF (cont'd)	240	tons (cont'd)	Chromium	4.97E-10	lb/ton	0%	1.19E-07
						Cobalt	3.12E-09	lb/ton	0%	7.48E-07
						Lead	1.99E-08	lb/ton	0%	4.78E-06
						Manganese	1.54E-09	lb/ton	0%	3.69E-07
						Mercury	8.03E-10	lb/ton	0%	1.93E-07
						Nickel	2.25E-09	lb/ton	0%	5.40E-07
						Selenium	3.91E-09	lb/ton	0%	9.37E-07
006-8	Filtered Concentrate Transfer Conveyor to the Main Indoor Copper Concentrate Stockpile	CCTrPrt	F	240	tons	Antimony	4.85E-08	lb/ton	0%	1.16E-05
						Arsenic	8.06E-08	lb/ton	0%	1.93E-05
						Beryllium	2.37E-10	lb/ton	0%	5.68E-08
						Cadmium	8.88E-10	lb/ton	0%	2.13E-07
						Chromium	4.97E-10	lb/ton	0%	1.19E-07
						Cobalt	3.12E-09	lb/ton	0%	7.48E-07
						Lead	1.99E-08	lb/ton	0%	4.78E-06
						Manganese	1.54E-09	lb/ton	0%	3.69E-07
						Mercury	8.03E-10	lb/ton	0%	1.93E-07
						Nickel	2.25E-09	lb/ton	0%	5.40E-07
						Selenium	3.91E-09	lb/ton	0%	9.37E-07
006-14	Main Indoor Copper Concentrate Stockpile to the Secondary Indoor Copper Concentrate Stockpile	CCTrPrt	F	240	tons	Antimony	4.85E-08	lb/ton	0%	1.16E-05
						Arsenic	8.06E-08	lb/ton	0%	1.93E-05
						Beryllium	2.37E-10	lb/ton	0%	5.68E-08
						Cadmium	8.88E-10	lb/ton	0%	2.13E-07
						Chromium	4.97E-10	lb/ton	0%	1.19E-07
						Cobalt	3.12E-09	lb/ton	0%	7.48E-07
						Lead	1.99E-08	lb/ton	0%	4.78E-06
						Manganese	1.54E-09	lb/ton	0%	3.69E-07
						Mercury	8.03E-10	lb/ton	0%	1.93E-07
						Nickel	2.25E-09	lb/ton	0%	5.40E-07
						Selenium	3.91E-09	lb/ton	0%	9.37E-07
027-5	Wind Erosion of the Main and Secondary Indoor Copper Concentrate Stockpiles	HWindICC	F	0.50	acre-yr	Antimony	5.51E-03	lb/acre-hr	75%	6.89E-04
						Arsenic	9.15E-03	lb/acre-hr	75%	1.14E-03
						Beryllium	2.69E-05	lb/acre-hr	75%	3.36E-06
						Cadmium	1.01E-04	lb/acre-hr	75%	1.26E-05
						Chromium	5.65E-05	lb/acre-hr	75%	7.06E-06
						Cobalt	3.54E-04	lb/acre-hr	75%	4.43E-05
						Lead	2.26E-03	lb/acre-hr	75%	2.83E-04
						Manganese	1.75E-04	lb/acre-hr	75%	2.18E-05
						Mercury	9.12E-05	lb/acre-hr	75%	1.14E-05
						Nickel	2.55E-04	lb/acre-hr	75%	3.19E-05
006-6	Main and Secondary Indoor Copper Concentrate Stockpiles to the Outdoor Copper Concentrate Stockpile	CCTrUnprt	F	240	tons	Selenium	4.44E-04	lb/acre-hr	75%	5.55E-05
						Antimony	4.54E-07	lb/ton	0%	1.09E-04
						Arsenic	7.53E-07	lb/ton	0%	1.81E-04
						Beryllium	2.21E-09	lb/ton	0%	5.31E-07
						Cadmium	8.30E-09	lb/ton	0%	1.99E-06
						Chromium	4.65E-09	lb/ton	0%	1.12E-06
						Cobalt	2.91E-08	lb/ton	0%	6.99E-06
						Lead	1.86E-07	lb/ton	0%	4.47E-05
						Manganese	1.44E-08	lb/ton	0%	3.45E-06
						Mercury	7.51E-09	lb/ton	0%	1.80E-06
						Nickel	2.10E-08	lb/ton	0%	5.04E-06
027-4	Wind Erosion of Outdoor Copper Concentrate Stockpile	HWindOCC	F	1.80	acre-yr	Selenium	3.65E-08	lb/ton	0%	8.76E-06
						Antimony	5.51E-03	lb/acre-hr	0%	9.92E-03
						Arsenic	9.15E-03	lb/acre-hr	0%	1.65E-02
						Beryllium	2.69E-05	lb/acre-hr	0%	4.84E-05
						Cadmium	1.01E-04	lb/acre-hr	0%	1.81E-04
						Chromium	5.65E-05	lb/acre-hr	0%	1.02E-04
						Cobalt	3.54E-04	lb/acre-hr	0%	6.37E-04
						Lead	2.26E-03	lb/acre-hr	0%	4.07E-03
						Manganese	1.75E-04	lb/acre-hr	0%	3.15E-04
						Mercury	9.12E-05	lb/acre-hr	0%	1.64E-04
						Nickel	2.55E-04	lb/acre-hr	0%	4.60E-04
006-7	All Copper Concentrate Stockpiles to Trucks	CCTrUnprt	F	240	tons	Selenium	4.44E-04	lb/acre-hr	0%	7.99E-04
						Antimony	4.54E-07	lb/ton	0%	1.09E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
006-7 (cont'd)	All Copper Concentrate Stockpiles to Trucks (cont'd)	CCTrUnprt (cont'd)	F (cont'd)	240	tons (cont'd)	Arsenic	7.53E-07	lb/ton	0%	1.81E-04
						Beryllium	2.21E-09	lb/ton	0%	5.31E-07
						Cadmium	8.30E-09	lb/ton	0%	1.99E-06
						Chromium	4.65E-09	lb/ton	0%	1.12E-06
						Cobalt	2.91E-08	lb/ton	0%	6.99E-06
						Lead	1.86E-07	lb/ton	0%	4.47E-05
						Manganese	1.44E-08	lb/ton	0%	3.45E-06
						Mercury	7.51E-09	lb/ton	0%	1.80E-06
Nickel	2.10E-08	lb/ton	0%	5.04E-06						
Selenium	3.65E-08	lb/ton	0%	8.76E-06						7.79E-05
Total of Non-Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										
Total of Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										3.63E-02
Total of Non-Fugitive and Fugitive Emissions for Copper Concentrate Processing and Loading Operations:										3.64E-02
Molybdenum Concentrate Processing and Bagging Operations										
052-1	Molybdenum Concentrate Surge Bin to Molybdenum Concentrate Bagger	MC1TrPrt	F	5.00	tons	Antimony	5.34E-08	lb/ton	0%	2.67E-07
						Arsenic	5.83E-08	lb/ton	0%	2.91E-07
						Beryllium	2.61E-10	lb/ton	0%	1.30E-09
						Cadmium	9.78E-10	lb/ton	0%	4.89E-09
						Chromium	5.47E-10	lb/ton	0%	2.74E-09
						Cobalt	3.43E-09	lb/ton	0%	1.72E-08
						Lead	5.94E-09	lb/ton	0%	2.97E-08
						Manganese	1.69E-09	lb/ton	0%	8.47E-09
						Mercury	8.84E-10	lb/ton	0%	4.42E-09
						Nickel	2.48E-09	lb/ton	0%	1.24E-08
Selenium	6.65E-09	lb/ton	0%	3.32E-08						0.00E+00
Total of Non-Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:										
Total of Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:										6.73E-07
Total of Non-Fugitive and Fugitive Emissions for Molybdenum Concentrate Processing and Bagging Operations:										6.73E-07
Tailings Operations										
027-3	Wind Erosion of Tailings	HWindT	F	4,200	acre-yr	Antimony	7.06E-08	lb/acre-hr	0%	2.96E-04
						Arsenic	9.36E-08	lb/acre-hr	0%	3.93E-04
						Beryllium	2.35E-08	lb/acre-hr	0%	9.88E-05
						Cadmium	2.35E-08	lb/acre-hr	0%	9.88E-05
						Chromium	5.88E-07	lb/acre-hr	0%	2.47E-03
						Cobalt	6.96E-07	lb/acre-hr	0%	2.93E-03
						Lead	1.29E-07	lb/acre-hr	0%	5.44E-04
						Manganese	3.37E-06	lb/acre-hr	0%	1.42E-02
						Mercury	5.88E-11	lb/acre-hr	0%	2.47E-07
						Nickel	4.71E-07	lb/acre-hr	0%	1.98E-03
Selenium	2.59E-08	lb/acre-hr	0%	1.09E-04						0.00E+00
Total of Non-Fugitive Emissions for Tailings Operations:										
Total of Fugitive Emissions for Tailings Operations:										2.31E-02
Total of Non-Fugitive and Fugitive Emissions for Tailings Operations:										2.31E-02
Concentrate Leach Plant										
042-10	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr)	NGC	NF	25	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.23E-05
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	5.88E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	4.41E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	3.92E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	5.88E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Benzene	2.06E-06	lb/MMBtu	0%	5.15E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	2.94E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	2.94E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	2.94E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	2.94E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	7.35E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	6.86E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	1.84E-03

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
042-10 (cont'd)	Natural Gas Primary Package Boiler G3 (25 MMBtu/hr) / Natural Gas Backup Package Boiler G1 (25 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	25	MMBtu (cont'd)	Hexane	1.76E-03	lb/MMBtu	0%	4.41E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	4.41E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	1.50E-05
						Phenanthrene	1.67E-08	lb/MMBtu	0%	4.17E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	1.23E-07
						Toluene	3.33E-06	lb/MMBtu	0%	8.33E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	4.90E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	2.94E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	2.70E-05
						Chromium	1.37E-06	lb/MMBtu	0%	3.43E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	2.06E-06
						Manganese	3.73E-07	lb/MMBtu	0%	9.31E-06
						Mercury	2.55E-07	lb/MMBtu	0%	6.37E-06
						Nickel	2.06E-06	lb/MMBtu	0%	5.15E-05
042-11	CLP Cooling Tower	CLP-CT	F	240	1000 gal	Selenium	2.35E-08	lb/MMBtu	0%	5.88E-07
						Antimony	0.00E+00	lb/1000 gal	0%	0.00E+00
						Arsenic	0.00E+00	lb/1000 gal	0%	0.00E+00
						Beryllium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Cadmium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chromium	5.62E-12	lb/1000 gal	0%	1.35E-09
						Cobalt	0.00E+00	lb/1000 gal	0%	0.00E+00
						Lead	1.40E-11	lb/1000 gal	0%	3.37E-09
						Manganese	6.95E-10	lb/1000 gal	0%	1.67E-07
						Mercury	0.00E+00	lb/1000 gal	0%	0.00E+00
						Nickel	0.00E+00	lb/1000 gal	0%	0.00E+00
042-4	Processes Controlled by Primary Venturi Scrubber CH-02 and Secondary Venturi Scrubber CH-03	CH-02/03	NF	1	hours	Selenium	0.00E+00	lb/1000 gal	0%	0.00E+00
						Chloromethane	7.83E-05	lb/hr	0%	7.83E-05
						Chloroethane	1.17E-05	lb/hr	0%	1.17E-05
						Methyl Iodide	1.56E-04	lb/hr	0%	1.56E-04
						Methylene Chloride	7.83E-05	lb/hr	0%	7.83E-05
						Carbon Disulfide	2.88E-02	lb/hr	0%	2.88E-02
						Benzene	3.00E-04	lb/hr	0%	3.00E-04
						Methyl Isobutyl Ketone	3.23E-04	lb/hr	0%	3.23E-04
						Toluene	3.17E-04	lb/hr	0%	3.17E-04
						1,1,2-Trichloroethane	2.25E-05	lb/hr	0%	2.25E-05
						Ethylbenzene	1.05E-04	lb/hr	0%	1.05E-04
						Xylenes	4.16E-04	lb/hr	0%	4.16E-04
						Antimony	5.64E-03	lb/hr	0%	5.64E-03
						Arsenic	6.88E-02	lb/hr	0%	6.88E-02
						Beryllium	2.75E-05	lb/hr	0%	2.75E-05
						Cadmium	1.03E-04	lb/hr	0%	1.03E-04
						Chromium	5.78E-05	lb/hr	0%	5.78E-05
						Cobalt	3.62E-04	lb/hr	0%	3.62E-04
						Lead	6.27E-04	lb/hr	0%	6.27E-04
						Manganese	1.79E-04	lb/hr	0%	1.79E-04
047-12	Molybdenum Concentrate Unloading to Molybdenum Concentrate Feed Hopper 1	MC2TrPrt	NF	4.00	tons	Mercury	9.33E-05	lb/hr	0%	9.33E-05
						Nickel	2.61E-04	lb/hr	0%	2.61E-04
						Selenium	7.01E-04	lb/hr	0%	7.01E-04
						Antimony	5.34E-08	lb/ton	0%	2.14E-07
						Arsenic	6.52E-07	lb/ton	0%	2.61E-06
						Beryllium	2.61E-10	lb/ton	0%	1.04E-09
						Cadmium	9.78E-10	lb/ton	0%	3.91E-09
						Chromium	5.47E-10	lb/ton	0%	2.19E-09
						Cobalt	3.43E-09	lb/ton	0%	1.37E-08
						Lead	5.94E-09	lb/ton	0%	2.38E-08
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	4.00	tons	Manganese	1.69E-09	lb/ton	0%	6.78E-09
						Mercury	8.84E-10	lb/ton	0%	3.54E-09
						Nickel	2.48E-09	lb/ton	0%	9.91E-09
						Selenium	6.65E-09	lb/ton	0%	2.66E-08
047-1	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder	MC2TrPrt	NF	4.00	tons	Antimony	5.34E-08	lb/ton	0%	2.14E-07
						Arsenic	6.52E-07	lb/ton	0%	2.61E-06
						Beryllium	2.61E-10	lb/ton	0%	1.04E-09
						Cadmium	9.78E-10	lb/ton	0%	3.91E-09

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-1 (cont'd)	Molybdenum Concentrate Feed Hopper 1 to Molybdenum Concentrate Belt Feeder (cont'd)	MC2TrPrt (cont'd)	NF (cont'd)	4.00	tons (cont'd)	Chromium	5.47E-10	lb/ton	0%	2.19E-09
						Cobalt	3.43E-09	lb/ton	0%	1.37E-08
						Lead	5.94E-09	lb/ton	0%	2.38E-08
						Manganese	1.69E-09	lb/ton	0%	6.78E-09
						Mercury	8.84E-10	lb/ton	0%	3.54E-09
						Nickel	2.48E-09	lb/ton	0%	9.91E-09
						Selenium	6.65E-09	lb/ton	0%	2.66E-08
047-2	Molybdenum Concentrate Belt Feeder and Molybdenum Concentrate Screw Conveyor 3 to Molybdenum Concentrate Screw Conveyor 1	MC3TrPrt	NF	4.00	tons	Antimony	2.64E-05	lb/ton	0%	1.06E-04
						Arsenic	3.22E-04	lb/ton	0%	1.29E-03
						Beryllium	1.29E-07	lb/ton	0%	5.15E-07
						Cadmium	4.83E-07	lb/ton	0%	1.93E-06
						Chromium	2.71E-07	lb/ton	0%	1.08E-06
						Cobalt	1.70E-06	lb/ton	0%	6.79E-06
						Lead	2.94E-06	lb/ton	0%	1.17E-05
						Manganese	8.38E-07	lb/ton	0%	3.35E-06
						Mercury	4.37E-07	lb/ton	0%	1.75E-06
						Nickel	1.22E-06	lb/ton	0%	4.90E-06
						Selenium	3.29E-06	lb/ton	0%	1.31E-05
047-13	Processes Controlled by Molybdenum Concentrate Dust Collector 2	MCD C2	NF	30,000	dscf	Antimony	6.40E-09	lb/dscf	0%	1.92E-04
						Arsenic	7.80E-08	lb/dscf	0%	2.34E-03
						Beryllium	3.12E-11	lb/dscf	0%	9.36E-07
						Cadmium	1.17E-10	lb/dscf	0%	3.51E-06
						Chromium	6.55E-11	lb/dscf	0%	1.97E-06
						Cobalt	4.11E-10	lb/dscf	0%	1.23E-05
						Lead	7.11E-10	lb/dscf	0%	2.13E-05
						Manganese	2.03E-10	lb/dscf	0%	6.09E-06
						Mercury	1.06E-10	lb/dscf	0%	3.18E-06
						Nickel	2.97E-10	lb/dscf	0%	8.90E-06
						Selenium	7.96E-10	lb/dscf	0%	2.39E-05
047-3	Natural Gas Steam Generator (5.23 MMBtu/hr)	NGC	NF	5.23	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	2.56E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.23E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	9.23E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	8.20E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	1.23E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Benzene	2.06E-06	lb/MMBtu	0%	1.08E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	6.15E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	6.15E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	6.15E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	6.15E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.54E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	1.44E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	3.85E-04
						Hexane	1.76E-03	lb/MMBtu	0%	9.23E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	9.23E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	3.13E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	8.72E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	2.56E-08
						Toluene	3.33E-06	lb/MMBtu	0%	1.74E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	1.03E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	6.15E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	5.64E-06
						Chromium	1.37E-06	lb/MMBtu	0%	7.18E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	4.31E-07
						Manganese	3.73E-07	lb/MMBtu	0%	1.95E-06
						Mercury	2.55E-07	lb/MMBtu	0%	1.33E-06
						Nickel	2.06E-06	lb/MMBtu	0%	1.08E-05
						Selenium	2.35E-08	lb/MMBtu	0%	1.23E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-4	Natural Gas Deoiler Heater (6.5 MMBtu/hr)	NGC	NF	6.50	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	3.19E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.53E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.15E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.02E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	1.53E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Benzene	2.06E-06	lb/MMBtu	0%	1.34E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	7.65E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	7.65E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	7.65E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	7.65E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.91E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	1.78E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	4.78E-04
						Hexane	1.76E-03	lb/MMBtu	0%	1.15E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.15E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	3.89E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.08E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	3.19E-08
						Toluene	3.33E-06	lb/MMBtu	0%	2.17E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	1.27E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	7.65E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	7.01E-06
						Chromium	1.37E-06	lb/MMBtu	0%	8.92E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	5.35E-07
						Manganese	3.73E-07	lb/MMBtu	0%	2.42E-06
						Mercury	2.55E-07	lb/MMBtu	0%	1.66E-06
						Nickel	2.06E-06	lb/MMBtu	0%	1.34E-05
						Selenium	2.35E-08	lb/MMBtu	0%	1.53E-07
047-5	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare	NGF	NF	1	hours	Lead	2.97E-05	lb/hr	0%	2.97E-05
						2-Methylnaphthalene	3.65E-08	lb/hr	0%	3.65E-08
						3-Methylchloranthrene	2.74E-09	lb/hr	0%	2.74E-09
						7,12-Dimethylbenz(a)anthracene	2.43E-08	lb/hr	0%	2.43E-08
						Acenaphthene	2.74E-09	lb/hr	0%	2.74E-09
						Acenaphthylene	2.74E-09	lb/hr	0%	2.74E-09
						Anthracene	3.65E-09	lb/hr	0%	3.65E-09
						Benz(a)anthracene	2.74E-09	lb/hr	0%	2.74E-09
						Benzene	3.19E-06	lb/hr	0%	3.19E-06
						Benzo(a)pyrene	1.82E-09	lb/hr	0%	1.82E-09
						Benzo(b)fluoranthene	2.74E-09	lb/hr	0%	2.74E-09
						Benzo(g,h,i)perylene	1.82E-09	lb/hr	0%	1.82E-09
						Benzo(k)fluoranthene	2.74E-09	lb/hr	0%	2.74E-09
						Chrysene	2.74E-09	lb/hr	0%	2.74E-09
						Dibenz(a,h)anthracene	1.82E-09	lb/hr	0%	1.82E-09
						Dichlorobenzene	1.82E-06	lb/hr	0%	1.82E-06
						Fluoranthene	4.56E-09	lb/hr	0%	4.56E-09
						Fluorene	4.25E-09	lb/hr	0%	4.25E-09
						Formaldehyde	1.14E-04	lb/hr	0%	1.14E-04
						Hexane	2.74E-03	lb/hr	0%	2.74E-03
						Indeno(1,2,3-cd)pyrene	2.74E-09	lb/hr	0%	2.74E-09
						Naphthalene	9.27E-07	lb/hr	0%	9.27E-07
						Phenanthrene	2.58E-08	lb/hr	0%	2.58E-08
						Pyrene	7.60E-09	lb/hr	0%	7.60E-09
						Toluene	5.17E-06	lb/hr	0%	5.17E-06
						Antimony	2.61E-04	lb/hr	0%	2.61E-04
						Arsenic	3.18E-03	lb/hr	0%	3.18E-03
						Beryllium	1.29E-06	lb/hr	0%	1.29E-06
						Cadmium	6.44E-06	lb/hr	0%	6.44E-06

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
047-5 (cont'd)	Processes Controlled by Venturi Scrubber / Venturi Scrubber (alternate), Packed Scrubber 1, Packed Scrubber 2, and Natural Gas Flare (cont'd)	NGF (cont'd)	NF (cont'd)	1	hours (cont'd)	Chromium	4.80E-06	lb/hr	0%	4.80E-06
						Cobalt	1.69E-05	lb/hr	0%	1.69E-05
						Manganese	8.84E-06	lb/hr	0%	8.84E-06
						Mercury	4.71E-06	lb/hr	0%	4.71E-06
						Nickel	1.53E-05	lb/hr	0%	1.53E-05
047-10	Processes Controlled by Molybdenum Concentrate Dust Collector 1	MCDC1	NF	54,000	dscf	Selenium	3.24E-05	lb/hr	0%	3.24E-05
						Antimony	6.40E-09	lb/dscf	0%	3.46E-04
						Arsenic	7.80E-08	lb/dscf	0%	4.21E-03
						Beryllium	3.12E-11	lb/dscf	0%	1.69E-06
						Cadmium	1.17E-10	lb/dscf	0%	6.32E-06
						Chromium	6.55E-11	lb/dscf	0%	3.54E-06
						Cobalt	4.11E-10	lb/dscf	0%	2.22E-05
						Lead	7.11E-10	lb/dscf	0%	3.84E-05
						Manganese	2.03E-10	lb/dscf	0%	1.10E-05
						Mercury	1.06E-10	lb/dscf	0%	5.72E-06
						Nickel	2.97E-10	lb/dscf	0%	1.60E-05
						Selenium	7.96E-10	lb/dscf	0%	4.30E-05
047-11	MoO3 Inclined Screw Conveyor to MoO3 Bags	MOTrPrt	F	7.00	tons	Antimony	0.00E+00	lb/ton	0%	0.00E+00
						Arsenic	6.98E-07	lb/ton	0%	4.88E-06
						Beryllium	0.00E+00	lb/ton	0%	0.00E+00
						Cadmium	0.00E+00	lb/ton	0%	0.00E+00
						Chromium	0.00E+00	lb/ton	0%	0.00E+00
						Cobalt	0.00E+00	lb/ton	0%	0.00E+00
						Lead	5.30E-09	lb/ton	0%	3.71E-08
						Manganese	0.00E+00	lb/ton	0%	0.00E+00
						Mercury	0.00E+00	lb/ton	0%	0.00E+00
						Nickel	0.00E+00	lb/ton	0%	0.00E+00
047-7	Settling Tank	ST	NF	1	hours	Selenium	3.19E-10	lb/ton	0%	2.23E-09
						Benzene	1.28E-06	lb/hr	0%	1.28E-06
						Ethylbenzene	2.03E-06	lb/hr	0%	2.03E-06
						n-Hexane	2.60E-07	lb/hr	0%	2.60E-07
						Toluene	1.48E-05	lb/hr	0%	1.48E-05
047-8	Solution Extraction - Molybdenum Pressure Leaching	SX MPL	F	1	hours	m-Xylene	3.77E-05	lb/hr	0%	3.77E-05
						Benzene	6.02E-04	lb/hr	0%	6.02E-04
						Toluene	2.16E-03	lb/hr	0%	2.16E-03
						Ethylbenzene	7.12E-03	lb/hr	0%	7.12E-03
047-14	Damaged Molybdenum Concentrate Bags to Molybdenum Concentrate Re-Bagger	MC3TrUnpr t	F	37.50	tons	Xylenes	9.27E-03	lb/hr	0%	9.27E-03
						Antimony	2.47E-04	lb/ton	0%	9.26E-03
						Arsenic	3.01E-03	lb/ton	0%	1.13E-01
						Beryllium	1.20E-06	lb/ton	0%	4.52E-05
						Cadmium	4.52E-06	lb/ton	0%	1.69E-04
						Chromium	2.53E-06	lb/ton	0%	9.49E-05
						Cobalt	1.59E-05	lb/ton	0%	5.95E-04
						Lead	2.74E-05	lb/ton	0%	1.03E-03
						Manganese	7.83E-06	lb/ton	0%	2.94E-04
						Mercury	4.09E-06	lb/ton	0%	1.53E-04
047-15	Molybdenum Concentrate Re-Bagger to New Molybdenum Concentrate Bags	MC3TrUnpr t	F	37.50	tons	Nickel	1.14E-05	lb/ton	0%	4.29E-04
						Selenium	3.07E-05	lb/ton	0%	1.15E-03
						Antimony	2.47E-04	lb/ton	0%	9.26E-03
						Arsenic	3.01E-03	lb/ton	0%	1.13E-01
						Beryllium	1.20E-06	lb/ton	0%	4.52E-05
						Cadmium	4.52E-06	lb/ton	0%	1.69E-04
						Chromium	2.53E-06	lb/ton	0%	9.49E-05
						Cobalt	1.59E-05	lb/ton	0%	5.95E-04
						Lead	2.74E-05	lb/ton	0%	1.03E-03
						Manganese	7.83E-06	lb/ton	0%	2.94E-04
Total of Non-Fugitive Emissions for Concentrate Leach Plant:										1.91E-01
Total of Fugitive Emissions for Concentrate Leach Plant:										2.71E-01
Total of Non-Fugitive and Fugitive Emissions for Concentrate Leach Plant:										4.62E-01

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
Solution Extraction/Electrowinning Operations										
029-1	Solution Extraction - Main Systems	SXM	F	1	hours	Benzene	1.03E-02	lb/hr	0%	1.03E-02
						Toluene	3.68E-02	lb/hr	0%	3.68E-02
						Ethylbenzene	1.21E-01	lb/hr	0%	1.21E-01
						Xylenes	1.58E-01	lb/hr	0%	1.58E-01
011-1	Electrowinning - Main System	EWM	F	1	hours	Cobalt Compounds	1.24E-04	lb/hr	0%	1.24E-04
029-2	Raffinate Pond	RP	F	1	hours	Benzene	1.40E-02	lb/hr	0%	1.40E-02
						Toluene	5.03E-02	lb/hr	0%	5.03E-02
						Ethylbenzene	1.66E-01	lb/hr	0%	1.66E-01
						Xylenes	2.16E-01	lb/hr	0%	2.16E-01
029-3	Organic Tank TK-22	TK-22	NF	1	hours	Benzene	2.95E-04	lb/hr	0%	2.95E-04
						Toluene	1.06E-03	lb/hr	0%	1.06E-03
						Ethylbenzene	3.48E-03	lb/hr	0%	3.48E-03
						Xylenes	4.53E-03	lb/hr	0%	4.53E-03
029-4	Organic Mix Tank TK-13	TK-13	NF	1	hours	Benzene	3.21E-04	lb/hr	0%	3.21E-04
						Toluene	1.15E-03	lb/hr	0%	1.15E-03
						Ethylbenzene	3.79E-03	lb/hr	0%	3.79E-03
						Xylenes	4.94E-03	lb/hr	0%	4.94E-03
049-49	Natural Gas Hot Water Pressure Washer 3 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.96E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	9.41E-09
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	7.06E-10
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	6.27E-09
						Acenaphthene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Anthracene	2.35E-09	lb/MMBtu	0%	9.41E-10
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Benzene	2.06E-06	lb/MMBtu	0%	8.24E-07
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Chrysene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	4.71E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.18E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	1.10E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.94E-05
						Hexane	1.76E-03	lb/MMBtu	0%	7.06E-04
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.39E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	6.67E-09
						Pyrene	4.90E-09	lb/MMBtu	0%	1.96E-09
						Toluene	3.33E-06	lb/MMBtu	0%	1.33E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	7.84E-08
						Beryllium	1.18E-08	lb/MMBtu	0%	4.71E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	4.31E-07
						Chromium	1.37E-06	lb/MMBtu	0%	5.49E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	3.29E-08
						Manganese	3.73E-07	lb/MMBtu	0%	1.49E-07
						Mercury	2.55E-07	lb/MMBtu	0%	1.02E-07
						Nickel	2.06E-06	lb/MMBtu	0%	8.24E-07
						Selenium	2.35E-08	lb/MMBtu	0%	9.41E-09
049-50	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr)	NGC	NF	0.40	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.96E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	9.41E-09
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	7.06E-10
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	6.27E-09
						Acenaphthene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Anthracene	2.35E-09	lb/MMBtu	0%	9.41E-10
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Benzene	2.06E-06	lb/MMBtu	0%	8.24E-07
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	7.06E-10

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-50 (cont'd)	Natural Gas Hot Water Pressure Washer 4 (0.4 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	0.40	MMBtu (cont'd)	Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Chrysene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	4.71E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	4.71E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.18E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	1.10E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.94E-05
						Hexane	1.76E-03	lb/MMBtu	0%	7.06E-04
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	7.06E-10
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.39E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	6.67E-09
						Pyrene	4.90E-09	lb/MMBtu	0%	1.96E-09
						Toluene	3.33E-06	lb/MMBtu	0%	1.33E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	7.84E-08
						Beryllium	1.18E-08	lb/MMBtu	0%	4.71E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	4.31E-07
						Chromium	1.37E-06	lb/MMBtu	0%	5.49E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	3.29E-08
						Manganese	3.73E-07	lb/MMBtu	0%	1.49E-07
						Mercury	2.55E-07	lb/MMBtu	0%	1.02E-07
						Nickel	2.06E-06	lb/MMBtu	0%	8.24E-07
						Selenium	2.35E-08	lb/MMBtu	0%	9.41E-09
049-45	Natural Gas SX Pressure Washer (0.34 MMBtu/hr)	NGC	NF	0.34	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	1.67E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	8.00E-09
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	6.00E-10
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	5.33E-09
						Acenaphthene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Anthracene	2.35E-09	lb/MMBtu	0%	8.00E-10
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Benzene	2.06E-06	lb/MMBtu	0%	7.00E-07
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	4.00E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	4.00E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Chrysene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	4.00E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	4.00E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.00E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	9.33E-10
						Formaldehyde	7.35E-05	lb/MMBtu	0%	2.50E-05
						Hexane	1.76E-03	lb/MMBtu	0%	6.00E-04
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	6.00E-10
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.03E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	5.67E-09
						Pyrene	4.90E-09	lb/MMBtu	0%	1.67E-09
						Toluene	3.33E-06	lb/MMBtu	0%	1.13E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	6.67E-08
						Beryllium	1.18E-08	lb/MMBtu	0%	4.00E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	3.67E-07
						Chromium	1.37E-06	lb/MMBtu	0%	4.67E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	2.80E-08
						Manganese	3.73E-07	lb/MMBtu	0%	1.27E-07
						Mercury	2.55E-07	lb/MMBtu	0%	8.67E-08
						Nickel	2.06E-06	lb/MMBtu	0%	7.00E-07
						Selenium	2.35E-08	lb/MMBtu	0%	8.00E-09
010-1	Natural Gas Hot Water Heater (6.842 MMBtu/hr)	NGHWH	NF	6.842	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	3.35E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.61E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.21E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.07E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.21E-08

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
010-1 (cont'd)	Natural Gas Hot Water Heater (6.842 MMBtu/hr) (cont'd)	NGHWH (cont'd)	NF (cont'd)	6.842	MMBtu (cont'd)	Anthracene	2.35E-09	lb/MMBtu	0%	1.61E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Benzene	2.06E-06	lb/MMBtu	0%	1.41E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	8.05E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	8.05E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	8.05E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	8.05E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	2.01E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	1.88E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	5.03E-04
						Hexane	1.76E-03	lb/MMBtu	0%	1.21E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.21E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	4.09E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.14E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	3.35E-08
						Toluene	3.33E-06	lb/MMBtu	0%	2.28E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	1.34E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	8.05E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	7.38E-06
						Chromium	1.37E-06	lb/MMBtu	0%	9.39E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	5.63E-07
						Manganese	3.73E-07	lb/MMBtu	0%	2.55E-06
						Mercury	2.55E-07	lb/MMBtu	0%	1.74E-06
						Nickel	2.06E-06	lb/MMBtu	0%	1.41E-05
						Selenium	2.35E-08	lb/MMBtu	0%	1.61E-07
042-7	Natural Gas Electrolyte Heater (5.44 MMBtu/hr)	NGEH	NF	5.44	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	2.67E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.28E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	9.60E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	8.53E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	1.28E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Benzene	2.06E-06	lb/MMBtu	0%	1.12E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	6.40E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	6.40E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	6.40E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	6.40E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.60E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	1.49E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	4.00E-04
						Hexane	1.76E-03	lb/MMBtu	0%	9.60E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	9.60E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	3.25E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	9.07E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	2.67E-08
						Toluene	3.33E-06	lb/MMBtu	0%	1.81E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	1.07E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	6.40E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	5.87E-06
						Chromium	1.37E-06	lb/MMBtu	0%	7.47E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	4.48E-07
						Manganese	3.73E-07	lb/MMBtu	0%	2.03E-06
						Mercury	2.55E-07	lb/MMBtu	0%	1.39E-06
						Nickel	2.06E-06	lb/MMBtu	0%	1.12E-05
						Selenium	2.35E-08	lb/MMBtu	0%	1.28E-07
Total of Non-Fugitive Emissions for Solution Extraction/Electrowinning Operations:										4.44E-02

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
Total of Fugitive Emissions for Solution Extraction/Electrowinning Operations:										7.72E-01
Total of Non-Fugitive and Fugitive Emissions for Solution Extraction/Electrowinning Operations:										8.17E-01
Portable Aggregate System										
009-9	Aggregate to Hopper (via front-end loader)	NMTrUnprt	F	850	tons	Antimony	2.30E-09	lb/ton	0%	1.96E-06
						Arsenic	5.15E-09	lb/ton	0%	4.37E-06
						Beryllium	4.19E-10	lb/ton	0%	3.56E-07
						Cadmium	1.64E-10	lb/ton	0%	1.39E-07
						Chromium	1.23E-08	lb/ton	0%	1.05E-05
						Cobalt	5.70E-09	lb/ton	0%	4.85E-06
						Lead	9.73E-09	lb/ton	0%	8.27E-06
						Manganese	9.16E-08	lb/ton	0%	7.79E-05
						Mercury	6.28E-11	lb/ton	0%	5.34E-08
009-10	Hopper to Vibrating Grizzly Feeder and Vibrating Grizzly Feeder Screening	VGFScreen C	NF	850	tons	Nickel	8.34E-09	lb/ton	0%	7.09E-06
						Selenium	7.75E-10	lb/ton	0%	6.58E-07
						Antimony	4.88E-09	lb/ton	0%	4.15E-06
						Arsenic	1.09E-08	lb/ton	0%	9.28E-06
						Beryllium	8.88E-10	lb/ton	0%	7.55E-07
						Cadmium	3.48E-10	lb/ton	0%	2.96E-07
						Chromium	2.61E-08	lb/ton	0%	2.22E-05
						Cobalt	1.21E-08	lb/ton	0%	1.03E-05
						Lead	2.06E-08	lb/ton	0%	1.75E-05
009-11	Vibrating Grizzly Feeder Oversize to Jaw Crusher and Jaw Crushing	JCCrushC	NF	850	tons	Manganese	1.94E-07	lb/ton	0%	1.65E-04
						Mercury	1.33E-10	lb/ton	0%	1.13E-07
						Nickel	1.77E-08	lb/ton	0%	1.50E-05
						Selenium	1.64E-09	lb/ton	0%	1.40E-06
						Cobalt	8.82E-09	lb/ton	0%	7.50E-06
						Lead	1.50E-08	lb/ton	0%	1.28E-05
						Manganese	1.42E-07	lb/ton	0%	1.20E-04
						Mercury	9.72E-11	lb/ton	0%	8.26E-08
						Nickel	1.29E-08	lb/ton	0%	1.10E-05
009-12	Jaw Crusher Discharge and Vibrating Grizzly Feeder Undersize to Jaw Crusher Discharge Conveyor	NMTrPrt	NF	850	tons	Selenium	1.20E-09	lb/ton	0%	1.02E-06
						Antimony	3.56E-09	lb/ton	0%	3.03E-06
						Arsenic	7.97E-09	lb/ton	0%	6.77E-06
						Beryllium	6.48E-10	lb/ton	0%	5.51E-07
						Cadmium	2.54E-10	lb/ton	0%	2.16E-07
						Chromium	1.91E-08	lb/ton	0%	1.62E-05
						Cobalt	8.82E-09	lb/ton	0%	7.50E-06
						Lead	1.50E-08	lb/ton	0%	1.28E-05
						Manganese	1.42E-07	lb/ton	0%	1.20E-04
009-13	Jaw Crusher Discharge Conveyor and Cone Crusher Discharge Conveyor to Screen Feed Conveyor	NMTrPrt	NF	850	tons	Nickel	8.93E-10	lb/ton	90%	7.59E-08
						Selenium	8.29E-11	lb/ton	90%	7.04E-09
						Mercury	6.72E-12	lb/ton	90%	5.71E-10
						Manganese	9.80E-09	lb/ton	90%	8.33E-07
						Lead	1.04E-09	lb/ton	90%	8.84E-08
						Cobalt	6.10E-10	lb/ton	90%	5.18E-08
						Chromium	1.32E-09	lb/ton	90%	1.12E-07
						Cadmium	1.75E-11	lb/ton	90%	1.49E-09
						Beryllium	4.48E-11	lb/ton	90%	3.81E-09
009-14	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening	TDSScreen C	NF	850	tons	Arsenic	5.51E-10	lb/ton	0%	4.68E-07
						Antimony	2.46E-10	lb/ton	0%	2.09E-07
						Nickel	8.93E-10	lb/ton	0%	7.59E-07
						Mercury	6.72E-12	lb/ton	0%	5.71E-09
						Manganese	9.80E-09	lb/ton	0%	8.33E-06
						Lead	1.04E-09	lb/ton	0%	8.84E-07
						Cobalt	6.10E-10	lb/ton	0%	5.18E-07
						Chromium	1.32E-09	lb/ton	0%	1.12E-06
						Cadmium	1.75E-11	lb/ton	0%	1.49E-08

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-13 (cont'd)	Screen Feed Conveyor to Triple Deck Screen and Triple Deck Screening (cont'd)	TDSScreen C (cont'd)	NF (cont'd)	850	tons (cont'd)	Cobalt	1.21E-08	lb/ton	0%	1.03E-05
						Lead	2.06E-08	lb/ton	0%	1.75E-05
						Manganese	1.94E-07	lb/ton	0%	1.65E-04
						Mercury	1.33E-10	lb/ton	0%	1.13E-07
						Nickel	1.77E-08	lb/ton	0%	1.50E-05
						Selenium	1.64E-09	lb/ton	0%	1.40E-06
009-14	Triple Deck Screen Discharge to Cone Feed Conveyor (Oversize), Coarse Stacking Conveyor (Midsize), or Triple Deck Screen Discharge Conveyor (Undersize)	NMTrPrt	NF	850	tons	Antimony	2.46E-10	lb/ton	0%	2.09E-07
						Arsenic	5.51E-10	lb/ton	0%	4.68E-07
						Beryllium	4.48E-11	lb/ton	0%	3.81E-08
						Cadmium	1.75E-11	lb/ton	0%	1.49E-08
						Chromium	1.32E-09	lb/ton	0%	1.12E-06
						Cobalt	6.10E-10	lb/ton	0%	5.18E-07
						Lead	1.04E-09	lb/ton	0%	8.84E-07
						Manganese	9.80E-09	lb/ton	0%	8.33E-06
						Mercury	6.72E-12	lb/ton	0%	5.71E-09
						Nickel	8.93E-10	lb/ton	0%	7.59E-07
						Selenium	8.29E-11	lb/ton	0%	7.04E-08
						Antimony	3.56E-09	lb/ton	0%	3.03E-06
009-15	Cone Feed Conveyor to Cone Crusher and Cone Crushing	CSSCrushC	NF	850	tons	Arsenic	7.97E-09	lb/ton	0%	6.77E-06
						Beryllium	6.48E-10	lb/ton	0%	5.51E-07
						Cadmium	2.54E-10	lb/ton	0%	2.16E-07
						Chromium	1.91E-08	lb/ton	0%	1.62E-05
						Cobalt	8.82E-09	lb/ton	0%	7.50E-06
						Lead	1.50E-08	lb/ton	0%	1.28E-05
						Manganese	1.42E-07	lb/ton	0%	1.20E-04
						Mercury	9.72E-11	lb/ton	0%	8.26E-08
						Nickel	1.29E-08	lb/ton	0%	1.10E-05
						Selenium	1.20E-09	lb/ton	0%	1.02E-06
						Antimony	2.46E-10	lb/ton	90%	2.09E-08
						Arsenic	5.51E-10	lb/ton	90%	4.68E-08
009-16	Cone Crusher to Cone Crusher Discharge Conveyor	NMTrPrt	NF	850	tons	Beryllium	4.48E-11	lb/ton	90%	3.81E-09
						Cadmium	1.75E-11	lb/ton	90%	1.49E-09
						Chromium	1.32E-09	lb/ton	90%	1.12E-07
						Cobalt	6.10E-10	lb/ton	90%	5.18E-08
						Lead	1.04E-09	lb/ton	90%	8.84E-08
						Manganese	9.80E-09	lb/ton	90%	8.33E-07
						Mercury	6.72E-12	lb/ton	90%	5.71E-10
						Nickel	8.93E-10	lb/ton	90%	7.59E-08
						Selenium	8.29E-11	lb/ton	90%	7.04E-09
						Antimony	2.46E-10	lb/ton	90%	2.09E-08
						Arsenic	5.51E-10	lb/ton	90%	4.68E-08
						Beryllium	4.48E-11	lb/ton	90%	3.81E-09
009-17	Triple Deck Screen Discharge Conveyor to Fines Stacking Conveyor	NMTrPrt	NF	850	tons	Cadmium	1.75E-11	lb/ton	90%	1.49E-09
						Chromium	1.32E-09	lb/ton	90%	1.12E-07
						Cobalt	6.10E-10	lb/ton	90%	5.18E-08
						Lead	1.04E-09	lb/ton	90%	8.84E-08
						Manganese	9.80E-09	lb/ton	90%	8.33E-07
						Mercury	6.72E-12	lb/ton	90%	5.71E-10
						Nickel	8.93E-10	lb/ton	90%	7.59E-08
						Selenium	8.29E-11	lb/ton	90%	7.04E-09
						Antimony	2.30E-09	lb/ton	90%	1.96E-07
						Arsenic	5.15E-09	lb/ton	90%	4.37E-07
						Beryllium	4.19E-10	lb/ton	90%	3.56E-08
						Cadmium	1.64E-10	lb/ton	90%	1.39E-08
009-18	Coarse and Fines Stacking Conveyors to Coarse and Fine Aggregate Stockpiles	NMTrUnprt	F	850	tons	Chromium	1.23E-08	lb/ton	90%	1.05E-06
						Cobalt	5.70E-09	lb/ton	90%	4.85E-07
						Lead	9.73E-09	lb/ton	90%	8.27E-07
						Manganese	9.16E-08	lb/ton	90%	7.79E-06
						Mercury	6.28E-11	lb/ton	90%	5.34E-09
						Nickel	8.34E-09	lb/ton	90%	7.09E-07
						Selenium	7.75E-10	lb/ton	90%	6.58E-08
						Antimony	2.30E-09	lb/ton	0%	1.96E-06
						Arsenic	5.15E-09	lb/ton	0%	4.37E-06
009-19	Coarse and Fine Aggregate Stockpiles to Trucks	NMTrUnprt	F	850	tons	Antimony	2.30E-09	lb/ton	0%	1.96E-06
						Arsenic	5.15E-09	lb/ton	0%	4.37E-06

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-19 (cont'd)	Coarse and Fine Aggregate Stockpiles to Trucks (cont'd)	NMTrUnprt (cont'd)	F (cont'd)	850	tons (cont'd)	Beryllium	4.19E-10	lb/ton	0%	3.56E-07
						Cadmium	1.64E-10	lb/ton	0%	1.39E-07
						Chromium	1.23E-08	lb/ton	0%	1.05E-05
						Cobalt	5.70E-09	lb/ton	0%	4.85E-06
						Lead	9.73E-09	lb/ton	0%	8.27E-06
						Manganese	9.16E-08	lb/ton	0%	7.79E-05
						Mercury	6.28E-11	lb/ton	0%	5.34E-08
						Nickel	8.34E-09	lb/ton	0%	7.09E-06
009-20	Wind Erosion of Coarse and Fine Aggregate Stockpiles	HWindPAS	F	0.23	acre-yr	Selenium	7.75E-10	lb/ton	0%	6.58E-07
						Antimony	1.20E-06	lb/acre-hr	0%	2.76E-07
						Arsenic	2.69E-06	lb/acre-hr	0%	6.18E-07
						Beryllium	2.18E-07	lb/acre-hr	0%	5.02E-08
						Cadmium	8.56E-08	lb/acre-hr	0%	1.97E-08
						Chromium	6.43E-06	lb/acre-hr	0%	1.48E-06
						Cobalt	2.97E-06	lb/acre-hr	0%	6.84E-07
						Lead	5.07E-06	lb/acre-hr	0%	1.17E-06
						Manganese	4.78E-05	lb/acre-hr	0%	1.10E-05
						Mercury	3.28E-08	lb/acre-hr	0%	7.54E-09
						Nickel	4.35E-06	lb/acre-hr	0%	1.00E-06
						Selenium	4.04E-07	lb/acre-hr	0%	9.30E-08
Total of Non-Fugitive Emissions for Portable Aggregate System:										8.80E-04
Total of Fugitive Emissions for Portable Aggregate System:										2.60E-04
Total of Non-Fugitive and Fugitive Emissions for Portable Aggregate System:										1.14E-03
Supplemental Portable Aggregate System										
009-22	Nonmetallic Minerals to Item 1 SPAS Vibrating Grizzly Feeder and Operation of the Screen	VGFScreen C	NF	540	tons	Antimony	4.88E-09	lb/ton	0%	2.64E-06
						Arsenic	1.09E-08	lb/ton	0%	5.89E-06
						Beryllium	8.88E-10	lb/ton	0%	4.80E-07
						Cadmium	3.48E-10	lb/ton	0%	1.88E-07
						Chromium	2.61E-08	lb/ton	0%	1.41E-05
						Cobalt	1.21E-08	lb/ton	0%	6.53E-06
						Lead	2.06E-08	lb/ton	0%	1.11E-05
						Manganese	1.94E-07	lb/ton	0%	1.05E-04
						Mercury	1.33E-10	lb/ton	0%	7.19E-08
						Nickel	1.77E-08	lb/ton	0%	9.55E-06
009-23	Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Jaw Crusher and Operation of the Crusher	JCCrushC	NF	540	tons	Selenium	1.64E-09	lb/ton	0%	8.87E-07
						Antimony	3.56E-09	lb/ton	0%	1.92E-06
						Arsenic	7.97E-09	lb/ton	0%	4.30E-06
						Beryllium	6.48E-10	lb/ton	0%	3.50E-07
						Cadmium	2.54E-10	lb/ton	0%	1.37E-07
						Chromium	1.91E-08	lb/ton	0%	1.03E-05
						Cobalt	8.82E-09	lb/ton	0%	4.76E-06
						Lead	1.50E-08	lb/ton	0%	8.13E-06
						Manganese	1.42E-07	lb/ton	0%	7.65E-05
						Mercury	9.72E-11	lb/ton	0%	5.25E-08
009-24	Item 1 SPAS Jaw Crusher and Item 1 SPAS Vibrating Grizzly Feeder to Item 1 SPAS Conveyor 54x42	NMTrPrt	NF	540	tons	Nickel	1.29E-08	lb/ton	0%	6.97E-06
						Selenium	1.20E-09	lb/ton	0%	6.47E-07
						Antimony	2.46E-10	lb/ton	90%	1.33E-08
						Arsenic	5.51E-10	lb/ton	90%	2.97E-08
						Beryllium	4.48E-11	lb/ton	90%	2.42E-09
						Cadmium	1.75E-11	lb/ton	90%	9.47E-10
						Chromium	1.32E-09	lb/ton	90%	7.12E-08
						Cobalt	6.10E-10	lb/ton	90%	3.29E-08
						Lead	1.04E-09	lb/ton	90%	5.62E-08
						Manganese	9.80E-09	lb/ton	90%	5.29E-07
009-25	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80	NMTrPrt	NF	990	tons	Mercury	6.72E-12	lb/ton	90%	3.63E-10
						Nickel	8.93E-10	lb/ton	90%	4.82E-08
						Selenium	8.29E-11	lb/ton	90%	4.48E-09
						Antimony	2.46E-10	lb/ton	90%	2.44E-08
						Arsenic	5.51E-10	lb/ton	90%	5.45E-08
						Beryllium	4.48E-11	lb/ton	90%	4.43E-09
						Cadmium	1.75E-11	lb/ton	90%	1.74E-09
Chromium	1.32E-09	lb/ton	90%	1.31E-07						
	Cobalt	6.10E-10	lb/ton	90%	6.04E-08					

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-25 (cont'd)	Item 1 SPAS Conveyor 54x42 and Item 9 SPAS Conveyor 42x40 to Item 2 SPAS Conveyor 48x80 (cont'd)	NMTrPrt (cont'd)	NF (cont'd)	990	tons (cont'd)	Lead	1.04E-09	lb/ton	90%	1.03E-07
						Manganese	9.80E-09	lb/ton	90%	9.70E-07
						Mercury	6.72E-12	lb/ton	90%	6.65E-10
						Nickel	8.93E-10	lb/ton	90%	8.84E-08
						Selenium	8.29E-11	lb/ton	90%	8.20E-09
009-26	Item 2 SPAS Conveyor 48x80 to Item 3 SPAS Vibrating Screen and Operation of the Screen	TDSscreen C	NF	990	tons	Antimony	4.88E-09	lb/ton	0%	4.84E-06
						Arsenic	1.09E-08	lb/ton	0%	1.08E-05
						Beryllium	8.88E-10	lb/ton	0%	8.79E-07
						Cadmium	3.48E-10	lb/ton	0%	3.44E-07
						Chromium	2.61E-08	lb/ton	0%	2.59E-05
						Cobalt	1.21E-08	lb/ton	0%	1.20E-05
						Lead	2.06E-08	lb/ton	0%	2.04E-05
						Manganese	1.94E-07	lb/ton	0%	1.92E-04
						Mercury	1.33E-10	lb/ton	0%	1.32E-07
						Nickel	1.77E-08	lb/ton	0%	1.75E-05
009-27	Item 3 SPAS Vibrating Screen to Item 4 SPAS Conveyor 42x30	NMTrPrt	NF	450	tons	Selenium	1.64E-09	lb/ton	0%	1.63E-06
						Antimony	2.46E-10	lb/ton	0%	1.11E-07
						Arsenic	5.51E-10	lb/ton	0%	2.48E-07
						Beryllium	4.48E-11	lb/ton	0%	2.02E-08
						Cadmium	1.75E-11	lb/ton	0%	7.90E-09
						Chromium	1.32E-09	lb/ton	0%	5.93E-07
						Cobalt	6.10E-10	lb/ton	0%	2.74E-07
						Lead	1.04E-09	lb/ton	0%	4.68E-07
						Manganese	9.80E-09	lb/ton	0%	4.41E-06
						Mercury	6.72E-12	lb/ton	0%	3.02E-09
009-28	Item 4 SPAS Conveyor 42x30 to Item 5 SPAS Conveyor 42x60	NMTrPrt	NF	450	tons	Nickel	8.93E-10	lb/ton	0%	4.02E-07
						Selenium	8.29E-11	lb/ton	0%	3.73E-08
						Antimony	2.46E-10	lb/ton	90%	1.11E-08
						Arsenic	5.51E-10	lb/ton	90%	2.48E-08
						Beryllium	4.48E-11	lb/ton	90%	2.02E-09
						Cadmium	1.75E-11	lb/ton	90%	7.90E-10
						Chromium	1.32E-09	lb/ton	90%	5.93E-08
						Cobalt	6.10E-10	lb/ton	90%	2.74E-08
						Lead	1.04E-09	lb/ton	90%	4.68E-08
						Manganese	9.80E-09	lb/ton	90%	4.41E-07
009-29	Item 5 SPAS Conveyor 42x60 to Item 6 SPAS Surge Bin with Belt Feeder	NMTrPrt	NF	450	tons	Mercury	6.72E-12	lb/ton	90%	3.02E-10
						Nickel	8.93E-10	lb/ton	90%	4.02E-08
						Selenium	8.29E-11	lb/ton	90%	3.73E-09
						Antimony	2.46E-10	lb/ton	90%	1.11E-08
						Arsenic	5.51E-10	lb/ton	90%	2.48E-08
						Beryllium	4.48E-11	lb/ton	90%	2.02E-09
						Cadmium	1.75E-11	lb/ton	90%	7.90E-10
						Chromium	1.32E-09	lb/ton	90%	5.93E-08
						Cobalt	6.10E-10	lb/ton	90%	2.74E-08
						Lead	1.04E-09	lb/ton	90%	4.68E-08
009-30	Item 6 SPAS Surge Bin with Belt Feeder to Item 7 SPAS Conveyor 42x60	NMTrPrt	NF	450	tons	Manganese	9.80E-09	lb/ton	90%	4.41E-07
						Mercury	6.72E-12	lb/ton	90%	3.02E-10
						Nickel	8.93E-10	lb/ton	90%	4.02E-08
						Selenium	8.29E-11	lb/ton	90%	3.73E-09
						Antimony	2.46E-10	lb/ton	90%	1.11E-08
						Arsenic	5.51E-10	lb/ton	90%	2.48E-08
						Beryllium	4.48E-11	lb/ton	90%	2.02E-09
						Cadmium	1.75E-11	lb/ton	90%	7.90E-10
						Chromium	1.32E-09	lb/ton	90%	5.93E-08
						Cobalt	6.10E-10	lb/ton	90%	2.74E-08
009-31	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	450	tons	Lead	1.04E-09	lb/ton	90%	4.68E-08
						Manganese	9.80E-09	lb/ton	90%	4.41E-07
						Mercury	6.72E-12	lb/ton	90%	3.02E-10
009-31	Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	450	tons	Nickel	8.93E-10	lb/ton	90%	4.02E-08
						Selenium	8.29E-11	lb/ton	90%	3.73E-09
						Antimony	3.56E-09	lb/ton	0%	1.60E-06
009-31	Item 8 SPAS Cone Crusher and Operation of the Crusher	CSSCrushC	NF	450	tons	Arsenic	7.97E-09	lb/ton	0%	3.58E-06
						Beryllium	6.48E-10	lb/ton	0%	2.92E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
009-31 (cont'd)	Item 7 SPAS Conveyor 42x60 to Item 8 SPAS Cone Crusher and Operation of the Crusher (cont'd)	CSSCrushC (cont'd)	NF (cont'd)	450	tons (cont'd)	Cadmium	2.54E-10	lb/ton	0%	1.14E-07
						Chromium	1.91E-08	lb/ton	0%	8.58E-06
						Cobalt	8.82E-09	lb/ton	0%	3.97E-06
						Lead	1.50E-08	lb/ton	0%	6.77E-06
						Manganese	1.42E-07	lb/ton	0%	6.38E-05
						Mercury	9.72E-11	lb/ton	0%	4.37E-08
						Nickel	1.29E-08	lb/ton	0%	5.81E-06
009-32	Item 8 SPAS Cone Crusher to Item 9 SPAS Conveyor 42x40	NMTrPrt	NF	450	tons	Selenium	1.20E-09	lb/ton	0%	5.39E-07
						Antimony	2.46E-10	lb/ton	90%	1.11E-08
						Arsenic	5.51E-10	lb/ton	90%	2.48E-08
						Beryllium	4.48E-11	lb/ton	90%	2.02E-09
						Cadmium	1.75E-11	lb/ton	90%	7.90E-10
						Chromium	1.32E-09	lb/ton	90%	5.93E-08
						Cobalt	6.10E-10	lb/ton	90%	2.74E-08
						Lead	1.04E-09	lb/ton	90%	4.68E-08
						Manganese	9.80E-09	lb/ton	90%	4.41E-07
						Mercury	6.72E-12	lb/ton	90%	3.02E-10
						Nickel	8.93E-10	lb/ton	90%	4.02E-08
009-33	Item 3 SPAS Vibrating Screen to Either Item 3 SPAS Conveyor 48x22, Item 10 SPAS Conveyor 36x30, or Item 13 SPAS Conveyor 36x60	NMTrPrt	NF	540	tons	Selenium	8.29E-11	lb/ton	90%	3.73E-09
						Antimony	2.46E-10	lb/ton	0%	1.33E-07
						Arsenic	5.51E-10	lb/ton	0%	2.97E-07
						Beryllium	4.48E-11	lb/ton	0%	2.42E-08
						Cadmium	1.75E-11	lb/ton	0%	9.47E-09
						Chromium	1.32E-09	lb/ton	0%	7.12E-07
						Cobalt	6.10E-10	lb/ton	0%	3.29E-07
						Lead	1.04E-09	lb/ton	0%	5.62E-07
						Manganese	9.80E-09	lb/ton	0%	5.29E-06
						Mercury	6.72E-12	lb/ton	0%	3.63E-09
						Nickel	8.93E-10	lb/ton	0%	4.82E-07
009-34	Item 3 SPAS Conveyor 48x22 to Item 17 SPAS Conveyor 36x60, Item 10 SPAS Conveyor 36x30 to Item 11 SPAS Conveyor 36x300, or Item 13 SPAS Conveyor 36x60 to Item 14 SPAS Splitter Box	NMTrPrt	NF	540	tons	Selenium	8.29E-11	lb/ton	0%	4.48E-09
						Antimony	2.46E-10	lb/ton	90%	1.33E-08
						Arsenic	5.51E-10	lb/ton	90%	2.97E-08
						Beryllium	4.48E-11	lb/ton	90%	2.42E-09
						Cadmium	1.75E-11	lb/ton	90%	9.47E-10
						Chromium	1.32E-09	lb/ton	90%	7.12E-08
						Cobalt	6.10E-10	lb/ton	90%	3.29E-08
						Lead	1.04E-09	lb/ton	90%	5.62E-08
						Manganese	9.80E-09	lb/ton	90%	5.29E-07
						Mercury	6.72E-12	lb/ton	90%	3.63E-10
						Nickel	8.93E-10	lb/ton	90%	4.82E-08
009-35	Item 17 SPAS Conveyor 36x60 to Item 18 SPAS Conveyor 36x100 or Item 14 SPAS Splitter Box to Item 15 SPAS Conveyor 36x100 and Item 18 SPAS Conveyor 36x100	NMTrPrt	NF	540	tons	Selenium	8.29E-11	lb/ton	0%	4.48E-08
						Antimony	2.46E-10	lb/ton	0%	1.33E-07
						Arsenic	5.51E-10	lb/ton	0%	2.97E-07
						Beryllium	4.48E-11	lb/ton	0%	2.42E-08
						Cadmium	1.75E-11	lb/ton	0%	9.47E-09
						Chromium	1.32E-09	lb/ton	0%	7.12E-07
						Cobalt	6.10E-10	lb/ton	0%	3.29E-07
						Lead	1.04E-09	lb/ton	0%	5.62E-07
						Manganese	9.80E-09	lb/ton	0%	5.29E-06
						Mercury	6.72E-12	lb/ton	0%	3.63E-09
						Nickel	8.93E-10	lb/ton	0%	4.82E-07
009-36	Item 18 SPAS Conveyor 36x100 to Item 19 SPAS Radial Stacker 36x100, Item 11 SPAS Conveyor 36x300 to Item 12 SPAS Radial Stacker 36x100, or Item 15 SPAS Conveyor 36x100 to Item 16 SPAS Radial Stacker 36x100	NMTrPrt	NF	540	tons	Selenium	8.29E-11	lb/ton	90%	4.48E-09
						Antimony	2.46E-10	lb/ton	90%	1.33E-08
						Arsenic	5.51E-10	lb/ton	90%	2.97E-08
						Beryllium	4.48E-11	lb/ton	90%	2.42E-09
						Cadmium	1.75E-11	lb/ton	90%	9.47E-10
						Chromium	1.32E-09	lb/ton	90%	7.12E-08
						Cobalt	6.10E-10	lb/ton	90%	3.29E-08
						Lead	1.04E-09	lb/ton	90%	5.62E-08
						Manganese	9.80E-09	lb/ton	90%	5.29E-07
						Mercury	6.72E-12	lb/ton	90%	3.63E-10
						Nickel	8.93E-10	lb/ton	90%	4.82E-08

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
009-37	Item 12 SPAS Radial Stacker 36x100, Item 16 SPAS Radial Stacker 36x100, or Item 19 SPAS Radial Stacker 36x100 to SPAS Stockpiles	NMTrUnprt	F	540	tons	Antimony	2.30E-09	lb/ton	0%	1.24E-06
						Arsenic	5.15E-09	lb/ton	0%	2.78E-06
						Beryllium	4.19E-10	lb/ton	0%	2.26E-07
						Cadmium	1.64E-10	lb/ton	0%	8.86E-08
						Chromium	1.23E-08	lb/ton	0%	6.66E-06
						Cobalt	5.70E-09	lb/ton	0%	3.08E-06
						Lead	9.73E-09	lb/ton	0%	5.25E-06
						Manganese	9.16E-08	lb/ton	0%	4.95E-05
						Mercury	6.28E-11	lb/ton	0%	3.39E-08
						Nickel	8.34E-09	lb/ton	0%	4.51E-06
009-38	SPAS Stockpiles to Trucks	NMTrUnprt	F	540	tons	Selenium	7.75E-10	lb/ton	0%	4.18E-07
						Antimony	2.30E-09	lb/ton	0%	1.24E-06
						Arsenic	5.15E-09	lb/ton	0%	2.78E-06
						Beryllium	4.19E-10	lb/ton	0%	2.26E-07
						Cadmium	1.64E-10	lb/ton	0%	8.86E-08
						Chromium	1.23E-08	lb/ton	0%	6.66E-06
						Cobalt	5.70E-09	lb/ton	0%	3.08E-06
						Lead	9.73E-09	lb/ton	0%	5.25E-06
						Manganese	9.16E-08	lb/ton	0%	4.95E-05
						Mercury	6.28E-11	lb/ton	0%	3.39E-08
009-39	Wind Erosion of the SPAS Stockpiles	HWindSPAS	F	3.31	acre-yr	Nickel	8.34E-09	lb/ton	0%	4.51E-06
						Selenium	7.75E-10	lb/ton	0%	4.18E-07
						Antimony	1.20E-06	lb/acre-hr	0%	3.97E-06
						Arsenic	2.69E-06	lb/acre-hr	0%	8.88E-06
						Beryllium	2.18E-07	lb/acre-hr	0%	7.22E-07
						Cadmium	8.56E-08	lb/acre-hr	0%	2.83E-07
						Chromium	6.43E-06	lb/acre-hr	0%	2.13E-05
						Cobalt	2.97E-06	lb/acre-hr	0%	9.83E-06
						Lead	5.07E-06	lb/acre-hr	0%	1.68E-05
						Manganese	4.78E-05	lb/acre-hr	0%	1.58E-04
Mercury	3.28E-08	lb/acre-hr	0%	1.08E-07						
Nickel	4.35E-06	lb/acre-hr	0%	1.44E-05						
Selenium	4.04E-07	lb/acre-hr	0%	1.34E-06						
Total of Non-Fugitive Emissions for Supplemental Portable Aggregate System:										6.81E-04
Total of Fugitive Emissions for Supplemental Portable Aggregate System:										3.83E-04
Total of Non-Fugitive and Fugitive Emissions for Supplemental Portable Aggregate System:										1.06E-03
Storage Tanks and Parts Cleaning										
033-3	Gasoline Storage Tank 150 (GDF1)	GST-150	NF	1	hours	Benzene	4.57E-03	lb/hr	0%	4.57E-03
						Ethylbenzene	2.08E-04	lb/hr	0%	2.08E-04
						n-Hexane	6.91E-03	lb/hr	0%	6.91E-03
						Naphthalene	1.11E-06	lb/hr	0%	1.11E-06
						Cumene	1.47E-04	lb/hr	0%	1.47E-04
						Toluene	5.37E-03	lb/hr	0%	5.37E-03
						m-Xylene	8.31E-04	lb/hr	0%	8.31E-04
033-2	Gasoline Storage Tank FT-3 (GDF2)	GST-FT-3	NF	1	hours	Benzene	4.57E-03	lb/hr	0%	4.57E-03
						Ethylbenzene	2.08E-04	lb/hr	0%	2.08E-04
						n-Hexane	6.91E-03	lb/hr	0%	6.91E-03
						Naphthalene	1.11E-06	lb/hr	0%	1.11E-06
						Cumene	1.47E-04	lb/hr	0%	1.47E-04
						Toluene	5.37E-03	lb/hr	0%	5.37E-03
						m-Xylene	8.31E-04	lb/hr	0%	8.31E-04
033-4	Gasoline Storage Tank Sycamore TSF (GDF3)	GST-FF	NF	1	hours	Benzene	4.27E-03	lb/hr	0%	4.27E-03
						Ethylbenzene	1.95E-04	lb/hr	0%	1.95E-04
						n-Hexane	6.47E-03	lb/hr	0%	6.47E-03
						Naphthalene	1.04E-06	lb/hr	0%	1.04E-06
						Cumene	1.37E-04	lb/hr	0%	1.37E-04
						Toluene	5.03E-03	lb/hr	0%	5.03E-03
						m-Xylene	7.78E-04	lb/hr	0%	7.78E-04
033-5	Gasoline Storage Tank Mine Operations (GDF4)	GST-MO	NF	1	hours	Benzene	4.27E-03	lb/hr	0%	4.27E-03
						Ethylbenzene	1.95E-04	lb/hr	0%	1.95E-04
						n-Hexane	6.47E-03	lb/hr	0%	6.47E-03
						Naphthalene	1.04E-06	lb/hr	0%	1.04E-06
						Cumene	1.37E-04	lb/hr	0%	1.37E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
033-5 (cont'd)	Gasoline Storage Tank Mine Operations (GDF4) (cont'd)	GST-MO (cont'd)	NF (cont'd)	1	hours (cont'd)	Toluene	5.03E-03	lb/hr	0%	5.03E-03
						m-Xylene	7.78E-04	lb/hr	0%	7.78E-04
053-1	Xanthate Mixing and Storage Tanks	XMS	NF	0.24	tons	Carbon Disulfide	1.23E+01	lb/ton	0%	2.98E+00
Total of Non-Fugitive Emissions for Storage Tanks and Parts Cleaning:										3.05E+00
Total of Fugitive Emissions for Storage Tanks and Parts Cleaning:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Storage Tanks and Parts Cleaning:										3.05E+00
Diesel Emergency ICE										
049-51	Mammoth Seepage Pond Diesel Emergency Generator (1214 hp engine)	C41	NF	1,214	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	6.59E-03
						Toluene	1.97E-06	lb/hp-hr	0%	2.39E-03
						Xylenes	1.35E-06	lb/hp-hr	0%	1.64E-03
						Formaldehyde	5.52E-07	lb/hp-hr	0%	6.70E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	2.14E-04
						Acrolein	5.52E-08	lb/hp-hr	0%	6.70E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	1.10E-03
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	7.84E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	3.98E-05
						Fluorene	8.96E-08	lb/hp-hr	0%	1.09E-04
						Phenanthrene	2.86E-07	lb/hp-hr	0%	3.47E-04
						Anthracene	8.61E-09	lb/hp-hr	0%	1.05E-05
						Fluoranthene	2.82E-08	lb/hp-hr	0%	3.42E-05
						Pyrene	2.60E-08	lb/hp-hr	0%	3.15E-05
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	5.29E-06
						Chrysene	1.07E-08	lb/hp-hr	0%	1.30E-05
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	9.43E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	1.85E-06
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	2.18E-06
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	3.52E-06
049-8	Diesel Emergency Generator IA04-D (59 hp engine)	DES	NF	59	hp-hr	Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	2.94E-06
						Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	4.72E-06
						Benzene	6.53E-06	lb/hp-hr	0%	3.85E-04
						Toluene	2.86E-06	lb/hp-hr	0%	1.69E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	1.18E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.61E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	4.87E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	3.17E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	3.82E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	3.50E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.09E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	5.86E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	1.21E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.21E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	7.72E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	3.14E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	1.97E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	6.94E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	1.46E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	4.09E-08
049-28	Diesel Emergency Generator IA24-D (762 hp engine)	IA24-D	NF	762	hp-hr	Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	6.40E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	7.76E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.55E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	2.41E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	2.02E-07
						Benzene	5.43E-06	lb/hp-hr	0%	4.14E-03
						Toluene	1.97E-06	lb/hp-hr	0%	1.50E-03
						Xylenes	1.35E-06	lb/hp-hr	0%	1.03E-03
						Formaldehyde	5.52E-07	lb/hp-hr	0%	4.21E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	1.34E-04
						Acrolein	5.52E-08	lb/hp-hr	0%	4.20E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	6.93E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	4.92E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	2.50E-05
						Fluorene	8.96E-08	lb/hp-hr	0%	6.83E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	2.18E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-28 (cont'd)	Diesel Emergency Generator IA24-D (762 hp engine) (cont'd)	IA24-D (cont'd)	NF (cont'd)	762	hp-hr (cont'd)	Anthracene	8.61E-09	lb/hp-hr	0%	6.56E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	2.15E-05
						Pyrene	2.60E-08	lb/hp-hr	0%	1.98E-05
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	3.32E-06
						Chrysene	1.07E-08	lb/hp-hr	0%	8.16E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	5.92E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	1.16E-06
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	1.37E-06
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	2.21E-06
						Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	1.85E-06
049-29	Diesel Emergency Generator IA25-D (90 hp engine)	IA25-D	NF	90	hp-hr	Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	2.97E-06
						Benzene	6.53E-06	lb/hp-hr	0%	5.88E-04
						Toluene	2.86E-06	lb/hp-hr	0%	2.58E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	1.80E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.46E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	7.43E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	4.83E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	5.83E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	5.34E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	3.19E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	8.95E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	1.84E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.85E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.18E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	4.79E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	3.01E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.06E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	2.22E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	6.24E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	9.77E-08
049-31	Diesel Emergency Generator IA28-D (900 hp engine)	IA28-D	NF	900	hp-hr	Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.18E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	2.36E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	3.67E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	3.08E-07
						Benzene	4.97E-06	lb/hp-hr	0%	4.48E-03
						Toluene	1.80E-06	lb/hp-hr	0%	1.62E-03
						Xylenes	1.24E-06	lb/hp-hr	0%	1.11E-03
						Formaldehyde	5.06E-07	lb/hp-hr	0%	4.55E-04
						Acetaldehyde	1.61E-07	lb/hp-hr	0%	1.45E-04
						Acrolein	5.05E-08	lb/hp-hr	0%	4.54E-05
						Naphthalene	8.33E-07	lb/hp-hr	0%	7.50E-04
						Acenaphthylene	5.91E-08	lb/hp-hr	0%	5.32E-05
						Acenaphthene	3.00E-08	lb/hp-hr	0%	2.70E-05
						Fluorene	8.20E-08	lb/hp-hr	0%	7.38E-05
						Phenanthrene	2.61E-07	lb/hp-hr	0%	2.35E-04
						Anthracene	7.88E-09	lb/hp-hr	0%	7.09E-06
						Fluoranthene	2.58E-08	lb/hp-hr	0%	2.32E-05
						Pyrene	2.38E-08	lb/hp-hr	0%	2.14E-05
						Benzo(a)anthracene	3.99E-09	lb/hp-hr	0%	3.59E-06
049-42	Diesel Emergency Generator IA36-D (161 hp engine)	Tier3-75/130-D	NF	161	hp-hr	Chrysene	9.80E-09	lb/hp-hr	0%	8.82E-06
						Benzo(b)fluoranthene	7.11E-09	lb/hp-hr	0%	6.40E-06
						Benzo(k)fluoranthene	1.40E-09	lb/hp-hr	0%	1.26E-06
						Benzo(a)pyrene	1.65E-09	lb/hp-hr	0%	1.48E-06
						Indeno(1,2,3-cd)pyrene	2.65E-09	lb/hp-hr	0%	2.39E-06
						Dibenz(a,h)anthracene	2.22E-09	lb/hp-hr	0%	2.00E-06
						Benzo(g,h,i)perylene	3.56E-09	lb/hp-hr	0%	3.21E-06
						Benzene	6.53E-06	lb/hp-hr	0%	1.05E-03
						Toluene	2.86E-06	lb/hp-hr	0%	4.61E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	3.21E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	4.41E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.33E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	8.64E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.04E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-42 (cont'd)	Diesel Emergency Generator IA36-D (161 hp engine) (cont'd)	Tier3-75/130-D (cont'd)	NF (cont'd)	161	hp-hr (cont'd)	Naphthalene	5.94E-07	lb/hp-hr	0%	9.56E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	5.70E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.60E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	3.29E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	3.31E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	2.11E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	8.58E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	5.39E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.89E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	3.98E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.12E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.75E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	2.12E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	4.23E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	6.57E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	5.51E-07
049-52	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP03 (75 hp engine)	IA42-D	NF	75	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	4.90E-04
						Toluene	2.86E-06	lb/hp-hr	0%	2.15E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	1.50E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.05E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	6.20E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	4.03E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	4.86E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	4.45E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.66E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	7.46E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	1.53E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.54E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	9.82E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	4.00E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	2.51E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	8.82E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	1.85E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	5.20E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	8.14E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	9.87E-08
049-53	Tailings Wing Dike Diesel Emergency Water Pump TLPUMP04 (100 hp engine)	IA43-D	NF	100	hp-hr	Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.97E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	3.06E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	2.57E-07
						Benzene	6.53E-06	lb/hp-hr	0%	6.53E-04
						Toluene	2.86E-06	lb/hp-hr	0%	2.86E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.00E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.74E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	8.26E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	5.37E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	6.48E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	5.94E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	3.54E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	9.94E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	2.04E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.06E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.31E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	5.33E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	3.35E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.18E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	2.47E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	6.94E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.09E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.32E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	2.63E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	4.08E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	3.42E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-54	Copper Cleaner Flotation Diesel Emergency Generator IA44-D (480 hp engine)	IA44-D	NF	480	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	3.13E-03
						Toluene	2.86E-06	lb/hp-hr	0%	1.37E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	9.58E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.31E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	3.96E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	2.58E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	3.11E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	2.85E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.70E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	4.77E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	9.81E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	9.88E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	6.28E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	2.56E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.61E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	5.64E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	1.19E-06
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	3.33E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	5.21E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	6.32E-07
049-57	CLP Diesel Emergency Generator IA47-D (85.8 hp engine)	IA47-D	NF	85.80	hp-hr	Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.26E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.96E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.64E-06
						Benzene	6.53E-06	lb/hp-hr	0%	5.60E-04
						Toluene	2.86E-06	lb/hp-hr	0%	2.46E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	1.71E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	2.35E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	7.09E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	4.61E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	5.56E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	5.09E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	3.04E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	8.53E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	1.75E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	1.77E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.12E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	4.57E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	2.87E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.01E-06
049-58	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine)	IA48-D	NF	398	hp-hr	Chrysene	2.47E-09	lb/hp-hr	0%	2.12E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	5.95E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	9.31E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.13E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	2.25E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	3.50E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	2.94E-07
						Benzene	6.53E-06	lb/hp-hr	0%	2.60E-03
						Toluene	2.86E-06	lb/hp-hr	0%	1.14E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	7.94E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.09E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	3.29E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	2.14E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	2.58E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	2.36E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.41E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	3.96E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	8.14E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	8.19E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	5.21E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	2.12E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.33E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	4.68E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	9.83E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-58 (cont'd)	Mulholland Seepage Pond Diesel Emergency Generator IA48-D (398 hp engine) (cont'd)	IA48-D (cont'd)	NF (cont'd)	398	hp-hr (cont'd)	Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	2.76E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	4.32E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	5.24E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.04E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.62E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.36E-06
049-63	Security Gate Diesel Emergency Generator IA49-D (33.5 hp engine)	Table2-19/37-D	NF	33.50	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	2.19E-04
						Toluene	2.86E-06	lb/hp-hr	0%	9.59E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	6.68E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	9.17E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	2.77E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.80E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	2.17E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.99E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.19E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	3.33E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	6.85E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	6.89E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	4.39E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.78E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	1.12E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	3.94E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	8.28E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	2.32E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	3.63E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	4.41E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	8.79E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.37E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.15E-07
049-68	Command Center Diesel Emergency Generator IA54-D (480 hp engine)	IA54-D	NF	480	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	3.13E-03
						Toluene	2.86E-06	lb/hp-hr	0%	1.37E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	9.58E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.31E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	3.96E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	2.58E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	3.11E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	2.85E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.70E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	4.77E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	9.81E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	9.88E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	6.28E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	2.56E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.61E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	5.64E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	1.19E-06
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	3.33E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	5.21E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	6.32E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.26E-06
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.96E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.64E-06
Total of Non-Fugitive Emissions for Diesel Emergency ICE:										8.40E-02
Total of Fugitive Emissions for Diesel Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Diesel Emergency ICE:										8.40E-02
Propane Emergency ICE										
049-17	Propane Emergency Generator IA16-P (13 hp engine)	IA16-P	NF	13	hp-hr	1,1,2,2-Tetrachloroethane	2.53E-07	lb/hp-hr	0%	3.29E-06
						1,1,2-Trichloroethane	1.53E-07	lb/hp-hr	0%	1.99E-06
						1,1-Dichloroethane	1.13E-07	lb/hp-hr	0%	1.47E-06
						1,2-Dichloroethane	1.13E-07	lb/hp-hr	0%	1.47E-06
						1,2-Dichloropropane	1.30E-07	lb/hp-hr	0%	1.69E-06
						1,3-Butadiene	6.63E-06	lb/hp-hr	0%	8.62E-05
						1,3-Dichloropropene	1.27E-07	lb/hp-hr	0%	1.65E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-17 (cont'd)	Propane Emergency Generator IA16-P (13 hp engine) (cont'd)	IA16-P (cont'd)	NF (cont'd)	13	hp-hr (cont'd)	Acetaldehyde	2.79E-05	lb/hp-hr	0%	3.63E-04
						Acrolein	2.63E-05	lb/hp-hr	0%	3.42E-04
						Benzene	1.58E-05	lb/hp-hr	0%	2.05E-04
						Carbon Tetrachloride	1.77E-07	lb/hp-hr	0%	2.30E-06
						Chlorobenzene	1.29E-07	lb/hp-hr	0%	1.68E-06
						Chloroform	1.37E-07	lb/hp-hr	0%	1.78E-06
						Ethylbenzene	2.48E-07	lb/hp-hr	0%	3.22E-06
						Ethylene Dibromide	2.13E-07	lb/hp-hr	0%	2.77E-06
						Formaldehyde	2.05E-04	lb/hp-hr	0%	2.67E-03
						Methanol	3.06E-05	lb/hp-hr	0%	3.98E-04
						Methylene Chloride	4.12E-07	lb/hp-hr	0%	5.36E-06
						Naphthalene	9.71E-07	lb/hp-hr	0%	1.26E-05
						Polycyclic Aromatic Hydrocarbons	1.41E-06	lb/hp-hr	0%	1.83E-05
						Styrene	1.19E-07	lb/hp-hr	0%	1.55E-06
						Toluene	5.58E-06	lb/hp-hr	0%	7.26E-05
049-20	Propane Emergency Generator IA19-P (60 hp engine)	IA19-P	NF	60	hp-hr	Vinyl Chloride	7.18E-08	lb/hp-hr	0%	9.34E-07
						Xylene	1.95E-06	lb/hp-hr	0%	2.54E-05
						1,1,2,2-Tetrachloroethane	2.55E-07	lb/hp-hr	0%	1.53E-05
						1,1,2-Trichloroethane	1.54E-07	lb/hp-hr	0%	9.25E-06
						1,1-Dichloroethane	1.14E-07	lb/hp-hr	0%	6.83E-06
						1,2-Dichloroethane	1.14E-07	lb/hp-hr	0%	6.83E-06
						1,2-Dichloropropane	1.31E-07	lb/hp-hr	0%	7.86E-06
						1,3-Butadiene	6.68E-06	lb/hp-hr	0%	4.01E-04
						1,3-Dichloropropene	1.28E-07	lb/hp-hr	0%	7.68E-06
						Acetaldehyde	2.81E-05	lb/hp-hr	0%	1.69E-03
						Acrolein	2.65E-05	lb/hp-hr	0%	1.59E-03
						Benzene	1.59E-05	lb/hp-hr	0%	9.56E-04
						Carbon Tetrachloride	1.78E-07	lb/hp-hr	0%	1.07E-05
						Chlorobenzene	1.30E-07	lb/hp-hr	0%	7.80E-06
						Chloroform	1.38E-07	lb/hp-hr	0%	8.29E-06
						Ethylbenzene	2.50E-07	lb/hp-hr	0%	1.50E-05
						Ethylene Dibromide	2.15E-07	lb/hp-hr	0%	1.29E-05
						Formaldehyde	2.07E-04	lb/hp-hr	0%	1.24E-02
						Methanol	3.08E-05	lb/hp-hr	0%	1.85E-03
						Methylene Chloride	4.15E-07	lb/hp-hr	0%	2.49E-05
049-30	Propane Emergency Generator IA21-P (80 hp engine)	IA21-P	NF	80	hp-hr	Naphthalene	9.79E-07	lb/hp-hr	0%	5.87E-05
						Polycyclic Aromatic Hydrocarbons	1.42E-06	lb/hp-hr	0%	8.53E-05
						Styrene	1.20E-07	lb/hp-hr	0%	7.20E-06
						Toluene	5.62E-06	lb/hp-hr	0%	3.37E-04
						Vinyl Chloride	7.24E-08	lb/hp-hr	0%	4.34E-06
						Xylene	1.97E-06	lb/hp-hr	0%	1.18E-04
						1,1,2,2-Tetrachloroethane	2.34E-07	lb/hp-hr	0%	1.87E-05
						1,1,2-Trichloroethane	1.41E-07	lb/hp-hr	0%	1.13E-05
						1,1-Dichloroethane	1.04E-07	lb/hp-hr	0%	8.35E-06
						1,2-Dichloroethane	1.04E-07	lb/hp-hr	0%	8.35E-06
						1,2-Dichloropropane	1.20E-07	lb/hp-hr	0%	9.61E-06
						1,3-Butadiene	6.12E-06	lb/hp-hr	0%	4.90E-04
						1,3-Dichloropropene	1.17E-07	lb/hp-hr	0%	9.38E-06
						Acetaldehyde	2.58E-05	lb/hp-hr	0%	2.06E-03
						Acrolein	2.43E-05	lb/hp-hr	0%	1.94E-03
						Benzene	1.46E-05	lb/hp-hr	0%	1.17E-03
						Carbon Tetrachloride	1.63E-07	lb/hp-hr	0%	1.31E-05
						Chlorobenzene	1.19E-07	lb/hp-hr	0%	9.53E-06
						Chloroform	1.27E-07	lb/hp-hr	0%	1.01E-05
						Ethylbenzene	2.29E-07	lb/hp-hr	0%	1.83E-05
						Ethylene Dibromide	1.97E-07	lb/hp-hr	0%	1.57E-05
						Formaldehyde	1.89E-04	lb/hp-hr	0%	1.51E-02
						Methanol	2.83E-05	lb/hp-hr	0%	2.26E-03
						Methylene Chloride	3.81E-07	lb/hp-hr	0%	3.04E-05
						Naphthalene	8.97E-07	lb/hp-hr	0%	7.17E-05
						Polycyclic Aromatic Hydrocarbons	1.30E-06	lb/hp-hr	0%	1.04E-04
						Styrene	1.10E-07	lb/hp-hr	0%	8.79E-06
						Toluene	5.15E-06	lb/hp-hr	0%	4.12E-04

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-30 (cont'd)	Propane Emergency Generator IA21-P (80 hp engine) (cont'd)	IA21-P (cont'd)	NF (cont'd)	80	hp-hr (cont'd)	Vinyl Chloride	6.63E-08	lb/hp-hr	0%	5.31E-06
						Xylene	1.80E-06	lb/hp-hr	0%	1.44E-04
						1,1,2,2-Tetrachloroethane	2.72E-07	lb/hp-hr	0%	8.29E-06
						1,1,2-Trichloroethane	1.64E-07	lb/hp-hr	0%	5.01E-06
						1,1-Dichloroethane	1.21E-07	lb/hp-hr	0%	3.70E-06
						1,2-Dichloroethane	1.21E-07	lb/hp-hr	0%	3.70E-06
						1,2-Dichloropropane	1.40E-07	lb/hp-hr	0%	4.26E-06
						1,3-Butadiene	7.12E-06	lb/hp-hr	0%	2.17E-04
						1,3-Dichloropropene	1.36E-07	lb/hp-hr	0%	4.16E-06
						Acetaldehyde	2.99E-05	lb/hp-hr	0%	9.14E-04
						Acrolein	2.82E-05	lb/hp-hr	0%	8.62E-04
						Benzene	1.70E-05	lb/hp-hr	0%	5.18E-04
						Carbon Tetrachloride	1.90E-07	lb/hp-hr	0%	5.80E-06
						Chlorobenzene	1.38E-07	lb/hp-hr	0%	4.23E-06
						Chloroform	1.47E-07	lb/hp-hr	0%	4.49E-06
						Ethylbenzene	2.66E-07	lb/hp-hr	0%	8.12E-06
						Ethylene Dibromide	2.29E-07	lb/hp-hr	0%	6.98E-06
						Formaldehyde	2.20E-04	lb/hp-hr	0%	6.72E-03
						Methanol	3.28E-05	lb/hp-hr	0%	1.00E-03
						Methylene Chloride	4.42E-07	lb/hp-hr	0%	1.35E-05
						Naphthalene	1.04E-06	lb/hp-hr	0%	3.18E-05
						Polycyclic Aromatic Hydrocarbons	1.51E-06	lb/hp-hr	0%	4.62E-05
						Styrene	1.28E-07	lb/hp-hr	0%	3.90E-06
						Toluene	5.99E-06	lb/hp-hr	0%	1.83E-04
						Vinyl Chloride	7.71E-08	lb/hp-hr	0%	2.35E-06
						Xylene	2.09E-06	lb/hp-hr	0%	6.39E-05
						1,1,2,2-Tetrachloroethane	1.87E-07	lb/hp-hr	0%	5.99E-06
						1,1,2-Trichloroethane	1.13E-07	lb/hp-hr	0%	3.62E-06
						1,1-Dichloroethane	8.36E-08	lb/hp-hr	0%	2.68E-06
						1,2-Dichloroethane	8.36E-08	lb/hp-hr	0%	2.68E-06
						1,2-Dichloropropane	9.62E-08	lb/hp-hr	0%	3.08E-06
						1,3-Butadiene	4.91E-06	lb/hp-hr	0%	1.57E-04
						1,3-Dichloropropene	9.40E-08	lb/hp-hr	0%	3.01E-06
						Acetaldehyde	2.07E-05	lb/hp-hr	0%	6.61E-04
						Acrolein	1.95E-05	lb/hp-hr	0%	6.23E-04
						Benzene	1.17E-05	lb/hp-hr	0%	3.74E-04
						Carbon Tetrachloride	1.31E-07	lb/hp-hr	0%	4.19E-06
						Chlorobenzene	9.55E-08	lb/hp-hr	0%	3.06E-06
						Chloroform	1.01E-07	lb/hp-hr	0%	3.25E-06
						Ethylbenzene	1.84E-07	lb/hp-hr	0%	5.87E-06
						Ethylene Dibromide	1.58E-07	lb/hp-hr	0%	5.05E-06
						Formaldehyde	1.52E-04	lb/hp-hr	0%	4.86E-03
						Methanol	2.27E-05	lb/hp-hr	0%	7.25E-04
						Methylene Chloride	3.05E-07	lb/hp-hr	0%	9.76E-06
						Naphthalene	7.19E-07	lb/hp-hr	0%	2.30E-05
						Polycyclic Aromatic Hydrocarbons	1.04E-06	lb/hp-hr	0%	3.34E-05
						Styrene	8.81E-08	lb/hp-hr	0%	2.82E-06
						Toluene	4.13E-06	lb/hp-hr	0%	1.32E-04
						Vinyl Chloride	5.31E-08	lb/hp-hr	0%	1.70E-06
						Xylene	1.44E-06	lb/hp-hr	0%	4.62E-05
						1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	0%	1.84E-05
						1,1,2-Trichloroethane	9.81E-08	lb/hp-hr	0%	1.11E-05
						1,1-Dichloroethane	7.25E-08	lb/hp-hr	0%	8.20E-06
						1,2-Dichloroethane	7.25E-08	lb/hp-hr	0%	8.20E-06
						1,2-Dichloropropane	8.34E-08	lb/hp-hr	0%	9.43E-06
						1,3-Butadiene	4.25E-06	lb/hp-hr	0%	4.81E-04
						1,3-Dichloropropene	8.14E-08	lb/hp-hr	0%	9.22E-06
						Acetaldehyde	1.79E-05	lb/hp-hr	0%	2.02E-03
						Acrolein	1.69E-05	lb/hp-hr	0%	1.91E-03
						Benzene	1.01E-05	lb/hp-hr	0%	1.15E-03
						Carbon Tetrachloride	1.13E-07	lb/hp-hr	0%	1.28E-05
						Chlorobenzene	8.27E-08	lb/hp-hr	0%	9.36E-06
						Chloroform	8.78E-08	lb/hp-hr	0%	9.94E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-43 (cont'd)	Propane Emergency Generator IA37-P (113.18 hp engine) (cont'd)	IA37-P (cont'd)	NF (cont'd)	113.18	hp-hr (cont'd)	Ethylbenzene	1.59E-07	lb/hp-hr	0%	1.80E-05
						Ethylene Dibromide	1.37E-07	lb/hp-hr	0%	1.55E-05
						Formaldehyde	1.31E-04	lb/hp-hr	0%	1.49E-02
						Methanol	1.96E-05	lb/hp-hr	0%	2.22E-03
						Methylene Chloride	2.64E-07	lb/hp-hr	0%	2.99E-05
						Naphthalene	6.23E-07	lb/hp-hr	0%	7.05E-05
						Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr	0%	1.02E-04
						Styrene	7.63E-08	lb/hp-hr	0%	8.64E-06
						Toluene	3.58E-06	lb/hp-hr	0%	4.05E-04
049-44	Propane Emergency Generator IA38-P (113.18 hp engine)	IA38-P	NF	113.18	hp-hr	Vinyl Chloride	4.60E-08	lb/hp-hr	0%	5.21E-06
						Xylene	1.25E-06	lb/hp-hr	0%	1.42E-04
						1,1,2,2-Tetrachloroethane	1.62E-07	lb/hp-hr	0%	1.84E-05
						1,1,2-Trichloroethane	9.81E-08	lb/hp-hr	0%	1.11E-05
						1,1-Dichloroethane	7.25E-08	lb/hp-hr	0%	8.20E-06
						1,2-Dichloroethane	7.25E-08	lb/hp-hr	0%	8.20E-06
						1,2-Dichloropropane	8.34E-08	lb/hp-hr	0%	9.43E-06
						1,3-Butadiene	4.25E-06	lb/hp-hr	0%	4.81E-04
						1,3-Dichloropropene	8.14E-08	lb/hp-hr	0%	9.22E-06
						Acetaldehyde	1.79E-05	lb/hp-hr	0%	2.02E-03
						Acrolein	1.69E-05	lb/hp-hr	0%	1.91E-03
						Benzene	1.01E-05	lb/hp-hr	0%	1.15E-03
						Carbon Tetrachloride	1.13E-07	lb/hp-hr	0%	1.28E-05
						Chlorobenzene	8.27E-08	lb/hp-hr	0%	9.36E-06
						Chloroform	8.78E-08	lb/hp-hr	0%	9.94E-06
						Ethylbenzene	1.59E-07	lb/hp-hr	0%	1.80E-05
						Ethylene Dibromide	1.37E-07	lb/hp-hr	0%	1.55E-05
						Formaldehyde	1.31E-04	lb/hp-hr	0%	1.49E-02
						Methanol	1.96E-05	lb/hp-hr	0%	2.22E-03
						Methylene Chloride	2.64E-07	lb/hp-hr	0%	2.99E-05
049-69	Sycamore Communication Tower Propane Emergency Generator IA55-P (103 hp engine)	IA55-P	NF	103	hp-hr	Naphthalene	6.23E-07	lb/hp-hr	0%	7.05E-05
						Polycyclic Aromatic Hydrocarbons	9.04E-07	lb/hp-hr	0%	1.02E-04
						Styrene	7.63E-08	lb/hp-hr	0%	8.64E-06
						Toluene	3.58E-06	lb/hp-hr	0%	4.05E-04
						Vinyl Chloride	4.60E-08	lb/hp-hr	0%	5.21E-06
						Xylene	1.25E-06	lb/hp-hr	0%	1.42E-04
						1,1,2,2-Tetrachloroethane	2.09E-07	lb/hp-hr	0%	2.15E-05
						1,1,2-Trichloroethane	1.26E-07	lb/hp-hr	0%	1.30E-05
						1,1-Dichloroethane	9.32E-08	lb/hp-hr	0%	9.60E-06
						1,2-Dichloroethane	9.32E-08	lb/hp-hr	0%	9.60E-06
						1,2-Dichloropropane	1.07E-07	lb/hp-hr	0%	1.10E-05
						1,3-Butadiene	5.47E-06	lb/hp-hr	0%	5.63E-04
						1,3-Dichloropropene	1.05E-07	lb/hp-hr	0%	1.08E-05
						Acetaldehyde	2.30E-05	lb/hp-hr	0%	2.37E-03
						Acrolein	2.17E-05	lb/hp-hr	0%	2.23E-03
						Benzene	1.30E-05	lb/hp-hr	0%	1.34E-03
						Carbon Tetrachloride	1.46E-07	lb/hp-hr	0%	1.50E-05
						Chlorobenzene	1.06E-07	lb/hp-hr	0%	1.10E-05
						Chloroform	1.13E-07	lb/hp-hr	0%	1.16E-05
						Ethylbenzene	2.04E-07	lb/hp-hr	0%	2.11E-05
						Ethylene Dibromide	1.76E-07	lb/hp-hr	0%	1.81E-05
						Formaldehyde	1.69E-04	lb/hp-hr	0%	1.74E-02
						Methanol	2.52E-05	lb/hp-hr	0%	2.60E-03
						Methylene Chloride	3.40E-07	lb/hp-hr	0%	3.50E-05
						Naphthalene	8.01E-07	lb/hp-hr	0%	8.25E-05
						Polycyclic Aromatic Hydrocarbons	1.16E-06	lb/hp-hr	0%	1.20E-04
						Styrene	9.81E-08	lb/hp-hr	0%	1.01E-05
						Toluene	4.60E-06	lb/hp-hr	0%	4.74E-04
						Vinyl Chloride	5.92E-08	lb/hp-hr	0%	6.10E-06
Xylene	1.61E-06	lb/hp-hr	0%	1.66E-04						
Total of Non-Fugitive Emissions for Propane Emergency ICE:										1.41E-01
Total of Fugitive Emissions for Propane Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Propane Emergency ICE:										1.41E-01

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
Natural Gas Emergency ICE										
049-23	Natural Gas Emergency Generator IA13-NG (17 hp engine)	IA13-NG	NF	17	hp-hr	1,1,2,2-Tetrachloroethane	3.34E-07	lb/hp-hr	0%	5.68E-06
						1,1,2-Trichloroethane	2.02E-07	lb/hp-hr	0%	3.43E-06
						1,1-Dichloroethane	1.49E-07	lb/hp-hr	0%	2.54E-06
						1,2-Dichloroethane	1.49E-07	lb/hp-hr	0%	2.54E-06
						1,2-Dichloropropane	1.72E-07	lb/hp-hr	0%	2.92E-06
						1,3-Butadiene	8.75E-06	lb/hp-hr	0%	1.49E-04
						1,3-Dichloropropene	1.68E-07	lb/hp-hr	0%	2.85E-06
						Acetaldehyde	3.68E-05	lb/hp-hr	0%	6.26E-04
						Acrolein	3.47E-05	lb/hp-hr	0%	5.90E-04
						Benzene	2.09E-05	lb/hp-hr	0%	3.55E-04
						Carbon Tetrachloride	2.34E-07	lb/hp-hr	0%	3.97E-06
						Chlorobenzene	1.70E-07	lb/hp-hr	0%	2.89E-06
						Chloroform	1.81E-07	lb/hp-hr	0%	3.07E-06
						Ethylbenzene	3.27E-07	lb/hp-hr	0%	5.57E-06
						Ethylene Dibromide	2.81E-07	lb/hp-hr	0%	4.78E-06
						Formaldehyde	2.71E-04	lb/hp-hr	0%	4.60E-03
						Methanol	4.04E-05	lb/hp-hr	0%	6.87E-04
						Methylene Chloride	5.44E-07	lb/hp-hr	0%	9.25E-06
						Naphthalene	1.28E-06	lb/hp-hr	0%	2.18E-05
						Polycyclic Aromatic Hydrocarbons	1.86E-06	lb/hp-hr	0%	3.16E-05
049-15	Natural Gas Emergency Generator IA22-NG (199 hp engine)	IA22-NG	NF	199	hp-hr	Styrene	1.57E-07	lb/hp-hr	0%	2.67E-06
						Toluene	7.37E-06	lb/hp-hr	0%	1.25E-04
						Vinyl Chloride	9.48E-08	lb/hp-hr	0%	1.61E-06
						Xylene	2.57E-06	lb/hp-hr	0%	4.38E-05
						1,1,2,2-Tetrachloroethane	1.82E-07	lb/hp-hr	0%	3.61E-05
						1,1,2-Trichloroethane	1.10E-07	lb/hp-hr	0%	2.18E-05
						1,1-Dichloroethane	8.11E-08	lb/hp-hr	0%	1.61E-05
						1,2-Dichloroethane	8.11E-08	lb/hp-hr	0%	1.61E-05
						1,2-Dichloropropane	9.33E-08	lb/hp-hr	0%	1.86E-05
						1,3-Butadiene	4.76E-06	lb/hp-hr	0%	9.47E-04
						1,3-Dichloropropene	9.11E-08	lb/hp-hr	0%	1.81E-05
						Acetaldehyde	2.00E-05	lb/hp-hr	0%	3.98E-03
						Acrolein	1.89E-05	lb/hp-hr	0%	3.76E-03
						Benzene	1.13E-05	lb/hp-hr	0%	2.26E-03
						Carbon Tetrachloride	1.27E-07	lb/hp-hr	0%	2.53E-05
						Chlorobenzene	9.26E-08	lb/hp-hr	0%	1.84E-05
						Chloroform	9.83E-08	lb/hp-hr	0%	1.96E-05
						Ethylbenzene	1.78E-07	lb/hp-hr	0%	3.54E-05
						Ethylene Dibromide	1.53E-07	lb/hp-hr	0%	3.04E-05
						Formaldehyde	1.47E-04	lb/hp-hr	0%	2.93E-02
Methanol	2.20E-05	lb/hp-hr	0%	4.37E-03						
Methylene Chloride	2.96E-07	lb/hp-hr	0%	5.88E-05						
Naphthalene	6.97E-07	lb/hp-hr	0%	1.39E-04						
Polycyclic Aromatic Hydrocarbons	1.01E-06	lb/hp-hr	0%	2.01E-04						
Styrene	8.54E-08	lb/hp-hr	0%	1.70E-05						
Toluene	4.00E-06	lb/hp-hr	0%	7.97E-04						
Vinyl Chloride	5.15E-08	lb/hp-hr	0%	1.03E-05						
Xylene	1.40E-06	lb/hp-hr	0%	2.78E-04						
049-16	Natural Gas Emergency Generator IA23-NG (192 hp engine)	IA23-NG	NF	192	hp-hr	1,1,2,2-Tetrachloroethane	2.40E-07	lb/hp-hr	0%	4.61E-05
						1,1,2-Trichloroethane	1.45E-07	lb/hp-hr	0%	2.79E-05
						1,1-Dichloroethane	1.07E-07	lb/hp-hr	0%	2.06E-05
						1,2-Dichloroethane	1.07E-07	lb/hp-hr	0%	2.06E-05
						1,2-Dichloropropane	1.23E-07	lb/hp-hr	0%	2.37E-05
						1,3-Butadiene	6.29E-06	lb/hp-hr	0%	1.21E-03
						1,3-Dichloropropene	1.20E-07	lb/hp-hr	0%	2.31E-05
						Acetaldehyde	2.65E-05	lb/hp-hr	0%	5.08E-03
						Acrolein	2.50E-05	lb/hp-hr	0%	4.79E-03
						Benzene	1.50E-05	lb/hp-hr	0%	2.88E-03
						Carbon Tetrachloride	1.68E-07	lb/hp-hr	0%	3.22E-05
						Chlorobenzene	1.22E-07	lb/hp-hr	0%	2.35E-05
						Chloroform	1.30E-07	lb/hp-hr	0%	2.50E-05
						Ethylbenzene	2.35E-07	lb/hp-hr	0%	4.52E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-16 (cont'd)	Natural Gas Emergency Generator IA23-NG (192 hp engine) (cont'd)	IA23-NG (cont'd)	NF (cont'd)	192	hp-hr (cont'd)	Ethylene Dibromide	2.02E-07	lb/hp-hr	0%	3.88E-05
						Formaldehyde	1.95E-04	lb/hp-hr	0%	3.73E-02
						Methanol	2.90E-05	lb/hp-hr	0%	5.57E-03
						Methylene Chloride	3.91E-07	lb/hp-hr	0%	7.51E-05
						Naphthalene	9.21E-07	lb/hp-hr	0%	1.77E-04
						Polycyclic Aromatic Hydrocarbons	1.34E-06	lb/hp-hr	0%	2.57E-04
						Styrene	1.13E-07	lb/hp-hr	0%	2.17E-05
						Toluene	5.29E-06	lb/hp-hr	0%	1.02E-03
						Vinyl Chloride	6.81E-08	lb/hp-hr	0%	1.31E-05
049-33	Natural Gas Emergency Generator IA30-NG (40 hp engine)	IA30-NG	NF	40	hp-hr	Xylene	1.85E-06	lb/hp-hr	0%	3.55E-04
						1,1,2,2-Tetrachloroethane	1.67E-07	lb/hp-hr	0%	6.70E-06
						1,1,2-Trichloroethane	1.01E-07	lb/hp-hr	0%	4.05E-06
						1,1-Dichloroethane	7.48E-08	lb/hp-hr	0%	2.99E-06
						1,2-Dichloroethane	7.48E-08	lb/hp-hr	0%	2.99E-06
						1,2-Dichloropropane	8.61E-08	lb/hp-hr	0%	3.44E-06
						1,3-Butadiene	4.39E-06	lb/hp-hr	0%	1.76E-04
						1,3-Dichloropropene	8.41E-08	lb/hp-hr	0%	3.36E-06
						Acetaldehyde	1.85E-05	lb/hp-hr	0%	7.39E-04
						Acrolein	1.74E-05	lb/hp-hr	0%	6.96E-04
						Benzene	1.05E-05	lb/hp-hr	0%	4.18E-04
						Carbon Tetrachloride	1.17E-07	lb/hp-hr	0%	4.69E-06
						Chlorobenzene	8.54E-08	lb/hp-hr	0%	3.42E-06
						Chloroform	9.07E-08	lb/hp-hr	0%	3.63E-06
						Ethylbenzene	1.64E-07	lb/hp-hr	0%	6.57E-06
						Ethylene Dibromide	1.41E-07	lb/hp-hr	0%	5.64E-06
						Formaldehyde	1.36E-04	lb/hp-hr	0%	5.43E-03
						Methanol	2.03E-05	lb/hp-hr	0%	8.10E-04
						Methylene Chloride	2.73E-07	lb/hp-hr	0%	1.09E-05
						Naphthalene	6.43E-07	lb/hp-hr	0%	2.57E-05
						Polycyclic Aromatic Hydrocarbons	9.33E-07	lb/hp-hr	0%	3.73E-05
						Styrene	7.88E-08	lb/hp-hr	0%	3.15E-06
						Toluene	3.69E-06	lb/hp-hr	0%	1.48E-04
						Vinyl Chloride	4.75E-08	lb/hp-hr	0%	1.90E-06
049-36	Natural Gas Emergency Generator IA33-NG (31.83 hp engine)	IA33-NG	NF	31.83	hp-hr	Xylene	1.29E-06	lb/hp-hr	0%	5.16E-05
						1,1,2,2-Tetrachloroethane	2.75E-07	lb/hp-hr	0%	8.76E-06
						1,1,2-Trichloroethane	1.67E-07	lb/hp-hr	0%	5.30E-06
						1,1-Dichloroethane	1.23E-07	lb/hp-hr	0%	3.91E-06
						1,2-Dichloroethane	1.23E-07	lb/hp-hr	0%	3.91E-06
						1,2-Dichloropropane	1.41E-07	lb/hp-hr	0%	4.50E-06
						1,3-Butadiene	7.22E-06	lb/hp-hr	0%	2.30E-04
						1,3-Dichloropropene	1.38E-07	lb/hp-hr	0%	4.40E-06
						Acetaldehyde	3.04E-05	lb/hp-hr	0%	9.67E-04
						Acrolein	2.86E-05	lb/hp-hr	0%	9.11E-04
						Benzene	1.72E-05	lb/hp-hr	0%	5.47E-04
						Carbon Tetrachloride	1.93E-07	lb/hp-hr	0%	6.13E-06
						Chlorobenzene	1.40E-07	lb/hp-hr	0%	4.47E-06
						Chloroform	1.49E-07	lb/hp-hr	0%	4.75E-06
						Ethylbenzene	2.70E-07	lb/hp-hr	0%	8.59E-06
						Ethylene Dibromide	2.32E-07	lb/hp-hr	0%	7.38E-06
						Formaldehyde	2.23E-04	lb/hp-hr	0%	7.10E-03
						Methanol	3.33E-05	lb/hp-hr	0%	1.06E-03
						Methylene Chloride	4.48E-07	lb/hp-hr	0%	1.43E-05
						Naphthalene	1.06E-06	lb/hp-hr	0%	3.36E-05
						Polycyclic Aromatic Hydrocarbons	1.53E-06	lb/hp-hr	0%	4.88E-05
						Styrene	1.30E-07	lb/hp-hr	0%	4.12E-06
						Toluene	6.07E-06	lb/hp-hr	0%	1.93E-04
						Vinyl Chloride	7.81E-08	lb/hp-hr	0%	2.49E-06
049-40	Natural Gas Emergency Generator IA34-NG (32 hp engine)	IA34-NG	NF	32	hp-hr	Xylene	2.12E-06	lb/hp-hr	0%	6.76E-05
						1,1,2,2-Tetrachloroethane	2.76E-07	lb/hp-hr	0%	8.83E-06
						1,1,2-Trichloroethane	1.67E-07	lb/hp-hr	0%	5.34E-06
						1,1-Dichloroethane	1.23E-07	lb/hp-hr	0%	3.94E-06
						1,2-Dichloroethane	1.23E-07	lb/hp-hr	0%	3.94E-06
						1,2-Dichloropropane	1.42E-07	lb/hp-hr	0%	4.53E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-40 (cont'd)	Natural Gas Emergency Generator IA34-NG (32 hp engine) (cont'd)	IA34-NG (cont'd)	NF (cont'd)	32	hp-hr (cont'd)	1,3-Butadiene	7.23E-06	lb/hp-hr	0%	2.31E-04
						1,3-Dichloropropene	1.38E-07	lb/hp-hr	0%	4.43E-06
						Acetaldehyde	3.04E-05	lb/hp-hr	0%	9.73E-04
						Acrolein	2.87E-05	lb/hp-hr	0%	9.17E-04
						Benzene	1.72E-05	lb/hp-hr	0%	5.51E-04
						Carbon Tetrachloride	1.93E-07	lb/hp-hr	0%	6.17E-06
						Chlorobenzene	1.41E-07	lb/hp-hr	0%	4.50E-06
						Chloroform	1.49E-07	lb/hp-hr	0%	4.78E-06
						Ethylbenzene	2.70E-07	lb/hp-hr	0%	8.65E-06
						Ethylene Dibromide	2.32E-07	lb/hp-hr	0%	7.43E-06
						Formaldehyde	2.23E-04	lb/hp-hr	0%	7.15E-03
						Methanol	3.34E-05	lb/hp-hr	0%	1.07E-03
						Methylene Chloride	4.49E-07	lb/hp-hr	0%	1.44E-05
						Naphthalene	1.06E-06	lb/hp-hr	0%	3.39E-05
						Polycyclic Aromatic Hydrocarbons	1.54E-06	lb/hp-hr	0%	4.92E-05
Styrene	1.30E-07	lb/hp-hr	0%	4.15E-06						
Toluene	6.08E-06	lb/hp-hr	0%	1.95E-04						
Vinyl Chloride	7.83E-08	lb/hp-hr	0%	2.50E-06						
Xylene	2.13E-06	lb/hp-hr	0%	6.80E-05						
Total of Non-Fugitive Emissions for Natural Gas Emergency ICE:										1.44E-01
Total of Fugitive Emissions for Natural Gas Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Natural Gas Emergency ICE:										1.44E-01
Diesel Non-Emergency ICE										
049-11	Diesel Non-Emergency Generator IA14-DN (128 hp engine)	IA14-DN	NF	128	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	8.36E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.66E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.55E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.50E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.06E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	6.87E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	8.29E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.60E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.53E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.27E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.62E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.63E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.68E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	6.82E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.28E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.51E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	3.16E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	8.88E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.39E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.68E-07
Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.36E-07						
Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	5.22E-07						
Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.38E-07						
049-12	Diesel Non-Emergency Generator IA15-DN (130 hp engine)	IA15-DN	NF	130	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	8.49E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.72E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.59E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.56E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.07E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	6.98E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	8.42E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	7.72E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.60E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.29E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.66E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.68E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.70E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	6.93E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.35E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.53E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	3.21E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-12 (cont'd)	Diesel Non-Emergency Generator IA15-DN (130 hp engine) (cont'd)	IA15-DN (cont'd)	NF (cont'd)	130	hp-hr (cont'd)	Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	9.02E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.41E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.71E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.41E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	5.31E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.45E-07
049-55	Copper Creek Flood Basin Diesel Non-Emergency Pump Engine (28.2 hp engine)	IA45-DN	NF	28.20	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	1.84E-04
						Toluene	2.86E-06	lb/hp-hr	0%	8.07E-05
						Xylenes	2.00E-06	lb/hp-hr	0%	5.63E-05
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	7.72E-06
						Formaldehyde	8.26E-06	lb/hp-hr	0%	2.33E-04
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.51E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	1.83E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.67E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	9.99E-07
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.80E-07
						Fluorene	2.04E-07	lb/hp-hr	0%	5.76E-06
						Phenanthrene	2.06E-07	lb/hp-hr	0%	5.80E-06
						Anthracene	1.31E-08	lb/hp-hr	0%	3.69E-07
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.50E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	9.44E-07
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	3.32E-07
						Chrysene	2.47E-09	lb/hp-hr	0%	6.97E-08
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	1.96E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	3.06E-08
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	3.71E-08
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	7.40E-08
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.15E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	9.65E-08
049-56	Lime Porta Batch Diesel Non-Emergency Engine (135 hp engine)	Tier3-75/130-DN	NF	135	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	8.82E-04
						Toluene	2.86E-06	lb/hp-hr	0%	3.87E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	2.69E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	3.69E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	1.12E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	7.25E-04
						Acrolein	6.48E-07	lb/hp-hr	0%	8.74E-05
						Naphthalene	5.94E-07	lb/hp-hr	0%	8.01E-05
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	4.78E-06
						Acenaphthene	9.94E-09	lb/hp-hr	0%	1.34E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	2.76E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	2.78E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	1.77E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	7.19E-06
						Pyrene	3.35E-08	lb/hp-hr	0%	4.52E-06
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	1.59E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	3.34E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	9.36E-08
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	1.46E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	1.78E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	3.54E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	5.51E-07
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	4.62E-07
049-67	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine)	IA53-DN	NF	577	hp-hr	Benzene	6.53E-06	lb/hp-hr	0%	3.77E-03
						Toluene	2.86E-06	lb/hp-hr	0%	1.65E-03
						Xylenes	2.00E-06	lb/hp-hr	0%	1.15E-03
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	1.58E-04
						Formaldehyde	8.26E-06	lb/hp-hr	0%	4.77E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	3.10E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	3.74E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	3.43E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	2.04E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	5.74E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	1.18E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-67 (cont'd)	Mill Compressor Diesel Non-Emergency Engine IA53-DN (577 hp engine) (cont'd)	IA53-DN (cont'd)	NF (cont'd)	577	hp-hr (cont'd)	Phenanthrene	2.06E-07	lb/hp-hr	0%	1.19E-04
						Anthracene	1.31E-08	lb/hp-hr	0%	7.55E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	3.07E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.93E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	6.79E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	1.43E-06
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	4.00E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	6.26E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	7.59E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	1.51E-06
049-70	Kimberly Diesel Non-Emergency Pump Engine (300 hp engine)	IA56-DN	NF	300	hp-hr	Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	2.35E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.98E-06
						Benzene	6.53E-06	lb/hp-hr	0%	1.96E-03
						Toluene	2.86E-06	lb/hp-hr	0%	8.59E-04
						Xylenes	2.00E-06	lb/hp-hr	0%	5.99E-04
						1,3-Butadiene	2.74E-07	lb/hp-hr	0%	8.21E-05
						Formaldehyde	8.26E-06	lb/hp-hr	0%	2.48E-03
						Acetaldehyde	5.37E-06	lb/hp-hr	0%	1.61E-03
						Acrolein	6.48E-07	lb/hp-hr	0%	1.94E-04
						Naphthalene	5.94E-07	lb/hp-hr	0%	1.78E-04
						Acenaphthylene	3.54E-08	lb/hp-hr	0%	1.06E-05
						Acenaphthene	9.94E-09	lb/hp-hr	0%	2.98E-06
						Fluorene	2.04E-07	lb/hp-hr	0%	6.13E-05
						Phenanthrene	2.06E-07	lb/hp-hr	0%	6.17E-05
						Anthracene	1.31E-08	lb/hp-hr	0%	3.93E-06
						Fluoranthene	5.33E-08	lb/hp-hr	0%	1.60E-05
						Pyrene	3.35E-08	lb/hp-hr	0%	1.00E-05
						Benzo(a)anthracene	1.18E-08	lb/hp-hr	0%	3.53E-06
						Chrysene	2.47E-09	lb/hp-hr	0%	7.41E-07
						Benzo(b)fluoranthene	6.94E-10	lb/hp-hr	0%	2.08E-07
						Benzo(k)fluoranthene	1.09E-09	lb/hp-hr	0%	3.26E-07
						Benzo(a)pyrene	1.32E-09	lb/hp-hr	0%	3.95E-07
						Indeno(1,2,3-cd)pyrene	2.63E-09	lb/hp-hr	0%	7.88E-07
						Dibenz(a,h)anthracene	4.08E-09	lb/hp-hr	0%	1.22E-06
						Benzo(g,h,i)perylene	3.42E-09	lb/hp-hr	0%	1.03E-06
Total of Non-Fugitive Emissions for Diesel Non-Emergency ICE:										3.52E-02
Total of Fugitive Emissions for Diesel Non-Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Diesel Non-Emergency ICE:										3.52E-02
Propane Non-Emergency ICE										
049-7	Propane Non-Emergency Generator IA10-PN (27 hp engine)	IA10-PN	NF	27	hp-hr	1,1,2,2-Tetrachloroethane	2.95E-07	lb/hp-hr	0%	7.97E-06
						1,1,2-Trichloroethane	1.79E-07	lb/hp-hr	0%	4.82E-06
						1,1-Dichloroethane	1.32E-07	lb/hp-hr	0%	3.56E-06
						1,2-Dichloroethane	1.32E-07	lb/hp-hr	0%	3.56E-06
						1,2-Dichloropropane	1.52E-07	lb/hp-hr	0%	4.10E-06
						1,3-Butadiene	7.74E-06	lb/hp-hr	0%	2.09E-04
						1,3-Dichloropropene	1.48E-07	lb/hp-hr	0%	4.00E-06
						Acetaldehyde	3.26E-05	lb/hp-hr	0%	8.79E-04
						Acrolein	3.07E-05	lb/hp-hr	0%	8.28E-04
						Benzene	1.84E-05	lb/hp-hr	0%	4.98E-04
						Carbon Tetrachloride	2.07E-07	lb/hp-hr	0%	5.58E-06
						Chlorobenzene	1.51E-07	lb/hp-hr	0%	4.06E-06
						Chloroform	1.60E-07	lb/hp-hr	0%	4.32E-06
						Ethylbenzene	2.89E-07	lb/hp-hr	0%	7.81E-06
						Ethylene Dibromide	2.49E-07	lb/hp-hr	0%	6.71E-06
						Formaldehyde	2.39E-04	lb/hp-hr	0%	6.46E-03
						Methanol	3.57E-05	lb/hp-hr	0%	9.64E-04
						Methylene Chloride	4.81E-07	lb/hp-hr	0%	1.30E-05
						Naphthalene	1.13E-06	lb/hp-hr	0%	3.06E-05
						Polycyclic Aromatic Hydrocarbons	1.65E-06	lb/hp-hr	0%	4.44E-05
						Styrene	1.39E-07	lb/hp-hr	0%	3.75E-06
						Toluene	6.51E-06	lb/hp-hr	0%	1.76E-04
						Vinyl Chloride	8.38E-08	lb/hp-hr	0%	2.26E-06
						Xylene	2.28E-06	lb/hp-hr	0%	6.14E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-19	Propane Non-Emergency Generator IA18-PN (20 hp engine)	IA18-PN	NF	20	hp-hr	1,1,2,2-Tetrachloroethane	3.51E-07	lb/hp-hr	0%	7.01E-06
						1,1,2-Trichloroethane	2.12E-07	lb/hp-hr	0%	4.24E-06
						1,1-Dichloroethane	1.57E-07	lb/hp-hr	0%	3.13E-06
						1,2-Dichloroethane	1.57E-07	lb/hp-hr	0%	3.13E-06
						1,2-Dichloropropane	1.80E-07	lb/hp-hr	0%	3.60E-06
						1,3-Butadiene	9.19E-06	lb/hp-hr	0%	1.84E-04
						1,3-Dichloropropene	1.76E-07	lb/hp-hr	0%	3.52E-06
						Acetaldehyde	3.87E-05	lb/hp-hr	0%	7.73E-04
						Acrolein	3.65E-05	lb/hp-hr	0%	7.29E-04
						Benzene	2.19E-05	lb/hp-hr	0%	4.38E-04
						Carbon Tetrachloride	2.45E-07	lb/hp-hr	0%	4.91E-06
						Chlorobenzene	1.79E-07	lb/hp-hr	0%	3.58E-06
						Chloroform	1.90E-07	lb/hp-hr	0%	3.80E-06
						Ethylbenzene	3.44E-07	lb/hp-hr	0%	6.87E-06
						Ethylene Dibromide	2.95E-07	lb/hp-hr	0%	5.90E-06
						Formaldehyde	2.84E-04	lb/hp-hr	0%	5.68E-03
						Methanol	4.24E-05	lb/hp-hr	0%	8.48E-04
						Methylene Chloride	5.71E-07	lb/hp-hr	0%	1.14E-05
						Naphthalene	1.35E-06	lb/hp-hr	0%	2.69E-05
						Polycyclic Aromatic Hydrocarbons	1.95E-06	lb/hp-hr	0%	3.91E-05
Styrene	1.65E-07	lb/hp-hr	0%	3.30E-06						
Toluene	7.73E-06	lb/hp-hr	0%	1.55E-04						
Vinyl Chloride	9.95E-08	lb/hp-hr	0%	1.99E-06						
Xylene	2.70E-06	lb/hp-hr	0%	5.41E-05						
Total of Non-Fugitive Emissions for Propane Non-Emergency ICE:										1.92E-02
Total of Fugitive Emissions for Propane Non-Emergency ICE:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Propane Non-Emergency ICE:										1.92E-02
Miscellaneous Fuel Burning Equipment										
049-41	Diesel Pressure Washer IA35-D (0.3429 MMBtu/hr)	DCI	NF	0.3429	MMBtu	Lead	9.00E-06	lb/MMBtu	0%	3.09E-06
						POM	2.41E-05	lb/MMBtu	0%	8.26E-06
						Formaldehyde	4.45E-04	lb/MMBtu	0%	1.53E-04
						Arsenic	4.00E-06	lb/MMBtu	0%	1.37E-06
						Beryllium	3.00E-06	lb/MMBtu	0%	1.03E-06
						Cadmium	3.00E-06	lb/MMBtu	0%	1.03E-06
						Chromium	3.00E-06	lb/MMBtu	0%	1.03E-06
						Mercury	3.00E-06	lb/MMBtu	0%	1.03E-06
						Manganese	6.00E-06	lb/MMBtu	0%	2.06E-06
						Nickel	3.00E-06	lb/MMBtu	0%	1.03E-06
Selenium	1.50E-05	lb/MMBtu	0%	5.14E-06						
049-46	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr)	NGC	NF	0.49	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	2.40E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.15E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	8.65E-10
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	7.69E-09
						Acenaphthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Anthracene	2.35E-09	lb/MMBtu	0%	1.15E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Benzene	2.06E-06	lb/MMBtu	0%	1.01E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Chrysene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	5.76E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.44E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	1.35E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	3.60E-05
						Hexane	1.76E-03	lb/MMBtu	0%	8.65E-04
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.93E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	8.17E-09
						Pyrene	4.90E-09	lb/MMBtu	0%	2.40E-09

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-46 (cont'd)	Natural Gas Mine Shop Pressure Washer 1 (0.49 MMBtu/hr) (cont'd)	NGC	NF (cont'd)	0.49	MMBtu (cont'd)	Toluene	3.33E-06	lb/MMBtu	0%	1.63E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	9.61E-08
						Beryllium	1.18E-08	lb/MMBtu	0%	5.76E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	5.28E-07
						Chromium	1.37E-06	lb/MMBtu	0%	6.73E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	4.04E-08
						Manganese	3.73E-07	lb/MMBtu	0%	1.83E-07
						Mercury	2.55E-07	lb/MMBtu	0%	1.25E-07
						Nickel	2.06E-06	lb/MMBtu	0%	1.01E-06
						Selenium	2.35E-08	lb/MMBtu	0%	1.15E-08
049-47	Natural Gas Mine Shop Pressure Washer 2 (0.49 MMBtu/hr)	NGC	NF	0.49	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	2.40E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.15E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	8.65E-10
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	7.69E-09
						Acenaphthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Anthracene	2.35E-09	lb/MMBtu	0%	1.15E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Benzene	2.06E-06	lb/MMBtu	0%	1.01E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Chrysene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	5.76E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	5.76E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	1.44E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	1.35E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	3.60E-05
						Hexane	1.76E-03	lb/MMBtu	0%	8.65E-04
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	8.65E-10
						Naphthalene	5.98E-07	lb/MMBtu	0%	2.93E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	8.17E-09
						Pyrene	4.90E-09	lb/MMBtu	0%	2.40E-09
						Toluene	3.33E-06	lb/MMBtu	0%	1.63E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	9.61E-08
						Beryllium	1.18E-08	lb/MMBtu	0%	5.76E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	5.28E-07
						Chromium	1.37E-06	lb/MMBtu	0%	6.73E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	4.04E-08
						Manganese	3.73E-07	lb/MMBtu	0%	1.83E-07
						Mercury	2.55E-07	lb/MMBtu	0%	1.25E-07
						Nickel	2.06E-06	lb/MMBtu	0%	1.01E-06
						Selenium	2.35E-08	lb/MMBtu	0%	1.15E-08
049-13	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total)	NGC	NF	9.499	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	4.66E-06
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	2.24E-07
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.68E-08
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.49E-07
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Anthracene	2.35E-09	lb/MMBtu	0%	2.24E-08
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Benzene	2.06E-06	lb/MMBtu	0%	1.96E-05
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	1.12E-08
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	1.12E-08
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Chrysene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	1.12E-08
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	1.12E-05
						Fluoranthene	2.94E-09	lb/MMBtu	0%	2.79E-08
						Fluorene	2.75E-09	lb/MMBtu	0%	2.61E-08
						Formaldehyde	7.35E-05	lb/MMBtu	0%	6.98E-04

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-13 (cont'd)	Natural Gas Small Space Heaters, Furnaces, and Boilers (9.499 MMBtu/hr total) (cont'd)	NGC (cont'd)	NF (cont'd)	9.499	MMBtu (cont'd)	Hexane	1.76E-03	lb/MMBtu	0%	1.68E-02
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.68E-08
						Naphthalene	5.98E-07	lb/MMBtu	0%	5.68E-06
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.58E-07
						Pyrene	4.90E-09	lb/MMBtu	0%	4.66E-08
						Toluene	3.33E-06	lb/MMBtu	0%	3.17E-05
						Arsenic	1.96E-07	lb/MMBtu	0%	1.86E-06
						Beryllium	1.18E-08	lb/MMBtu	0%	1.12E-07
						Cadmium	1.08E-06	lb/MMBtu	0%	1.02E-05
						Chromium	1.37E-06	lb/MMBtu	0%	1.30E-05
						Cobalt	8.24E-08	lb/MMBtu	0%	7.82E-07
						Manganese	3.73E-07	lb/MMBtu	0%	3.54E-06
						Mercury	2.55E-07	lb/MMBtu	0%	2.42E-06
						Nickel	2.06E-06	lb/MMBtu	0%	1.96E-05
049-14	Propane Small Space Heaters, Furnaces, and Boilers (0.95 MMBtu/hr total)	PCI	NF	0.95	MMBtu	Selenium	2.35E-08	lb/MMBtu	0%	2.24E-07
						Lead	4.90E-07	lb/MMBtu	0%	4.66E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	2.24E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.68E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.49E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	2.24E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Benzene	2.06E-06	lb/MMBtu	0%	1.96E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	1.12E-09
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	1.12E-09
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	1.12E-09
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	1.12E-06
						Fluoranthene	2.94E-09	lb/MMBtu	0%	2.79E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	2.61E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	6.99E-05
						Hexane	1.76E-03	lb/MMBtu	0%	1.68E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.68E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	5.68E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.58E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	4.66E-09
						Toluene	3.33E-06	lb/MMBtu	0%	3.17E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	1.86E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	1.12E-08
						Cadmium	1.08E-06	lb/MMBtu	0%	1.02E-06
						Chromium	1.37E-06	lb/MMBtu	0%	1.30E-06
						Cobalt	8.24E-08	lb/MMBtu	0%	7.82E-08
						Manganese	3.73E-07	lb/MMBtu	0%	3.54E-07
						Mercury	2.55E-07	lb/MMBtu	0%	2.42E-07
						Nickel	2.06E-06	lb/MMBtu	0%	1.96E-06
						Selenium	2.35E-08	lb/MMBtu	0%	2.24E-08
049-65	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr)	NGC	NF	0.72045	MMBtu	Lead	4.90E-07	lb/MMBtu	0%	3.53E-07
						2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.70E-08
						3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	1.27E-09
						7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	1.13E-08
						Acenaphthene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Acenaphthylene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Anthracene	2.35E-09	lb/MMBtu	0%	1.70E-09
						Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Benzene	2.06E-06	lb/MMBtu	0%	1.48E-06
						Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	8.48E-10
						Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	8.48E-10
						Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Chrysene	1.76E-09	lb/MMBtu	0%	1.27E-09

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
049-65 (cont'd)	Natural Gas Mill Wash Rack Pressure Washer IA51-NG (0.72045 MMBtu/hr) (cont'd)	NGC (cont'd)	NF (cont'd)	0.72045	MMBtu (cont'd)	Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	8.48E-10
						Dichlorobenzene	1.18E-06	lb/MMBtu	0%	8.48E-07
						Fluoranthene	2.94E-09	lb/MMBtu	0%	2.12E-09
						Fluorene	2.75E-09	lb/MMBtu	0%	1.98E-09
						Formaldehyde	7.35E-05	lb/MMBtu	0%	5.30E-05
						Hexane	1.76E-03	lb/MMBtu	0%	1.27E-03
						Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	1.27E-09
						Naphthalene	5.98E-07	lb/MMBtu	0%	4.31E-07
						Phenanthrene	1.67E-08	lb/MMBtu	0%	1.20E-08
						Pyrene	4.90E-09	lb/MMBtu	0%	3.53E-09
						Toluene	3.33E-06	lb/MMBtu	0%	2.40E-06
						Arsenic	1.96E-07	lb/MMBtu	0%	1.41E-07
						Beryllium	1.18E-08	lb/MMBtu	0%	8.48E-09
						Cadmium	1.08E-06	lb/MMBtu	0%	7.77E-07
						Chromium	1.37E-06	lb/MMBtu	0%	9.89E-07
						Cobalt	8.24E-08	lb/MMBtu	0%	5.93E-08
						Manganese	3.73E-07	lb/MMBtu	0%	2.68E-07
						Mercury	2.55E-07	lb/MMBtu	0%	1.84E-07
						Nickel	2.06E-06	lb/MMBtu	0%	1.48E-06
						049-66	Natural Gas Shower Facility Hot Water Heater IA52-NG (0.499 MMBtu/hr)	NGC	NF	0.499
Lead	4.90E-07	lb/MMBtu	0%	2.45E-07						
2-Methylnaphthalene	2.35E-08	lb/MMBtu	0%	1.17E-08						
3-Methylchloranthrene	1.76E-09	lb/MMBtu	0%	8.81E-10						
7,12-Dimethylbenz(a)anthracene	1.57E-08	lb/MMBtu	0%	7.83E-09						
Acenaphthene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Acenaphthylene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Anthracene	2.35E-09	lb/MMBtu	0%	1.17E-09						
Benz(a)anthracene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Benzene	2.06E-06	lb/MMBtu	0%	1.03E-06						
Benzo(a)pyrene	1.18E-09	lb/MMBtu	0%	5.87E-10						
Benzo(b)fluoranthene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Benzo(g,h,i)perylene	1.18E-09	lb/MMBtu	0%	5.87E-10						
Benzo(k)fluoranthene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Chrysene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Dibenz(a,h)anthracene	1.18E-09	lb/MMBtu	0%	5.87E-10						
Dichlorobenzene	1.18E-06	lb/MMBtu	0%	5.87E-07						
Fluoranthene	2.94E-09	lb/MMBtu	0%	1.47E-09						
Fluorene	2.75E-09	lb/MMBtu	0%	1.37E-09						
Formaldehyde	7.35E-05	lb/MMBtu	0%	3.67E-05						
Hexane	1.76E-03	lb/MMBtu	0%	8.81E-04						
Indeno(1,2,3-cd)pyrene	1.76E-09	lb/MMBtu	0%	8.81E-10						
Naphthalene	5.98E-07	lb/MMBtu	0%	2.98E-07						
Phenanthrene	1.67E-08	lb/MMBtu	0%	8.32E-09						
Pyrene	4.90E-09	lb/MMBtu	0%	2.45E-09						
Toluene	3.33E-06	lb/MMBtu	0%	1.66E-06						
Arsenic	1.96E-07	lb/MMBtu	0%	9.78E-08						
Beryllium	1.18E-08	lb/MMBtu	0%	5.87E-09						
Cadmium	1.08E-06	lb/MMBtu	0%	5.38E-07						
Chromium	1.37E-06	lb/MMBtu	0%	6.85E-07						
Cobalt	8.24E-08	lb/MMBtu	0%	4.11E-08						
Manganese	3.73E-07	lb/MMBtu	0%	1.86E-07						
Mercury	2.55E-07	lb/MMBtu	0%	1.27E-07						
Nickel	2.06E-06	lb/MMBtu	0%	1.03E-06						
Selenium	2.35E-08	lb/MMBtu	0%	1.17E-08						
Total of Non-Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										2.36E-02
Total of Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										0.00E+00
Total of Non-Fugitive and Fugitive Emissions for Miscellaneous Fuel Burning Equipment:										2.36E-02
Copper Decant Solids Handling Operations										
054-1	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad	HWindDSH 1	F	3.00	acre-yr	Antimony	5.33E-04	lb/acre-hr	0%	1.60E-03
						Arsenic	9.34E-04	lb/acre-hr	0%	2.80E-03
						Beryllium	1.39E-06	lb/acre-hr	0%	4.16E-06
						Cadmium	8.31E-06	lb/acre-hr	0%	2.49E-05
						Chromium	9.00E-06	lb/acre-hr	0%	2.70E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
054-1 (cont'd)	Wind Erosion of Copper Decant Material on the Copper Decant Drying and Storage Pad (cont'd)	HWindDSH 1 (cont'd)	F (cont'd)	3.00	acre-yr (cont'd)	Cobalt	1.66E-05	lb/acre-hr	0%	4.99E-05
						Lead	1.01E-04	lb/acre-hr	0%	3.03E-04
						Manganese	1.52E-05	lb/acre-hr	0%	4.57E-05
						Mercury	8.09E-06	lb/acre-hr	0%	2.43E-05
						Nickel	1.32E-05	lb/acre-hr	0%	3.95E-05
						Selenium	2.29E-05	lb/acre-hr	0%	6.86E-05
054-2	Copper Decant Drying and Storage Pad to Shipment Trucks or FMBI Operations (via front-end loader)	DSH1TrUn prt	F	6,000	tons	Antimony	1.00E-06	lb/ton	0%	6.03E-03
						Arsenic	1.76E-06	lb/ton	0%	1.06E-02
						Beryllium	2.61E-09	lb/ton	0%	1.57E-05
						Cadmium	1.57E-08	lb/ton	0%	9.39E-05
						Chromium	1.70E-08	lb/ton	0%	1.02E-04
						Cobalt	3.13E-08	lb/ton	0%	1.88E-04
						Lead	1.90E-07	lb/ton	0%	1.14E-03
						Manganese	2.87E-08	lb/ton	0%	1.72E-04
						Mercury	1.52E-08	lb/ton	0%	9.14E-05
						Nickel	2.48E-08	lb/ton	0%	1.49E-04
Selenium	4.31E-08	lb/ton	0%	2.58E-04						
Total of Non-Fugitive Emissions for Copper Decant Solids Handling Operations:										0.00E+00
Total of Fugitive Emissions for Copper Decant Solids Handling Operations:										2.38E-02
Total of Non-Fugitive and Fugitive Emissions for Copper Decant Solids Handling Operations:										2.38E-02
AOS1: Two Concentrator Operations										
Mining Operations (AOS1)										
026-3 (AOS1)	Drilling (AOS1)	Drilling (AOS1)	F	490	holes	Antimony	1.05E-05	lb/hole	0%	5.15E-03
						Arsenic	1.81E-05	lb/hole	0%	8.89E-03
						Beryllium	9.45E-07	lb/hole	0%	4.63E-04
						Cadmium	4.24E-07	lb/hole	0%	2.08E-04
						Chromium	2.56E-05	lb/hole	0%	1.26E-02
						Cobalt	2.27E-05	lb/hole	0%	1.11E-02
						Lead	1.92E-05	lb/hole	0%	9.42E-03
						Manganese	2.07E-04	lb/hole	0%	1.02E-01
						Mercury	2.02E-07	lb/hole	0%	9.89E-05
						Nickel	1.67E-05	lb/hole	0%	8.18E-03
Selenium	1.80E-06	lb/hole	0%	8.83E-04						
026-2 (AOS1)	Blasting (AOS1)	HBlasting (AOS1)	F	1	blasts	Lead	7.10E-02	lb/blast	0%	7.10E-02
						POM	2.14E-02	lb/blast	0%	2.14E-02
						Formaldehyde	3.95E-01	lb/blast	0%	3.95E-01
						Antimony	3.44E-02	lb/blast	0%	3.44E-02
						Arsenic	6.30E-02	lb/blast	0%	6.30E-02
						Beryllium	5.74E-03	lb/blast	0%	5.74E-03
						Cadmium	4.04E-03	lb/blast	0%	4.04E-03
						Chromium	8.67E-02	lb/blast	0%	8.67E-02
						Cobalt	7.45E-02	lb/blast	0%	7.45E-02
						Manganese	6.85E-01	lb/blast	0%	6.85E-01
Mercury	3.31E-03	lb/blast	0%	3.31E-03						
Nickel	5.74E-02	lb/blast	0%	5.74E-02						
Selenium	1.91E-02	lb/blast	0%	1.91E-02						
022-1 (AOS1)	Haul Truck Travel Inside the Pit (AOS1)	HTravel (AOS1)	F	2,239	VMT	Antimony	5.34E-05	lb/VMT	90%	1.20E-02
						Arsenic	9.23E-05	lb/VMT	90%	2.07E-02
						Beryllium	4.81E-06	lb/VMT	90%	1.08E-03
						Cadmium	2.16E-06	lb/VMT	90%	4.83E-04
						Chromium	1.31E-04	lb/VMT	90%	2.92E-02
						Cobalt	1.16E-04	lb/VMT	90%	2.59E-02
						Lead	9.78E-05	lb/VMT	90%	2.19E-02
						Manganese	1.06E-03	lb/VMT	90%	2.36E-01
						Mercury	1.03E-06	lb/VMT	90%	2.30E-04
						Nickel	8.50E-05	lb/VMT	90%	1.90E-02
Selenium	9.17E-06	lb/VMT	90%	2.05E-03						
022-2 (AOS1)	Haul Truck Travel Outside the Pit (AOS1)	HTravel (AOS1)	F	746	VMT	Antimony	5.34E-05	lb/VMT	90%	3.99E-03
						Arsenic	9.23E-05	lb/VMT	90%	6.89E-03
						Beryllium	4.81E-06	lb/VMT	90%	3.59E-04
						Cadmium	2.16E-06	lb/VMT	90%	1.61E-04
						Chromium	1.31E-04	lb/VMT	90%	9.74E-03
						Cobalt	1.16E-04	lb/VMT	90%	8.63E-03

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
022-2 (AOS1) (cont'd)	Haul Truck Travel Outside the Pit (AOS1) (cont'd)	HTravel (AOS1) (cont'd)	F (cont'd)	746	VMT (cont'd)	Lead	9.78E-05	lb/VMT	90%	7.30E-03
						Manganese	1.06E-03	lb/VMT	90%	7.88E-02
						Mercury	1.03E-06	lb/VMT	90%	7.66E-05
						Nickel	8.50E-05	lb/VMT	90%	6.34E-03
						Selenium	9.17E-06	lb/VMT	90%	6.84E-04
023-3 (AOS1)	Other Vehicle Travel (AOS1)	HTravel (AOS1)	F	2,142	VMT	Antimony	5.34E-05	lb/VMT	90%	1.14E-02
						Arsenic	9.23E-05	lb/VMT	90%	1.98E-02
						Beryllium	4.81E-06	lb/VMT	90%	1.03E-03
						Cadmium	2.16E-06	lb/VMT	90%	4.62E-04
						Chromium	1.31E-04	lb/VMT	90%	2.79E-02
						Cobalt	1.16E-04	lb/VMT	90%	2.48E-02
						Lead	9.78E-05	lb/VMT	90%	2.10E-02
						Manganese	1.06E-03	lb/VMT	90%	2.26E-01
						Mercury	1.03E-06	lb/VMT	90%	2.20E-04
						Nickel	8.50E-05	lb/VMT	90%	1.82E-02
						Selenium	9.17E-06	lb/VMT	90%	1.96E-03
023-1 (AOS1)	Dozer Operation (AOS1)	Dozer (AOS1)	F	22	hours	Antimony	2.16E-05	lb/hr	0%	4.75E-04
						Arsenic	3.73E-05	lb/hr	0%	8.22E-04
						Beryllium	1.94E-06	lb/hr	0%	4.28E-05
						Cadmium	8.73E-07	lb/hr	0%	1.92E-05
						Chromium	5.28E-05	lb/hr	0%	1.16E-03
						Cobalt	4.67E-05	lb/hr	0%	1.03E-03
						Lead	3.96E-05	lb/hr	0%	8.70E-04
						Manganese	4.27E-04	lb/hr	0%	9.39E-03
						Mercury	4.15E-07	lb/hr	0%	9.14E-06
						Nickel	3.44E-05	lb/hr	0%	7.56E-04
023-2 (AOS1)	Road Grader Operation (AOS1)	Grader (AOS1)	F	48	VMT	Selenium	3.71E-06	lb/hr	0%	8.16E-05
						Antimony	1.48E-05	lb/VMT	90%	7.11E-05
						Arsenic	2.56E-05	lb/VMT	90%	1.23E-04
						Beryllium	1.33E-06	lb/VMT	90%	6.40E-06
						Cadmium	5.99E-07	lb/VMT	90%	2.87E-06
						Chromium	3.62E-05	lb/VMT	90%	1.74E-04
						Cobalt	3.21E-05	lb/VMT	90%	1.54E-04
						Lead	2.71E-05	lb/VMT	90%	1.30E-04
						Manganese	2.93E-04	lb/VMT	90%	1.41E-03
						Mercury	2.85E-07	lb/VMT	90%	1.37E-06
021-1 (AOS1)	Loading Mined Material into Haul Trucks (AOS1)	Ore1TrUnpr t (AOS1)	F	39,352	tons	Nickel	2.36E-05	lb/VMT	90%	1.13E-04
						Selenium	2.54E-06	lb/VMT	90%	1.22E-05
						Antimony	1.73E-08	lb/ton	0%	6.80E-04
						Arsenic	2.98E-08	lb/ton	0%	1.17E-03
						Beryllium	1.55E-09	lb/ton	0%	6.12E-05
						Cadmium	6.98E-10	lb/ton	0%	2.75E-05
						Chromium	4.22E-08	lb/ton	0%	1.66E-03
						Cobalt	3.74E-08	lb/ton	0%	1.47E-03
						Lead	3.16E-08	lb/ton	0%	1.24E-03
						Manganese	3.41E-07	lb/ton	0%	1.34E-02
001-6 (AOS1)	Unloading Ore to Primary Crusher 1 (AOS1)	Ore2TrUnpr t	F	8,000	tons	Mercury	3.32E-10	lb/ton	0%	1.31E-05
						Nickel	2.75E-08	lb/ton	0%	1.08E-03
						Selenium	2.96E-09	lb/ton	0%	1.17E-04
						Antimony	3.86E-08	lb/ton	0%	3.09E-04
						Arsenic	5.71E-08	lb/ton	0%	4.57E-04
						Beryllium	1.35E-09	lb/ton	0%	1.08E-05
						Cadmium	9.88E-10	lb/ton	0%	7.91E-06
						Chromium	3.96E-08	lb/ton	0%	3.17E-04
						Cobalt	7.64E-08	lb/ton	0%	6.11E-04
						Lead	2.44E-08	lb/ton	0%	1.95E-04
001-7 (AOS1)	Unloading Ore to Primary Crusher 2 (AOS1)	Ore2TrUnpr t	F	7,000	tons	Manganese	3.64E-07	lb/ton	0%	2.91E-03
						Mercury	5.65E-10	lb/ton	0%	4.52E-06
						Nickel	2.26E-08	lb/ton	0%	1.81E-04
						Selenium	3.57E-09	lb/ton	0%	2.85E-05
						Antimony	3.86E-08	lb/ton	0%	2.70E-04
						Arsenic	5.71E-08	lb/ton	0%	4.00E-04
						Beryllium	1.35E-09	lb/ton	0%	9.43E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
001-7 (AOS1) (cont'd)	Unloading Ore to Primary Crusher 2 (AOS1) (cont'd)	Ore2TrUnprt (cont'd)	F (cont'd)	7,000	tons (cont'd)	Cadmium	9.88E-10	lb/ton	0%	6.92E-06
						Chromium	3.96E-08	lb/ton	0%	2.77E-04
						Cobalt	7.64E-08	lb/ton	0%	5.35E-04
						Lead	2.44E-08	lb/ton	0%	1.71E-04
						Manganese	3.64E-07	lb/ton	0%	2.54E-03
						Mercury	5.65E-10	lb/ton	0%	3.95E-06
						Nickel	2.26E-08	lb/ton	0%	1.58E-04
						Selenium	3.57E-09	lb/ton	0%	2.50E-05
045-3 (AOS1)	Unloading Ore to Leaching Areas (AOS1)	Ore3TrUnprt	F	1,264	tons	Antimony	0.00E+00	lb/ton	0%	0.00E+00
						Arsenic	1.54E-09	lb/ton	0%	1.95E-06
						Beryllium	3.54E-09	lb/ton	0%	4.48E-06
						Cadmium	0.00E+00	lb/ton	0%	0.00E+00
						Chromium	6.16E-09	lb/ton	0%	7.79E-06
						Cobalt	1.10E-08	lb/ton	0%	1.40E-05
						Lead	1.64E-08	lb/ton	0%	2.08E-05
						Manganese	2.34E-07	lb/ton	0%	2.96E-04
						Mercury	2.31E-10	lb/ton	0%	2.92E-07
						Nickel	8.98E-09	lb/ton	0%	1.14E-05
045-1 (AOS1)	Unloading Overburden/Low Grade Ore to Storage Areas (AOS1)	Ore4TrUnprt	F	23,087.40	tons	Selenium	0.00E+00	lb/ton	0%	0.00E+00
						Antimony	8.47E-09	lb/ton	0%	1.96E-04
						Arsenic	1.89E-08	lb/ton	0%	4.37E-04
						Beryllium	1.54E-09	lb/ton	0%	3.56E-05
						Cadmium	6.03E-10	lb/ton	0%	1.39E-05
						Chromium	4.53E-08	lb/ton	0%	1.05E-03
						Cobalt	2.10E-08	lb/ton	0%	4.84E-04
						Lead	3.58E-08	lb/ton	0%	8.26E-04
						Manganese	3.37E-07	lb/ton	0%	7.78E-03
						Mercury	2.31E-10	lb/ton	0%	5.33E-06
001-5 (AOS1)	Processes Controlled by Dust Collector C51 (AOS1)	C51 (AOS1)	NF	900,000	dscf	Nickel	3.07E-08	lb/ton	0%	7.08E-04
						Selenium	2.85E-09	lb/ton	0%	6.58E-05
						Antimony	5.80E-11	lb/dscf	0%	5.22E-05
						Arsenic	8.58E-11	lb/dscf	0%	7.72E-05
						Beryllium	2.03E-12	lb/dscf	0%	1.82E-06
						Cadmium	1.49E-12	lb/dscf	0%	1.34E-06
						Chromium	5.95E-11	lb/dscf	0%	5.36E-05
						Cobalt	1.15E-10	lb/dscf	0%	1.03E-04
						Lead	3.66E-11	lb/dscf	0%	3.30E-05
						Manganese	5.46E-10	lb/dscf	0%	4.92E-04
001-2 (AOS1)	Overland Conveyor 3A (AOS1) to Overland Conveyor 3 (AOS1)	Ore2TrPrt	NF	7,600	tons	Mercury	8.49E-13	lb/dscf	0%	7.64E-07
						Nickel	3.40E-11	lb/dscf	0%	3.06E-05
						Selenium	5.36E-12	lb/dscf	0%	4.83E-06
						Antimony	4.13E-09	lb/ton	90%	3.14E-06
						Arsenic	6.11E-09	lb/ton	90%	4.64E-06
						Beryllium	1.44E-10	lb/ton	90%	1.10E-07
						Cadmium	1.06E-10	lb/ton	90%	8.03E-08
						Chromium	4.24E-09	lb/ton	90%	3.22E-06
						Cobalt	8.17E-09	lb/ton	90%	6.21E-06
						Lead	2.61E-09	lb/ton	90%	1.98E-06
001-8 (AOS1)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1)	Ore2TrPrt	NF	7,600	tons	Manganese	3.89E-08	lb/ton	90%	2.96E-05
						Selenium	3.82E-10	lb/ton	90%	2.90E-07
						Nickel	2.42E-09	lb/ton	90%	1.84E-06
						Mercury	6.04E-11	lb/ton	90%	4.59E-08
						Manganese	3.89E-08	lb/ton	90%	2.96E-05
						Lead	2.61E-09	lb/ton	90%	1.98E-06
						Cobalt	8.17E-09	lb/ton	90%	6.21E-06
						Chromium	4.24E-09	lb/ton	90%	3.22E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
001-8 (AOS1) (cont'd)	Overland Conveyor 3 (AOS1) to Overland Conveyor 4 (AOS1) (cont'd)	Ore2TrPrt (cont'd)	NF (cont'd)	7,600	tons (cont'd)	Mercury	6.04E-11	lb/ton	90%	4.59E-08
						Nickel	2.42E-09	lb/ton	90%	1.84E-06
						Selenium	3.82E-10	lb/ton	90%	2.90E-07
001-9 (AOS1)	Overland Conveyor 4 (AOS1) to Radial Stacker 5 (AOS1)	Ore2TrPrt	NF	7,600	tons	Antimony	4.13E-09	lb/ton	90%	3.14E-06
						Arsenic	6.11E-09	lb/ton	90%	4.64E-06
						Beryllium	1.44E-10	lb/ton	90%	1.10E-07
						Cadmium	1.06E-10	lb/ton	90%	8.03E-08
						Chromium	4.24E-09	lb/ton	90%	3.22E-06
						Cobalt	8.17E-09	lb/ton	90%	6.21E-06
						Lead	2.61E-09	lb/ton	90%	1.98E-06
						Manganese	3.89E-08	lb/ton	90%	2.96E-05
						Mercury	6.04E-11	lb/ton	90%	4.59E-08
						Nickel	2.42E-09	lb/ton	90%	1.84E-06
						Selenium	3.82E-10	lb/ton	90%	2.90E-07
001-4 (AOS1)	Radial Stacker 5 (AOS1) to Coarse Ore Stockpiles 1/4 (AOS1)	Ore2TrUnprt	F	7,600	tons	Antimony	3.86E-08	lb/ton	0%	2.93E-04
						Arsenic	5.71E-08	lb/ton	0%	4.34E-04
						Beryllium	1.35E-09	lb/ton	0%	1.02E-05
						Cadmium	9.88E-10	lb/ton	0%	7.51E-06
						Chromium	3.96E-08	lb/ton	0%	3.01E-04
						Cobalt	7.64E-08	lb/ton	0%	5.80E-04
						Lead	2.44E-08	lb/ton	0%	1.85E-04
						Manganese	3.64E-07	lb/ton	0%	2.76E-03
						Mercury	5.65E-10	lb/ton	0%	4.29E-06
						Nickel	2.26E-08	lb/ton	0%	1.72E-04
						Selenium	3.57E-09	lb/ton	0%	2.71E-05
001-10 (AOS1)	Radial Stacker 5 (AOS1) to Free-Standing Stacker 6 (AOS1)	Ore2TrUnprt	F	7,600	tons	Antimony	3.86E-08	lb/ton	0%	2.93E-04
						Arsenic	5.71E-08	lb/ton	0%	4.34E-04
						Beryllium	1.35E-09	lb/ton	0%	1.02E-05
						Cadmium	9.88E-10	lb/ton	0%	7.51E-06
						Chromium	3.96E-08	lb/ton	0%	3.01E-04
						Cobalt	7.64E-08	lb/ton	0%	5.80E-04
						Lead	2.44E-08	lb/ton	0%	1.85E-04
						Manganese	3.64E-07	lb/ton	0%	2.76E-03
						Mercury	5.65E-10	lb/ton	0%	4.29E-06
						Nickel	2.26E-08	lb/ton	0%	1.72E-04
						Selenium	3.57E-09	lb/ton	0%	2.71E-05
001-3 (AOS1)	Free-Standing Stacker 6 (AOS1) to Coarse Ore Stockpile 5 (AOS1)	Ore2TrUnprt	F	7,600	tons	Antimony	3.86E-08	lb/ton	0%	2.93E-04
						Arsenic	5.71E-08	lb/ton	0%	4.34E-04
						Beryllium	1.35E-09	lb/ton	0%	1.02E-05
						Cadmium	9.88E-10	lb/ton	0%	7.51E-06
						Chromium	3.96E-08	lb/ton	0%	3.01E-04
						Cobalt	7.64E-08	lb/ton	0%	5.80E-04
						Lead	2.44E-08	lb/ton	0%	1.85E-04
						Manganese	3.64E-07	lb/ton	0%	2.76E-03
						Mercury	5.65E-10	lb/ton	0%	4.29E-06
						Nickel	2.26E-08	lb/ton	0%	1.72E-04
						Selenium	3.57E-09	lb/ton	0%	2.71E-05
027-1 (AOS1)	Wind Erosion of Coarse Ore Stockpiles 1/5 (AOS1)	HWindCOS 1/5 (AOS1)	F	6.18	acre-yr	Antimony	3.37E-06	lb/acre-hr	0%	2.08E-05
						Arsenic	4.99E-06	lb/acre-hr	0%	3.08E-05
						Beryllium	1.18E-07	lb/acre-hr	0%	7.27E-07
						Cadmium	8.63E-08	lb/acre-hr	0%	5.33E-07
						Chromium	3.46E-06	lb/acre-hr	0%	2.14E-05
						Cobalt	6.67E-06	lb/acre-hr	0%	4.12E-05
						Lead	2.13E-06	lb/acre-hr	0%	1.32E-05
						Manganese	3.17E-05	lb/acre-hr	0%	1.96E-04
						Mercury	4.93E-08	lb/acre-hr	0%	3.05E-07
						Nickel	1.98E-06	lb/acre-hr	0%	1.22E-05
						Selenium	3.11E-07	lb/acre-hr	0%	1.92E-06
Primary Crushing and Overland Conveying Operations (to Second Concentrator) (AOS1)										
001-12 (AOS1)	Processes Controlled by PC1 Dust Collector 1 (AOS1)	SDC1 (AOS1)	NF	870,000	dscf	Antimony	9.88E-12	lb/dscf	0%	8.59E-06
						Arsenic	1.46E-11	lb/dscf	0%	1.27E-05
						Beryllium	3.45E-13	lb/dscf	0%	3.00E-07
						Cadmium	2.53E-13	lb/dscf	0%	2.20E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
001-12 (AOS1) (cont'd)	Processes Controlled by PC1 Dust Collector 1 (AOS1) (cont'd)	SDC1 (AOS1) (cont'd)	NF (cont'd)	870,000	dscf (cont'd)	Chromium	1.01E-11	lb/dscf	0%	8.82E-06
						Cobalt	1.96E-11	lb/dscf	0%	1.70E-05
						Lead	6.24E-12	lb/dscf	0%	5.43E-06
						Manganese	9.31E-11	lb/dscf	0%	8.10E-05
						Mercury	1.45E-13	lb/dscf	0%	1.26E-07
						Nickel	5.80E-12	lb/dscf	0%	5.04E-06
						Selenium	9.13E-13	lb/dscf	0%	7.95E-07
001-13 (AOS1)	Processes Controlled by PC1 CCC1 Dust Collector 2 (AOS1)	SDC2 (AOS1)	NF	1,002,000	dscf	Antimony	9.88E-12	lb/dscf	0%	9.90E-06
						Arsenic	1.46E-11	lb/dscf	0%	1.47E-05
						Beryllium	3.45E-13	lb/dscf	0%	3.46E-07
						Cadmium	2.53E-13	lb/dscf	0%	2.54E-07
						Chromium	1.01E-11	lb/dscf	0%	1.02E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.96E-05
						Lead	6.24E-12	lb/dscf	0%	6.26E-06
						Manganese	9.31E-11	lb/dscf	0%	9.33E-05
						Mercury	1.45E-13	lb/dscf	0%	1.45E-07
						Nickel	5.80E-12	lb/dscf	0%	5.81E-06
001-14 (AOS1)	Processes Controlled by PC1 CCC2 Dust Collector 3 (AOS1)	SDC3 (AOS1)	NF	1,002,000	dscf	Selenium	9.13E-13	lb/dscf	0%	9.15E-07
						Antimony	9.88E-12	lb/dscf	0%	9.90E-06
						Arsenic	1.46E-11	lb/dscf	0%	1.47E-05
						Beryllium	3.45E-13	lb/dscf	0%	3.46E-07
						Cadmium	2.53E-13	lb/dscf	0%	2.54E-07
						Chromium	1.01E-11	lb/dscf	0%	1.02E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.96E-05
						Lead	6.24E-12	lb/dscf	0%	6.26E-06
						Manganese	9.31E-11	lb/dscf	0%	9.33E-05
						Mercury	1.45E-13	lb/dscf	0%	1.45E-07
001-15 (AOS1)	Processes Controlled by PC1 CCC3 Dust Collector 4 (AOS1)	SDC4 (AOS1)	NF	1,002,000	dscf	Nickel	5.80E-12	lb/dscf	0%	5.81E-06
						Selenium	9.13E-13	lb/dscf	0%	9.15E-07
						Antimony	9.88E-12	lb/dscf	0%	9.90E-06
						Arsenic	1.46E-11	lb/dscf	0%	1.47E-05
						Beryllium	3.45E-13	lb/dscf	0%	3.46E-07
						Cadmium	2.53E-13	lb/dscf	0%	2.54E-07
						Chromium	1.01E-11	lb/dscf	0%	1.02E-05
						Cobalt	1.96E-11	lb/dscf	0%	1.96E-05
						Lead	6.24E-12	lb/dscf	0%	6.26E-06
						Manganese	9.31E-11	lb/dscf	0%	9.33E-05
001-20 (AOS1)	PC1 Cross Country Conveyor 3 (AOS1) to Coarse Ore Stockpile 6 (AOS1)	Ore2TrUnpr t	F	8,000	tons	Mercury	1.45E-13	lb/dscf	0%	1.45E-07
						Nickel	5.80E-12	lb/dscf	0%	5.81E-06
						Selenium	9.13E-13	lb/dscf	0%	9.15E-07
						Antimony	3.86E-08	lb/ton	0%	3.09E-04
						Arsenic	5.71E-08	lb/ton	0%	4.57E-04
						Beryllium	1.35E-09	lb/ton	0%	1.08E-05
						Cadmium	9.88E-10	lb/ton	0%	7.91E-06
						Chromium	3.96E-08	lb/ton	0%	3.17E-04
						Cobalt	7.64E-08	lb/ton	0%	6.11E-04
						Lead	2.44E-08	lb/ton	0%	1.95E-04
027-7 (AOS1)	Wind Erosion of Coarse Ore Stockpile 6 (AOS1)	HWindCOS 6 (AOS1)	F	3.04	acre-yr	Manganese	3.64E-07	lb/ton	0%	2.91E-03
						Mercury	5.65E-10	lb/ton	0%	4.52E-06
						Nickel	2.26E-08	lb/ton	0%	1.81E-04
						Selenium	3.57E-09	lb/ton	0%	2.85E-05
						Antimony	3.37E-06	lb/acre-hr	0%	1.02E-05
						Arsenic	4.99E-06	lb/acre-hr	0%	1.52E-05
						Beryllium	1.18E-07	lb/acre-hr	0%	3.58E-07
						Cadmium	8.63E-08	lb/acre-hr	0%	2.62E-07
						Chromium	3.46E-06	lb/acre-hr	0%	1.05E-05
						Cobalt	6.67E-06	lb/acre-hr	0%	2.03E-05
						Lead	2.13E-06	lb/acre-hr	0%	6.47E-06
						Manganese	3.17E-05	lb/acre-hr	0%	9.65E-05
						Mercury	4.93E-08	lb/acre-hr	0%	1.50E-07
						Nickel	1.98E-06	lb/acre-hr	0%	6.01E-06
						Selenium	3.11E-07	lb/acre-hr	0%	9.47E-07

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
Second Concentrator Milling Operations (AOS1)										
002-7 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 1 Dust Collector 5 (AOS1)	SDC5 (AOS1)	NF	1,320,000	dscf	Antimony	9.88E-12	lb/dscf	0%	1.30E-05
						Arsenic	1.46E-11	lb/dscf	0%	1.93E-05
						Beryllium	3.45E-13	lb/dscf	0%	4.55E-07
						Cadmium	2.53E-13	lb/dscf	0%	3.34E-07
						Chromium	1.01E-11	lb/dscf	0%	1.34E-05
						Cobalt	1.96E-11	lb/dscf	0%	2.58E-05
						Lead	6.24E-12	lb/dscf	0%	8.24E-06
						Manganese	9.31E-11	lb/dscf	0%	1.23E-04
						Mercury	1.45E-13	lb/dscf	0%	1.91E-07
002-8 (AOS1)	Processes Controlled by Coarse Ore Reclaim Conveyor 2 Dust Collector 6 (AOS1)	SDC6 (AOS1)	NF	1,320,000	dscf	Nickel	5.80E-12	lb/dscf	0%	7.65E-06
						Selenium	9.13E-13	lb/dscf	0%	1.21E-06
						Antimony	9.88E-12	lb/dscf	0%	1.30E-05
						Arsenic	1.46E-11	lb/dscf	0%	1.93E-05
						Beryllium	3.45E-13	lb/dscf	0%	4.55E-07
						Cadmium	2.53E-13	lb/dscf	0%	3.34E-07
						Chromium	1.01E-11	lb/dscf	0%	1.34E-05
						Cobalt	1.96E-11	lb/dscf	0%	2.58E-05
						Lead	6.24E-12	lb/dscf	0%	8.24E-06
002-9 (AOS1)	Processes Controlled by HPGR Discharge Dust Collector 7 (AOS1)	SDC7 (AOS1)	NF	1,380,000	dscf	Manganese	9.31E-11	lb/dscf	0%	1.23E-04
						Mercury	1.45E-13	lb/dscf	0%	1.91E-07
						Nickel	5.80E-12	lb/dscf	0%	7.65E-06
						Selenium	9.13E-13	lb/dscf	0%	1.21E-06
						Antimony	9.88E-12	lb/dscf	0%	1.36E-05
						Arsenic	1.46E-11	lb/dscf	0%	2.02E-05
						Beryllium	3.45E-13	lb/dscf	0%	4.76E-07
						Cadmium	2.53E-13	lb/dscf	0%	3.49E-07
						Chromium	1.01E-11	lb/dscf	0%	1.40E-05
002-10 (AOS1)	Processes Controlled by HPGR Discharge Conveyor Transfer Dust Collector 8 (AOS1)	SDC8 (AOS1)	NF	1,620,000	dscf	Cobalt	1.96E-11	lb/dscf	0%	2.70E-05
						Lead	6.24E-12	lb/dscf	0%	8.62E-06
						Manganese	9.31E-11	lb/dscf	0%	1.28E-04
						Mercury	1.45E-13	lb/dscf	0%	2.00E-07
						Nickel	5.80E-12	lb/dscf	0%	8.00E-06
						Selenium	9.13E-13	lb/dscf	0%	1.26E-06
						Antimony	9.88E-12	lb/dscf	0%	1.60E-05
						Arsenic	1.46E-11	lb/dscf	0%	2.37E-05
						Beryllium	3.45E-13	lb/dscf	0%	5.59E-07
002-11 (AOS1)	Processes Controlled by HPGR Product Bin Dust Collector 9 (AOS1)	SDC9 (AOS1)	NF	1,500,000	dscf	Cadmium	2.53E-13	lb/dscf	0%	4.10E-07
						Chromium	1.01E-11	lb/dscf	0%	1.64E-05
						Cobalt	1.96E-11	lb/dscf	0%	3.17E-05
						Lead	6.24E-12	lb/dscf	0%	1.01E-05
						Manganese	9.31E-11	lb/dscf	0%	1.51E-04
						Mercury	1.45E-13	lb/dscf	0%	2.34E-07
						Nickel	5.80E-12	lb/dscf	0%	9.39E-06
						Selenium	9.13E-13	lb/dscf	0%	1.48E-06
						Antimony	9.88E-12	lb/dscf	0%	1.48E-05
002-12 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1)	SDC10 (AOS1)	NF	600,000	dscf	Arsenic	1.46E-11	lb/dscf	0%	2.19E-05
						Beryllium	3.45E-13	lb/dscf	0%	5.18E-07
						Cadmium	2.53E-13	lb/dscf	0%	3.80E-07
						Chromium	1.01E-11	lb/dscf	0%	1.52E-05
						Cobalt	1.96E-11	lb/dscf	0%	2.93E-05
						Lead	6.24E-12	lb/dscf	0%	9.36E-06
						Manganese	9.31E-11	lb/dscf	0%	1.40E-04
						Mercury	1.45E-13	lb/dscf	0%	2.17E-07
						Nickel	5.80E-12	lb/dscf	0%	8.69E-06

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
002-12 (AOS1) (cont'd)	Processes Controlled by HPGR Product Transfer Dust Collector 10 (AOS1) (cont'd)	SDC10 (AOS1) (cont'd)	NF (cont'd)	600,000	dscf (cont'd)	Manganese	9.31E-11	lb/dscf	0%	5.58E-05
						Mercury	1.45E-13	lb/dscf	0%	8.67E-08
						Nickel	5.80E-12	lb/dscf	0%	3.48E-06
						Selenium	9.13E-13	lb/dscf	0%	5.48E-07
002-13 (AOS1)	Processes Controlled by HPGR Product Transfer Dust Collector 11 (AOS1)	SDC11 (AOS1)	NF	600,000	dscf	Antimony	9.88E-12	lb/dscf	0%	5.93E-06
						Arsenic	1.46E-11	lb/dscf	0%	8.77E-06
						Beryllium	3.45E-13	lb/dscf	0%	2.07E-07
						Cadmium	2.53E-13	lb/dscf	0%	1.52E-07
						Chromium	1.01E-11	lb/dscf	0%	6.09E-06
						Cobalt	1.96E-11	lb/dscf	0%	1.17E-05
						Lead	6.24E-12	lb/dscf	0%	3.75E-06
						Manganese	9.31E-11	lb/dscf	0%	5.58E-05
						Mercury	1.45E-13	lb/dscf	0%	8.67E-08
						Nickel	5.80E-12	lb/dscf	0%	3.48E-06
						Selenium	9.13E-13	lb/dscf	0%	5.48E-07
Second Concentrator Bulk and Molybdenum Flotation Operations (AOS1)										
044-2 (AOS1)	Second Concentrator Bulk and Molybdenum Flotation Equipment	MFE	F	59.10	tons	Benzene	8.67E-06	lb/ton	0%	5.12E-04
						Ethylbenzene	1.46E-05	lb/ton	0%	8.63E-04
						n-Hexane	1.83E-06	lb/ton	0%	1.08E-04
						Toluene	1.04E-04	lb/ton	0%	6.18E-03
						m-Xylene	2.72E-04	lb/ton	0%	1.61E-02
Second Concentrator Concentrate Handling Operations (AOS1)										
006-11 (AOS1)	Copper Concentrate Filters 1/2 (AOS1) to Copper Concentrate Filter Drop Storage (AOS1)	CCTrPrt	F	57	tons	Antimony	4.85E-08	lb/ton	0%	2.77E-06
						Arsenic	8.06E-08	lb/ton	0%	4.59E-06
						Beryllium	2.37E-10	lb/ton	0%	1.35E-08
						Cadmium	8.88E-10	lb/ton	0%	5.06E-08
						Chromium	4.97E-10	lb/ton	0%	2.83E-08
						Cobalt	3.12E-09	lb/ton	0%	1.78E-07
						Lead	1.99E-08	lb/ton	0%	1.13E-06
						Manganese	1.54E-09	lb/ton	0%	8.77E-08
						Mercury	8.03E-10	lb/ton	0%	4.58E-08
						Nickel	2.25E-09	lb/ton	0%	1.28E-07
006-12 (AOS1)	Copper Concentrate Filter Drop Storage (AOS1) to Copper Concentrate Loadout Storage (AOS1) via Front-End Loader	CCTrPrt	F	57	tons	Selenium	3.91E-09	lb/ton	0%	2.23E-07
						Antimony	4.85E-08	lb/ton	0%	2.77E-06
						Arsenic	8.06E-08	lb/ton	0%	4.59E-06
						Beryllium	2.37E-10	lb/ton	0%	1.35E-08
						Cadmium	8.88E-10	lb/ton	0%	5.06E-08
						Chromium	4.97E-10	lb/ton	0%	2.83E-08
						Cobalt	3.12E-09	lb/ton	0%	1.78E-07
						Lead	1.99E-08	lb/ton	0%	1.13E-06
						Manganese	1.54E-09	lb/ton	0%	8.77E-08
						Mercury	8.03E-10	lb/ton	0%	4.58E-08
006-13 (AOS1)	Copper Concentrate Loadout Storage (AOS1) to Trucks via Front-End Loader	CCTrPrt	F	57	tons	Nickel	2.25E-09	lb/ton	0%	1.28E-07
						Selenium	3.91E-09	lb/ton	0%	2.23E-07
						Antimony	4.85E-08	lb/ton	0%	2.77E-06
						Arsenic	8.06E-08	lb/ton	0%	4.59E-06
						Beryllium	2.37E-10	lb/ton	0%	1.35E-08
						Cadmium	8.88E-10	lb/ton	0%	5.06E-08
						Chromium	4.97E-10	lb/ton	0%	2.83E-08
						Cobalt	3.12E-09	lb/ton	0%	1.78E-07
						Lead	1.99E-08	lb/ton	0%	1.13E-06
						Manganese	1.54E-09	lb/ton	0%	8.77E-08
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	HWindSCC (AOS1)	F	0.30	acre-yr	Mercury	8.03E-10	lb/ton	0%	4.58E-08
						Nickel	2.25E-09	lb/ton	0%	1.28E-07
						Selenium	3.91E-09	lb/ton	0%	2.23E-07
						Antimony	5.51E-03	lb/acre-hr	75%	4.13E-04
						Arsenic	9.15E-03	lb/acre-hr	75%	6.86E-04
						Beryllium	2.69E-05	lb/acre-hr	75%	2.02E-06
						Cadmium	1.01E-04	lb/acre-hr	75%	7.56E-06
Chromium	5.65E-05	lb/acre-hr	75%	4.23E-06						
Cobalt	3.54E-04	lb/acre-hr	75%	2.66E-05						
Lead	2.26E-03	lb/acre-hr	75%	1.70E-04						
027-8 (AOS1)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1)	HWindSCC (AOS1)	F	0.30	acre-yr	Manganese	1.75E-04	lb/acre-hr	75%	1.31E-05

Emission Inventory Tables for Potential Emission Calculations
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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	EF	EF Units		
027-8 (AOS1) (cont'd)	Wind Erosion of Copper Concentrate Filter Drop Storage (AOS1) and Copper Concentrate Loadout Storage (AOS1) (cont'd)	HWindSCC (AOS1) (cont'd)	F (cont'd)	0.30	acre-yr (cont'd)	Mercury	9.12E-05	lb/acre-hr	75%	6.84E-06
						Nickel	2.55E-04	lb/acre-hr	75%	1.92E-05
						Selenium	4.44E-04	lb/acre-hr	75%	3.33E-05
052-2 (AOS1)	Processes Controlled by Molybdenum Dryer Wet Scrubber System (AOS1)	MDWSS (AOS1)	NF	1	hours	Antimony	1.29E-04	lb/hr	0%	1.29E-04
						Arsenic	1.41E-04	lb/hr	0%	1.41E-04
						Beryllium	6.31E-07	lb/hr	0%	6.31E-07
						Cadmium	2.36E-06	lb/hr	0%	2.36E-06
						Chromium	1.32E-06	lb/hr	0%	1.32E-06
						Cobalt	8.30E-06	lb/hr	0%	8.30E-06
						Lead	1.44E-05	lb/hr	0%	1.44E-05
						Manganese	4.10E-06	lb/hr	0%	4.10E-06
						Mercury	2.14E-06	lb/hr	0%	2.14E-06
						Nickel	5.99E-06	lb/hr	0%	5.99E-06
						Selenium	1.61E-05	lb/hr	0%	1.61E-05
						Benzene	3.48E-03	lb/hr	0%	3.48E-03
						Ethylbenzene	5.86E-03	lb/hr	0%	5.86E-03
						Hexane	7.32E-04	lb/hr	0%	7.32E-04
						Toluene	4.19E-02	lb/hr	0%	4.19E-02
m-Xylene	1.09E-01	lb/hr	0%	1.09E-01						
052-3 (AOS1)	Molybdenum Concentrate Dryer (AOS1) to Dried Molybdenum Concentrate Storage Bin (AOS1)	MC4TrPrt	NF	2.10	tons	Antimony	2.11E-06	lb/ton	0%	4.43E-06
						Arsenic	2.30E-06	lb/ton	0%	4.84E-06
						Beryllium	1.03E-08	lb/ton	0%	2.16E-08
						Cadmium	3.86E-08	lb/ton	0%	8.11E-08
						Chromium	2.16E-08	lb/ton	0%	4.54E-08
						Cobalt	1.36E-07	lb/ton	0%	2.85E-07
						Lead	2.35E-07	lb/ton	0%	4.93E-07
						Manganese	6.70E-08	lb/ton	0%	1.41E-07
						Mercury	3.49E-08	lb/ton	0%	7.34E-08
						Nickel	9.79E-08	lb/ton	0%	2.06E-07
052-4 (AOS1)	Dried Molybdenum Concentrate Storage Bin (AOS1) to Molybdenum Concentrate Bagging System (AOS1)	MC4TrPrt	F	2.10	tons	Selenium	2.63E-07	lb/ton	0%	5.52E-07
						Antimony	2.11E-06	lb/ton	0%	4.43E-06
						Arsenic	2.30E-06	lb/ton	0%	4.84E-06
						Beryllium	1.03E-08	lb/ton	0%	2.16E-08
						Cadmium	3.86E-08	lb/ton	0%	8.11E-08
						Chromium	2.16E-08	lb/ton	0%	4.54E-08
						Cobalt	1.36E-07	lb/ton	0%	2.85E-07
						Lead	2.35E-07	lb/ton	0%	4.93E-07
						Manganese	6.70E-08	lb/ton	0%	1.41E-07
						Mercury	3.49E-08	lb/ton	0%	7.34E-08
Nickel	9.79E-08	lb/ton	0%	2.06E-07						
Selenium	2.63E-07	lb/ton	0%	5.52E-07						
Second Concentrator Lime and Other Regent Operations (AOS1)										
053-2 (AOS1)	Xanthate Mix Tank (AOS1), Xanthate Holding Tank (AOS1), Test Reagent Mix Tank (AOS1), and Test Reagent Holding Tank (AOS1)	SXMS	NF	0.04	tons	Carbon Disulfide	1.23E+01	lb/ton	0%	4.94E-01
Second Concentrator Emergency ICE (AOS1)										
049-59 (AOS1)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine)	Tier3-450/560-D	NF	609	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	3.31E-03
						Toluene	1.97E-06	lb/hp-hr	0%	1.20E-03
						Xylenes	1.35E-06	lb/hp-hr	0%	8.23E-04
						Formaldehyde	5.52E-07	lb/hp-hr	0%	3.36E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	1.07E-04
						Acrolein	5.52E-08	lb/hp-hr	0%	3.36E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	5.54E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	3.93E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	2.00E-05
						Fluorene	8.96E-08	lb/hp-hr	0%	5.46E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	1.74E-04
						Anthracene	8.61E-09	lb/hp-hr	0%	5.24E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	1.72E-05
						Pyrene	2.60E-08	lb/hp-hr	0%	1.58E-05
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	2.65E-06
						Chrysene	1.07E-08	lb/hp-hr	0%	6.52E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	4.73E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	9.29E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-59 (AOS1) (cont'd)	Second Concentrator Diesel Emergency Generator 1 (AOS1) (609 hp engine) (cont'd)	Tier3-450/560-D (cont'd)	NF (cont'd)	609	hp-hr (cont'd)	Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	1.10E-06
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	1.76E-06
						Dibenz(a,h)anthracene	2.42E-09	lb/hp-hr	0%	1.47E-06
						Benzo(g,h,i)perylene	3.89E-09	lb/hp-hr	0%	2.37E-06
049-60 (AOS1)	Second Concentrator Diesel Emergency Generator 2 (AOS1) (762 hp engine)	Tier2-560-D	NF	762	hp-hr	Benzene	5.43E-06	lb/hp-hr	0%	4.14E-03
						Toluene	1.97E-06	lb/hp-hr	0%	1.50E-03
						Xylenes	1.35E-06	lb/hp-hr	0%	1.03E-03
						Formaldehyde	5.52E-07	lb/hp-hr	0%	4.21E-04
						Acetaldehyde	1.76E-07	lb/hp-hr	0%	1.34E-04
						Acrolein	5.52E-08	lb/hp-hr	0%	4.20E-05
						Naphthalene	9.10E-07	lb/hp-hr	0%	6.93E-04
						Acenaphthylene	6.46E-08	lb/hp-hr	0%	4.92E-05
						Acenaphthene	3.28E-08	lb/hp-hr	0%	2.50E-05
						Fluorene	8.96E-08	lb/hp-hr	0%	6.83E-05
						Phenanthrene	2.86E-07	lb/hp-hr	0%	2.18E-04
						Anthracene	8.61E-09	lb/hp-hr	0%	6.56E-06
						Fluoranthene	2.82E-08	lb/hp-hr	0%	2.15E-05
						Pyrene	2.60E-08	lb/hp-hr	0%	1.98E-05
						Benz(a)anthracene	4.35E-09	lb/hp-hr	0%	3.32E-06
						Chrysene	1.07E-08	lb/hp-hr	0%	8.16E-06
						Benzo(b)fluoranthene	7.77E-09	lb/hp-hr	0%	5.92E-06
						Benzo(k)fluoranthene	1.53E-09	lb/hp-hr	0%	1.16E-06
						Benzo(a)pyrene	1.80E-09	lb/hp-hr	0%	1.37E-06
						Indeno(1,2,3-cd)pyrene	2.90E-09	lb/hp-hr	0%	2.21E-06
049-61 (AOS1)	Second Concentrator Propane Emergency Generator 1 (AOS1) (84.7 hp engine)	SEG-P	NF	85	hp-hr	1,1,2,2-Tetrachloroethane	2.66E-07	lb/hp-hr	0%	2.25E-05
						1,1,2-Trichloroethane	1.61E-07	lb/hp-hr	0%	1.36E-05
						1,1-Dichloroethane	1.19E-07	lb/hp-hr	0%	1.00E-05
						1,2-Dichloroethane	1.19E-07	lb/hp-hr	0%	1.00E-05
						1,2-Dichloropropane	1.37E-07	lb/hp-hr	0%	1.16E-05
						1,3-Butadiene	6.96E-06	lb/hp-hr	0%	5.90E-04
						1,3-Dichloropropene	1.33E-07	lb/hp-hr	0%	1.13E-05
						Acetaldehyde	2.93E-05	lb/hp-hr	0%	2.48E-03
						Acrolein	2.76E-05	lb/hp-hr	0%	2.34E-03
						Benzene	1.66E-05	lb/hp-hr	0%	1.41E-03
						Carbon Tetrachloride	1.86E-07	lb/hp-hr	0%	1.57E-05
						Chlorobenzene	1.35E-07	lb/hp-hr	0%	1.15E-05
						Chloroform	1.44E-07	lb/hp-hr	0%	1.22E-05
						Ethylbenzene	2.60E-07	lb/hp-hr	0%	2.21E-05
						Ethylene Dibromide	2.24E-07	lb/hp-hr	0%	1.89E-05
						Formaldehyde	2.15E-04	lb/hp-hr	0%	1.82E-02
						Methanol	3.21E-05	lb/hp-hr	0%	2.72E-03
						Methylene Chloride	4.33E-07	lb/hp-hr	0%	3.66E-05
						Naphthalene	1.02E-06	lb/hp-hr	0%	8.64E-05
049-62 (AOS1)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine)	SEG-P	NF	85	hp-hr	Polycyclic Aromatic Hydrocarbons	1.48E-06	lb/hp-hr	0%	1.25E-04
						Styrene	1.25E-07	lb/hp-hr	0%	1.06E-05
						Toluene	5.86E-06	lb/hp-hr	0%	4.96E-04
						Vinyl Chloride	7.54E-08	lb/hp-hr	0%	6.39E-06
						Xylene	2.05E-06	lb/hp-hr	0%	1.73E-04
						1,1,2,2-Tetrachloroethane	2.66E-07	lb/hp-hr	0%	2.25E-05
						1,1,2-Trichloroethane	1.61E-07	lb/hp-hr	0%	1.36E-05
						1,1-Dichloroethane	1.19E-07	lb/hp-hr	0%	1.00E-05
						1,2-Dichloroethane	1.19E-07	lb/hp-hr	0%	1.00E-05
						1,2-Dichloropropane	1.37E-07	lb/hp-hr	0%	1.16E-05
						1,3-Butadiene	6.96E-06	lb/hp-hr	0%	5.90E-04
						1,3-Dichloropropene	1.33E-07	lb/hp-hr	0%	1.13E-05
						Acetaldehyde	2.93E-05	lb/hp-hr	0%	2.48E-03
						Acrolein	2.76E-05	lb/hp-hr	0%	2.34E-03
						Benzene	1.66E-05	lb/hp-hr	0%	1.41E-03
						Carbon Tetrachloride	1.86E-07	lb/hp-hr	0%	1.57E-05
						Chlorobenzene	1.35E-07	lb/hp-hr	0%	1.15E-05
						Chloroform	1.44E-07	lb/hp-hr	0%	1.22E-05

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
049-62 (AOS1) (cont'd)	Second Concentrator Propane Emergency Generator 2 (AOS1) (84.7 hp engine) (cont'd)	SEG-P (cont'd)	NF (cont'd)	85	hp-hr (cont'd)	Ethylbenzene	2.60E-07	lb/hp-hr	0%	2.21E-05
						Ethylene Dibromide	2.24E-07	lb/hp-hr	0%	1.89E-05
						Formaldehyde	2.15E-04	lb/hp-hr	0%	1.82E-02
						Methanol	3.21E-05	lb/hp-hr	0%	2.72E-03
						Methylene Chloride	4.33E-07	lb/hp-hr	0%	3.66E-05
						Naphthalene	1.02E-06	lb/hp-hr	0%	8.64E-05
						Polycyclic Aromatic Hydrocarbons	1.48E-06	lb/hp-hr	0%	1.25E-04
						Styrene	1.25E-07	lb/hp-hr	0%	1.06E-05
						Toluene	5.86E-06	lb/hp-hr	0%	4.96E-04
Vinyl Chloride	7.54E-08	lb/hp-hr	0%	6.39E-06						
Xylene	2.05E-06	lb/hp-hr	0%	1.73E-04						
Total of Non-Fugitive Emissions for AOS1:										7.31E-01
Total of Fugitive Emissions for AOS1:										2.63E+00
Total of Non-Fugitive and Fugitive Emissions for AOS1:										3.36E+00
AOS5: Emergency Grizzly Systems										
048-1 (AOS5)	Unloading Ore to Bar Grizzly 1/2 and Bar Grizzly Screening (AOS5)	BGScreenC	F	5,000	tons	Antimony	2.22E-08	lb/ton	0%	1.11E-04
						Arsenic	3.29E-08	lb/ton	0%	1.65E-04
						Beryllium	7.77E-10	lb/ton	0%	3.89E-06
						Cadmium	5.70E-10	lb/ton	0%	2.85E-06
						Chromium	2.28E-08	lb/ton	0%	1.14E-04
						Cobalt	4.40E-08	lb/ton	0%	2.20E-04
						Lead	1.41E-08	lb/ton	0%	7.03E-05
						Manganese	2.10E-07	lb/ton	0%	1.05E-03
						Mercury	3.26E-10	lb/ton	0%	1.63E-06
Nickel	1.31E-08	lb/ton	0%	6.53E-05						
Selenium	2.06E-09	lb/ton	0%	1.03E-05						
048-2 (AOS5)	Bar Grizzly 1/2 Oversize to Temporary Oversize Stockpile (AOS5)	Ore2TrUnprt	F	5,000	tons	Antimony	3.86E-08	lb/ton	90%	1.93E-05
						Arsenic	5.71E-08	lb/ton	90%	2.86E-05
						Beryllium	1.35E-09	lb/ton	90%	6.74E-07
						Cadmium	9.88E-10	lb/ton	90%	4.94E-07
						Chromium	3.96E-08	lb/ton	90%	1.98E-05
						Cobalt	7.64E-08	lb/ton	90%	3.82E-05
						Lead	2.44E-08	lb/ton	90%	1.22E-05
						Manganese	3.64E-07	lb/ton	90%	1.82E-04
						Mercury	5.65E-10	lb/ton	90%	2.82E-07
Nickel	2.26E-08	lb/ton	90%	1.13E-05						
Selenium	3.57E-09	lb/ton	90%	1.78E-06						
027-6 (AOS5)	Wind Erosion of Temporary Oversize Stockpile (AOS5)	HWindTOS	F	1	acre-yr	Antimony	3.37E-06	lb/acre-hr	0%	3.37E-06
						Arsenic	4.99E-06	lb/acre-hr	0%	4.99E-06
						Beryllium	1.18E-07	lb/acre-hr	0%	1.18E-07
						Cadmium	8.63E-08	lb/acre-hr	0%	8.63E-08
						Chromium	3.46E-06	lb/acre-hr	0%	3.46E-06
						Cobalt	6.67E-06	lb/acre-hr	0%	6.67E-06
						Lead	2.13E-06	lb/acre-hr	0%	2.13E-06
						Manganese	3.17E-05	lb/acre-hr	0%	3.17E-05
						Mercury	4.93E-08	lb/acre-hr	0%	4.93E-08
Nickel	1.98E-06	lb/acre-hr	0%	1.98E-06						
Selenium	3.11E-07	lb/acre-hr	0%	3.11E-07						
048-6 (AOS5)	Temporary Oversize Stockpile to Primary Crushers 1/2 (AOS5)	Ore2TrUnprt	F	5,000	tons	Antimony	3.86E-08	lb/ton	0%	1.93E-04
						Arsenic	5.71E-08	lb/ton	0%	2.86E-04
						Beryllium	1.35E-09	lb/ton	0%	6.74E-06
						Cadmium	9.88E-10	lb/ton	0%	4.94E-06
						Chromium	3.96E-08	lb/ton	0%	1.98E-04
						Cobalt	7.64E-08	lb/ton	0%	3.82E-04
						Lead	2.44E-08	lb/ton	0%	1.22E-04
						Manganese	3.64E-07	lb/ton	0%	1.82E-03
						Mercury	5.65E-10	lb/ton	0%	2.82E-06
Nickel	2.26E-08	lb/ton	0%	1.13E-04						
Selenium	3.57E-09	lb/ton	0%	1.78E-05						
048-3 (AOS5)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOS5)	Ore2TrPrt	NF	5,000	tons	Antimony	4.13E-09	lb/ton	0%	2.06E-05
						Arsenic	6.11E-09	lb/ton	0%	3.05E-05
						Beryllium	1.44E-10	lb/ton	0%	7.21E-07
						Cadmium	1.06E-10	lb/ton	0%	5.29E-07

Emission Inventory Tables for Potential Emission Calculations
October 2025

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	EF	EF Units		
048-3 (AOSS) (cont'd)	Bar Grizzly 1/2 Undersize to Apron Feeders 1/2 (AOSS) (cont'd)	Ore2TrPrt (cont'd)	NF (cont'd)	5,000	tons (cont'd)	Chromium	4.24E-09	lb/ton	0%	2.12E-05
						Cobalt	8.17E-09	lb/ton	0%	4.08E-05
						Lead	2.61E-09	lb/ton	0%	1.30E-05
						Manganese	3.89E-08	lb/ton	0%	1.94E-04
						Mercury	6.04E-11	lb/ton	0%	3.02E-07
						Nickel	2.42E-09	lb/ton	0%	1.21E-05
						Selenium	3.82E-10	lb/ton	0%	1.91E-06
048-5 (AOSS)	Apron Feeders 1/2 to Belt Conveyors 1/2 (AOSS)	Ore2TrPrt	NF	5,000	tons	Antimony	4.13E-09	lb/ton	0%	2.06E-05
						Arsenic	6.11E-09	lb/ton	0%	3.05E-05
						Beryllium	1.44E-10	lb/ton	0%	7.21E-07
						Cadmium	1.06E-10	lb/ton	0%	5.29E-07
						Chromium	4.24E-09	lb/ton	0%	2.12E-05
						Cobalt	8.17E-09	lb/ton	0%	4.08E-05
						Lead	2.61E-09	lb/ton	0%	1.30E-05
						Manganese	3.89E-08	lb/ton	0%	1.94E-04
						Mercury	6.04E-11	lb/ton	0%	3.02E-07
						Nickel	2.42E-09	lb/ton	0%	1.21E-05
048-4 (AOSS)	Belt Conveyors 1/2 to Overland Conveyors (AOSS)	Ore2TrPrt	NF	5,000	tons	Selenium	3.82E-10	lb/ton	0%	1.91E-06
						Antimony	4.13E-09	lb/ton	0%	2.06E-05
						Arsenic	6.11E-09	lb/ton	0%	3.05E-05
						Beryllium	1.44E-10	lb/ton	0%	7.21E-07
						Cadmium	1.06E-10	lb/ton	0%	5.29E-07
						Chromium	4.24E-09	lb/ton	0%	2.12E-05
						Cobalt	8.17E-09	lb/ton	0%	4.08E-05
						Lead	2.61E-09	lb/ton	0%	1.30E-05
						Manganese	3.89E-08	lb/ton	0%	1.94E-04
						Mercury	6.04E-11	lb/ton	0%	3.02E-07
						Nickel	2.42E-09	lb/ton	0%	1.21E-05
						Selenium	3.82E-10	lb/ton	0%	1.91E-06
Total of Non-Fugitive Emissions for AOSS:										1.01E-03
Total of Fugitive Emissions for AOSS:										5.33E-03
Total of Non-Fugitive and Fugitive Emissions for AOSS:										6.33E-03
Greatest Single HAP Emissions Under the Primary Operating Scenario:						Carbon Disulfide				3.01E+00
Total of Non-Fugitive Emissions Under the Primary Operating Scenario:										3.74E+00
Total of Fugitive Emissions Under the Primary Operating Scenario:										2.01E+00
Total of Non-Fugitive and Fugitive Emissions Under the Primary Operating Scenario:										5.75E+00
Greatest Single HAP Emissions Under AOS1:						Carbon Disulfide				3.50E+00
Total of Non-Fugitive Emissions Under AOS1:										4.46E+00
Total of Fugitive Emissions Under AOS1:										3.86E+00
Total of Non-Fugitive and Fugitive Emissions Under AOS1:										8.32E+00

* Potential emissions from AOS3 and AOS5 are less than or equal to emissions from the Primary Operating Scenario and AOS1 such that they are not considered in the maximum facility-wide totals.

APPENDIX G 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 11.
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.
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 12.
10.	For any current non-compliance issue, is a compliance schedule attached?			X	See Section 10.
11.	For minor permit revision that will make a modification upon submittal of application, has a suggested draft permit been attached?			X	The application is not for a minor permit revision.