CLASS II AIR QUALITY PERMIT

PERMIT No. 96659

PERMITTEE:	**Copper World, Inc.**
FACILITY:	**Copper World Project**
PLACE ID:	**217930**
DATE ISSUED:	**January 2, 2025**
EXPIRY DATE:	**January 1, 2030**

SUMMARY

This Class II Air Quality Permit No. 96659 is issued to Copper World, Inc., the Permittee, for the construction and operation of the Copper World Project. The facility is located at 9025 East Santa Rita Road, Sahuarita, Arizona 85629 in Pima County.

A Class II synthetic minor permit is required because the facility's potential to emit particulate matter (PM), particulate matter with aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and sulfuric acid mist (H_2SO_4) exceeds significant levels identified in the Arizona Administrative Code (A.A.C.) R18-2-101.131.a and -101.131.b. The facility has voluntarily accepted emission limitations in accordance with A.A.C. R18-2-306.01.A to limit the facility's potential to emit below the major source thresholds identified in A.A.C. R18-2-101.175.c and -401.13.b. Therefore, the Copper World Project is designated as a synthetic minor source in accordance A.A.C. R18-2-301.24.

New stationary sources with potential to emit regulated minor New Source Review (NSR) pollutants greater than the permitting exemption thresholds identified in A.A.C. R18-2-101.101 are required to undergo Minor NSR prior to beginning actual construction of the new stationary source in accordance with A.A.C. R18-2-334.A. To satisfy the requirements of Minor NSR, the source may elect to implement Reasonably Available Control Technology, or conduct an ambient air quality assessment to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS) in accordance with A.A.C. R18-2-334.C. In this case, the Permittee elected to conduct an ambient air impact analysis to demonstrate that emissions from the Copper World Project will not interfere with attainment or maintenance of the NAAQS.

Pursuant to Arizona Revised Statutes (A.R.S.) § 49-402, the Arizona Department of Environmental Quality (ADEQ) asserted jurisdiction as the air quality permitting authority for the Copper World Project. This permit is issued in accordance with A.R.S. § 49-426. It contains requirements from Title 18, Chapter 2 of the A.A.C., Title 17, Chapter 16 of the Pima County Code (P.C.C.), and Title 40 of the Code of Federal Regulations (CFR). All definitions, terms, and conditions used in this permit conform to those in the A.A.C. R18-2-101 et. seq. and Title 40 of the CFR, except as otherwise defined in this permit.

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ATTACHMENT "A": GENERAL PROVISIONS

I. PERMIT EXPIRATION AND RENEWAL

A. This permit is valid for a period of five (5) years from the date of issuance.
[A.R.S. § 49-426.F, A.A.C. R18-2-306.A.1]

B. The Permittee shall submit an application for renewal of this permit at least six (6) months, but not more than eighteen (18) months, prior to the date of permit expiration.
[A.A.C. R18-2-304.D.2]

II. COMPLIANCE WITH PERMIT CONDITIONS

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona Revised Statutes (A.R.S.) Title 49, Chapter 3, and the air quality rules under Title 18, Chapter 2 of the Arizona Administrative Code. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
[A.A.C. R18-2-306.A.8.a]

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
[A.A.C. R18-2-306.A.8.b]

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[A.A.C. R18-2-306.A.8.c]

B. The permit shall be reopened and revised under any of the following circumstances:

1. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; and
[A.A.C. R18-2-321.A.1.c]

2. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
[A.A.C. R18-2-321.A.1.d]

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening

shall be made as expeditiously as practicable. Permit reopenings shall not result in a resetting of the five-year permit term.

[A.A.C. R18-2-321.A.2]

IV. POSTING OF PERMIT

A. The Permittee shall post this permit or a certificate of permit issuance at the facility where the equipment is installed in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:

[A.A.C. R18-2-315.A]

1. Current permit number; or

2. Serial number or other equipment ID number that is also listed in the permit to identify that piece of equipment.

B. A copy of the complete permit shall be kept on site.

[A.A.C. R18-2-315.B]

V. FEE PAYMENT

The Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

[A.A.C. R18-2-306.A.9 and -326]

VI. EMISSIONS INVENTORY QUESTIONNAIRE

A. The Permittee shall complete and submit to the Director an emissions inventory questionnaire no later than June 1 every three years beginning June 1, 2021 At the Director's request, the Permittee may be required to complete and submit emissions inventory questionnaires in addition to the triennial emissions inventory questionnaire. The Director shall notify the Permittee in writing of the decision to require additional emissions inventory questionnaires.

[A.A.C. R18-2-327.A.1.b]

B. The emissions inventory questionnaire shall be on an electronic or paper form provided by the Director and shall include the information required by A.A.C. R18-2-327.A.3 for the previous calendar year.

[A.A.C. R18-2-327.A.3]

C. The Permittee shall submit to the Director an amendment to an emissions inventory questionnaire, containing the documentation required by A.A.C. R18-2-327.A.3, whenever the Permittee discovers or receives notice, within two years of the original submittal, that incorrect or insufficient information was submitted to the Director by a previous emissions inventory questionnaire. The amendment shall be submitted to the Director within 30 days of discovery or receipt of notice. If the incorrect or insufficient information resulted in an incorrect annual emissions fee, the Director shall require that additional payment be made or shall apply an amount as a credit to a future annual emissions fee. The submittal of an amendment shall not subject the Permittee to an enforcement action or a civil or criminal penalty if the original submittal of incorrect or insufficient information was not due to willful neglect.

[A.A.C. R18-2-327.A.4]

VII. COMPLIANCE CERTIFICATION

A. The Permittee shall submit a compliance certification to the Director semiannually which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

[A.A.C. R18-2-309.2.a]

B. The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;

[A.A.C. R18-2-309.2.c.i]

2. Identification of the methods or other means used by the Permittee for determining the compliance status with each term and condition during the certification period;

[A.A.C. R18-2-309.2c.ii]

3. Status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certifications shall identify each deviation (including any deviations reported pursuant to Condition XII.B of this Attachment) during the period covered by the certification and take it into account for consideration in the compliance certification;

[A.A.C. R18-2-309.2.c.iii]

4. Other facts the Director may require in determining the compliance status of the source.

[A.A.C. R18-2-309.2.c.iv]

C. A progress report on all outstanding compliance schedules shall be submitted every six months beginning six months after permit issuance.

[A.A.C. R18-2-309.5.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[A.A.C. R18-2-309.3]

IX. INSPECTION AND ENTRY

Upon presentation of proper credentials, the Permittee shall allow the Director or the authorized representative of the Director to:

A. Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
[A.A.C. R18-2-309.4.a]

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
[A.A.C. R18-2-309.4.b]

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
[A.A.C. R18-2-309.4.c]

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
[A.A.C. R18-2-309.4.d]

E. Record any inspection by use of written, electronic, magnetic and photographic media.
[A.A.C. R18-2-309.4.e]

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.
[A.A.C. R18-2-304.D.3]

XI. ACCIDENTAL RELEASE PROGRAM

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68.
[40 CFR Part 68]

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting
[A.A.C. R18-2-310.01.A, B, and C]

1. Excess emissions shall be reported as follows:

   a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

      (1) Notification by myDEQ, telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.

(2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a(1) above.

[A.A A.C. R18-2-310.01.A]

b. The report shall contain the following information:

(1) Identity of each stack or other emission point where the excess emissions occurred;

[A.A.C. R18-2-310.01.B.1]

(2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

[A.A.C. R18-2-310.01.B.2]

(3) Time and duration, or expected duration, of the excess emissions;

[A.A.C. R18-2-310.01.B.3]

(4) Identity of the equipment from which the excess emissions emanated;

[A.A.C. R18-2-310.01.B.4]

(5) Nature and cause of the emissions;

[A.A.C. R18-2-310.01.B.5]

(6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;

[A.A.C. R18-2-310.01.B.6]

(7) Steps that were or are being taken to limit the excess emissions; and

[A.A.C. R18-2-310.01.B.7]

(8) If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures governing source operation during periods of startup or malfunction.

[A.A.C. R18-2-310.01.B.8]

2. In the case of continuous or recurring excess emissions, the notification requirements shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the applicable requirement contains a definition of prompt or otherwise specifies a timeframe for reporting deviations, that definition or timeframe shall govern. Where the applicable requirement does not address the timeframe for reporting deviations, the Permittee shall submit reports of deviations according to the following schedule:

1. Notice that complies with Condition XII.A above is prompt for deviations that constitute excess emissions;

[A.A.C. R18-2-306.A.5.b.i]

2. Notice that is submitted within two (2) working days (during facility operations) of discovery of the deviation is prompt for deviations of permit conditions identified by Condition II.D.1 of Attachment "B";

[A.A.C. R18-2-306.A.5.b.ii]

3. Except as provided in Conditions XII.B.1 and 2, prompt notification of all other types of deviations shall be semiannually, concurrent with the semiannual compliance certifications required in Section VII, and can be submitted via myDEQ, the Arizona Department of Environmental Quality's online portal.

[A.A.C. R18-2-306.A.5.b.ii]
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XIII. RECORDKEEPING REQUIREMENTS

A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:

[A.A.C. R18-2-306.A.4.a]

1. The date, place as defined in the permit, and time of sampling or measurements;

[A.A.C. R18-2-306.A.4.a.i]

2. The date(s) any analyses were performed;

[A.A.C. R18-2-306.A.4.a.ii]

3. The name of the company or entity that performed the analyses;

[A.A.C. R18-2-306.A.4.a.iii]

4. A description of the analytical techniques or methods used;

[A.A.C. R18-2-306.A.4.a.iv]

5. The results of analyses; and

[A.A.C. R18-2-306.A.4.a.v]

6. The operating conditions as existing at the time of sampling or measurement.

[A.A.C. R18-2-306.A.4.a.vi]

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[A.A.C. R18-2-306.A.4.b]

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

[A.A.C. R18-2-306.A.8.e]

B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

[A.A.C. R18-2-304.H]

XV. PERMIT AMENDMENT OR REVISION

The Permittee shall apply for a permit amendment or revision for changes to the facility which does not qualify for a facility change without revision under Section XVI below, as follows:

A. Facility Changes that Require a Permit Revision;

[A.A.C. R18-2-317.01]

B. Administrative Permit Amendment;

[A.A.C. R18-2-318]

C. Minor Permit Revision; and

[A.A.C. R18-2-319]

D. Significant Permit Revision.

[A.A.C. R18-2-320]

The applicability and requirements for such action are defined in the above referenced regulations.

XVI. FACILITY CHANGE WITHOUT A PERMIT REVISION

A. Except for a physical change or change in the method of operation at a Class II source requiring a permit revision under A.A.C. R18-2-317.01, or a change subject to logging or notice requirements in Condition XVI.B, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Section.

[A.A.C. R18-2-317.02.A]

B. The following changes may be made if the source keeps on site records of the changes according to Condition XVI.F below:

[A.A.C. R18-2-317.02.B]

1. Implementing an alternative operating scenario, including raw materials changes;

2. Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;

3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.68 but not listed in the permit;

4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and

5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

C. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under Condition XVI.B.1.

[A.A.C. R18-2-317.02.F]

D. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the Permittee under this Section over the term of the permit, constitutes a change under subsection A.A.C. R18-2-317.01.A.

[A.A.C. R18-2-317.02.G]

E. A copy of all logs required under Condition XVI.B shall be filed with the Director within 30 days after each anniversary of the permit issuance date. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.

[A.A.C. R18-2-317.02.I]

F. Logging Requirements

[Arizona Administrative Code, Appendix 3]

1. Each log entry required by a change under Condition XVI.B shall include at least the following information:

   a. A description of the change, including:

      (1) A description of any process change;

(2) A description of any equipment change, including both old and new equipment descriptions, model numbers, and serial numbers, or any other unique equipment ID number; and

(3) A description of any process material change.

b. The date and time that the change occurred.

c. The provisions of Condition XVI.B that authorizes the change to be made with logging.

d. The date the entry was made and the first and last name of the person making the entry.

2. Logs shall be kept for five (5) years from the date created. Logging shall be performed in indelible ink in a bound log book with sequentially number pages, or in any other form, including electronic format, approved by the Director.

XVII. TESTING REQUIREMENTS

A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

[A.A.C. R18-2-312.A]

B. Operational Conditions during Performance Testing

Performance tests shall be conducted under such conditions as the Director shall specify to the plant operator based on representative performance of the source. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.

[A.A.C. R18-2-312.C]

C. Performance Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

[A.A.C. R18-2-312.B]

D. Test Plan

At least 14 working days prior to performing a test, the Permittee shall submit a test plan to the Director, which must include the following, in addition to all other applicable requirements, as identified in the Arizona Testing Manual:

[A.A.C. R18-2-312.B]

1. Test duration;

2. Test location(s);

3. Test method(s); and

4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

[A.A.C. R18-2-312.E]

1. Sampling ports adequate for test methods applicable to the facility;

2. Safe sampling platform(s);

3. Safe access to sampling platform(s); and

4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-312.F]

G. Report of Final Test Results

A written report of the results of performance tests conducted pursuant to 40 CFR 63, shall be submitted to the Director within 60 days after the test is performed. A written report of the results of all other performance tests shall be submitted within 4 weeks after the test is performed, or as otherwise provided in the Arizona Testing Manual. All performance testing reports shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

[A.A.C. R18-2-312.A and B]

H. Extension of Performance Test Deadline

Except for performance tests required by federal rule, performance tests may be rescheduled for good cause by mutual agreement of the Department and Permittee and

confirmed in writing by the Department. For performance testing required under Condition XVII.A above, the Permittee may request an extension to a performance test deadline due to a force majeure event as follows:

[A.A.C. R18-2-312.J]

1. If a force majeure event is about to occur, occurs, or has occurred for which the Permittee intends to assert a claim of force majeure, the Permittee shall notify the Director in writing as soon as practicable following the date the Permittee first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline. The notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall be given as soon as practicable.

   [A.A.C. R18-2-312.J.1]

2. The Permittee shall provide to the Director a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the Permittee proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure event occurs.

   [A.A.C. R18-2-312.J.2]

3. The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Director. The Director shall notify the Permittee in writing of approval or disapproval of the request for an extension as soon as practicable.

   [A.A.C. R18-2-312.J.3]

4. Until an extension of the performance test deadline has been approved by the Director under Conditions XVII.H.1, 2, and 3 above, the Permittee remains subject to the requirements of Section XVII.

   [A.A.C. R18-2-312.J.4]

5. For purposes of this Section XVII, a “force majeure event” means an event that will be or has been caused by circumstances beyond the control of the Permittee, its contractors, or any entity controlled by the Permittee that prevents it from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the Permittee's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the Permittee.

   [A.A.C. R18-2-312.J.5]

XVIII. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

[A.A.C. R18-2-306.A.8.d]

XIX. SEVERABILITY CLAUSE

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

[A.A.C. R18-2-306.A.7]

XX. PERMIT SHIELD

A. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements identified in the portions of this permit subtitled "Permit Shield". The permit shield shall not apply to minor revisions pursuant to Condition XV.C of this Attachment and any facility changes without a permit revision pursuant to Section XVI of this Attachment.

[A.A.C. R18-2-317.F, -319H and -325.A]

B. Nothing in this permit shall alter or affect the following:

[A.A.C. R18-2-325.B]

1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that Section;

2. The liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance;

3. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

4. The ability of the Administrator or the Director to obtain information from a source pursuant to Section 114 of the Act, or any provision of state law;

5. The authority of the Director to require compliance with new applicable requirements adopted after the permit is issued.

XXI. PROTECTION OF STRATOSPHERIC OZONE

If this source becomes subject to the provisions of 40 CFR Part 82, then the Permittee shall comply with these provisions accordingly.

[40 CFR Part 82]

XXII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

For all equipment subject to a New Source Performance Standard or a National Emission Standard for Hazardous Air Pollutants, the Permittee shall comply with all applicable requirements contained in Subpart A of Title 40, Chapter 60 and Chapter 63 of the Code of Federal Regulation.

[40 CFR Part 60 Subpart A and Part 63 Subpart A]

ATTACHMENT "B": SPECIFIC CONDITIONS

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

This permit is issued pursuant to the provisions of Arizona Revised States (A.R.S.) and constitutes an installation permit for the purpose of the applicable State Implementation Plan (SIP).

[A.R.S. § 49-404.c and -426]

II. FACILITY-WIDE REQUIREMENTS

A. Manufacturer's Specifications

Manufacturer's specifications shall mean the manufacturer's, designers', or installers recommended specifications, or an alternative set of specifications developed by a qualified professional which shall be made available to the Director upon request. The Permittee shall maintain records of these manufacturer's specifications on-site at all times.

B. General Operating Requirements

1. Visibility Limiting Standard

a. The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.

[P.C.C. 17.16.050.A]

b. Opacity of an emission from any nonpoint source shall not exceed 20 percent opacity.

[P.C.C. 17.16.050.B.1]

c. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the external property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken.

[P.C.C. 17.16.050.D]

(1) The Permittee may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this Subsection.

Compliance with the approved dust control plan and approved tailings dust management plan shall constitute compliance with this requirement.

[P.C.C. 17.16.050.D.1]

(2) This Subsection shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.

[P.C.C. 17.16.050.D.2]

(3) This Subsection shall not apply to the generation of airborne particulate matter from undisturbed land.

[P.C.C. 17.16.050.D.3]

d. Permit Shield

Compliance with the requirements of Condition II.B.1 shall be deemed compliance with the requirements of P.C.C. 17.16.050.A, -B, -D, -D.1, -D.2, and -D.3.

[A.A.C. R18-2-325]

2. Operating Limitations

a. *The Permittee shall not mine greater than 200,000 tons of material (including ore and waste rock) per day. Material mined shall be determined based on the target payload capacity of haul trucks and number of haul trucks loaded each day.*

[A.A.C. R18-2-306.01.A, -334, and -331.A.3.a]
[Material Permit Conditions are indicated with underlines and italics]

b. The Permittee shall conduct blasting operations according to the following requirements:

[A.A.C. R18-2-334]

(1) The Permittee shall only use fuel oil with a maximum sulfur content of 15 ppm for blasting operations.

(2) The Permittee shall limit drilling operations as required below:

Table 1: Drilling Limitations

Open-Pit Mine	Maximum Daily Holes Drilled	Maximum Annual Holes Drilled
Peach, Elgin, Copper World, Heavyweight	70 holes drilled per pit	12,250 holes drilled per pit
Broadtop Butte	100 holes drilled	14,000 holes drilled
Rosemont	300 holes drilled	32,000 holes drilled

(3) The Permittee shall limit blasting frequency and usage of ammonium nitrate fuel oil (ANFO) as required below:

[A.A.C. R18-2-334]

Table 2: Explosive Blasting Limitations

Open-Pit Mine	Maximum Daily Horizontal Surface Area Blasted	Maximum Annual Horizontal Surface Area Blasted	Blasting Frequency	Maximum ANFO Limitation	Allowable Hours
Peach, Elgin, Copper World, Heavyweight	63,421 square feet (ft^2) per pit per blast	11,098,675ft^2 per pit	1 blast per hour 1 blast per day 175 blasts per year per pit	21 tons ANFO per blast	12:00 p.m. to 4:00 p.m.
Broadtop Butte	181,202 ft^2 per blast	18,120,200 ft^2	1 blast per hour 1 blast per day 100 blasts per year	30 tons ANFO per blast	12:00 p.m. to 2:00 p.m.
Rosemont	362,404 ft^2 per blast	54,360,600 ft^2	1 blast per hour 1 blast per day 300 blasts per year	90 tons ANFO per blast	12:00 p.m. to 4:00 p.m.

3. Recordkeeping Requirements

a. The Permittee shall maintain documentation of sulfur content for fuel oil used to produce ANFO on-site.

[A.A.C. R18-2-306.A.3.c]

b. Each day, the Permittee shall maintain operating logs containing the information below:

[A.A.C. R18-2-306.A.3.c]

(1) Identification of open-pit mines and waste rock facilities being operated each day.

(2) Total quantity of ore mined;

(3) Total quantity of waste rock mined;

(4) Total miles traveled by haul trucks;

(5) Number of holes drilled in each pit;

(6) Time and date of any explosive blasting that occurs during the operating day;

(7) Quantity of ANFO used per blast per pit; and

(8) Horizontal surface area that blasting occurred over (in square feet per pit).

c. The Permittee shall make these logs available upon request to the Director.

[A.A.C. R18-2-306.A.3.c]

C. Opacity

1. Instantaneous Surveys and Six-Minute Observations

Any instantaneous survey or six-minute observation required by this permit shall be conducted by an EPA Reference Method 9 certified observer.

[A.A.C. R18-2-306.A.3.c]

2. The Permittee shall have on site a person certified in EPA Reference Method 9 during daytime operations.

[A.A.C. R18-2-306.A.3.c]

3. Monitoring, Recordkeeping, and Reporting Requirements

[A.A.C. R18-2-306.A.3.c]

a. At the frequency specified in the following sections of this permit, the Permittee shall conduct an instantaneous survey of visible emissions from both process stack sources, when in operation, and fugitive dust sources.

b. If the visible emissions on an instantaneous basis appears less than or equal to the applicable opacity standard, then the Permittee shall keep a record of the name of the observer, the date on which the instantaneous survey was made, and the results of the instantaneous survey.

c. If the visible emissions on an instantaneous basis appears greater than the applicable opacity standard, then the Permittee shall immediately conduct a six-minute observation of the visible emissions.

(1) If the six-minute observation of the visible emissions is less than or equal to the applicable opacity standard, then the Permittee shall record the name of the observer, the date on which the six-minute observation was made, and the results of the six-minute observation.

(2) If the six-minute observation of the visible emissions is greater than the applicable opacity standard, then the Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard;

(b) Record the name of the observer, the date on which the six-minute observation was made, the results of the six-minute observation, and all corrective action taken; and

(c) Report the event as an excess emission for opacity in accordance with Condition XII.A of Attachment "A".

(d) Conduct another six-minute observation to document the effectiveness of the adjustments or repairs completed.

D. Recordkeeping and Reporting Requirements

1. Deviations from the following Attachment "B" permit conditions shall be promptly reported in accordance with Condition XII.B.2 of Attachment "A":
[A.A.C. R18-2-306.A.5.b]

a. Conditions III.A.2.a, III.A.2.b, and III.A.2.c;

b. Conditions III.A.3.a and III.A.3.b;

c. Conditions IV.C.1, IV.C.3, and IV.C.4;

d. Conditions IV.D.2 and IV.D.3;

e. Condition V.C; and

f. Condition V.D.2.a, V.D.2.b, and V.D.2.c.

2. The Permittee shall submit reports of all monitoring activities required in Attachment "B" along with the semiannual compliance certifications required by Section VII of Attachment "A."
[A.A.C. R18-2-306.A.5]

3. The Permittee shall notify the Director in writing within 30 days of purchase of the equipment listed in Attachment "C". Equipment purchases within a specified period may be grouped and reported together. This notification shall contain all the information required to complete Attachment "C".
[A.A.C. R18-2-306.A.5]

III. ORE PROCESSING AND SUPPORTING OPERATIONS

A. General Requirements

1. Voluntarily Accepted Emissions Limitations

On and after the date on which the initial performance test required to be conducted by Condition III.A.4.b is completed, the Permittee shall not cause to be discharged into the atmosphere from the following air pollution control devices any stack emissions that contain particulate matter in excess of the following:
[A.A.C. R18-2-306.01 and -331.A.3.a]
[Material Permit Conditions are indicated with underlines and italics]

Table 3: Voluntarily Accepted Emissions Limitations

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
Cartridge Dust Collector (AE-002)	*Process Equipment:* • *Oxide Primary Crusher* *Material Handling Emission Points:* • *Oxide Primary Crusher to the crusher discharge vault* • *Crusher discharge vault to a crusher discharge conveyor* • *Crusher discharge conveyor to the stockpile feed conveyor belt*	*0.005*	*0.0005*	*0.00009*
Cartridge Dust Collector (AE-003)	*Process Equipment:* • *Oxide Secondary Crusher* *Material Handling Emission Points:* • *Oxide Coarse Ore Stockpile to Oxide Stockpile Reclaim Feeders* • *Oxide Stockpile Reclaim Feeders to Reclaim Feeder Discharge Chute* • *Reclaim Feeder Discharge Chute to Oxide Stockpile Reclaim Conveyor* • *Oxide Stockpile Reclaim Conveyor to Oxide Stockpile Reclaim Conveyor Discharge Chute* • *Oxide Stockpile Reclaim Conveyor*	*0.005*	*0.00225*	*0.00042*

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
	Discharge Chute to Oxide Secondary Feeder Screen • *Oxide Secondary Feeder Screen to Oxide Secondary Crusher Feed Bin* • *Oxide Secondary Crusher Feed Bin to Oxide Secondary Crusher Belt Feeder* • *Oxide Secondary Crusher Belt Feeder to Oxide Secondary Crusher* • *Oxide Secondary Crusher to Oxide Secondary Crusher Discharge Conveyor*			
Cartridge Dust Collector (AE-005)	*Process Equipment:* • *Sulfide Primary Crusher* *Material Handling Emission Points:* • *Primary crushed sulfide ore to the crusher discharge vault* • *Crusher discharge vault to a crusher discharge conveyor* • *Crusher discharge conveyor to the stockpile feed conveyor belt*	*0.005*	*0.0005*	*0.00009*

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
Cartridge Dust Collector (AE-006)	*Process Equipment:* • *Sulfide Pebble Crusher* *Material Handling Emission Points:* • *Sulfide SAG Mill Screen Oversize from Sulfide Pebble Conveyor to Sulfide Pebble Crusher Feed Bin* • *Sulfide Pebble Crusher Feed Bin to a Sulfide Pebble Crusher Belt Feeder* • *Sulfide Pebble Crusher Belt Feeder to a Sulfide Pebble Crusher Belt Feeder Discharge Chute* • *Sulfide Pebble Crusher Belt Feeder Discharge Chute to a Sulfide Pebble Crusher* • *Sulfide Pebble Crusher to a Sulfide Pebble Crusher Discharge Chute* • *Sulfide Pebble Crusher Discharge Chute to a Sulfide Pebble Crusher Product Conveyor* • *Sulfide Pebble Crusher Product Conveyor to a Sulfide Pebble*	*0.005*	*0.0003*	*0.00005*

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
	Crusher Product Conveyor Discharge Chute • *Sulfide Pebble Crusher Product Conveyor Discharge Chute to a Sulfide SAG Mill Feed Conveyor* • *Sulfide SAG Mill Feed Conveyor to a Crusher* • *Ore to Sulfide SAG Mill*			
Cartridge Dust Collector (AE-007)	*Process Equipment:* • *Copper Concentrate* *Material Handling Emission Points:* • *Copper Concentrate to Copper Concentrate Filters* • *Copper Concentrate Filters to Copper Concentrate loadout Stockpile* • *Copper Concentrate loadout Stockpile to Shipment Trucks/Container by Front-end Loaders*	*0.005*	*0.00236*	*0.00036*
Wet Scrubber (AE-008)	*Material Handling Emission Points:* • *Molybdenum Flotation Scrubber System*	*0.02*	*0.02*	*0.02*

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
Cartridge Dust Collector (AE-009)	*Process Equipment:* • *Molybdenum Concentrate Dryer* *Material Handling Emission Points:* • *Molybdenum Concentrate from Molybdenum Dryer Screw Feeder* • *Molybdenum Concentrate to Molybdenum Dryer* • *Molybdenum Dryer to Molybdenum Concentrate Storage Bin* • *Molybdenum Concentrate Storage Bin to Molybdenum Concentrate Bag Feeder/Conveyor*	*0.005*	*0.00236*	*0.00036*
Cartridge Dust Collector (AE-010)	*Material Handling Emission Points:* • *Molybdenum Concentrate Bag Feeder/Conveyor to Molybdenum Concentrate Bag Loader* • *Molybdenum Concentrate Bag Loader to Molybdenum Concentrate to Shipment Trucks*	*0.005*	*0.00236*	*0.00036*
Cyclone Scrubber (AE-011)	*Material Handling Emission Points:*	*0.02*	*0.01218*	*0.006*

Control Device Emission Point	Processes Controlled	PM Emissions Limitation (gr/dscf)	PM_{10} Emissions Limitation (gr/dscf)	$PM_{2.5}$ Emissions Limitation (gr/dscf)
	• *Molybdenum Dryer*			
Cartridge Dust Collector (AE-012)	*Process Equipment:* • *Quicklime Slaking Mill* *Material Handling Emission Points:* • *Quicklime to Quicklime Storage Bin*	*0.005*	*0.00236*	*0.00036*
Wet Scrubber (AE-013)	*Material Handling Emission Points:* • *Lime Slaking Mill*	*0.02*	*0.02*	*0.02*
Cartridge Dust Collector (AE-014)	*Material Handling Emission Points:* • *Flocculant Bulk Bags to Flocculant Feed Bin*	*0.005*	*0.00236*	*0.00036*
Cartridge Dust Collector (AE-017)	*Laboratory Equipment*	*0.005*	*0.00313*	*0.00125*
Wet Scrubber (AE-018)	*Laboratory Equipment*	*0.005*	*0.00313*	*0.00125*
Cartridge Dust Collector (AE-019)	*Material Handling Emission Points:* • *Concentrate Leach Flocculant Bulk Bags to Flocculant Feed Bin* • *Mill Tailings Flocculant Bulk Bags to Flocculant Feed Bin*	*0.005*	*0.00236*	*0.00036*
Cartridge Dust Collector (AE-027)	*Precious Metals Recovery Refinery*	*0.005*	*0.005*	*0.005*
Cartridge Dust Collector (AE-028)	*Laboratory Dust Collector*	*0.005*	*0.00313*	*0.00125*

2. Air Pollution Control Requirements

a. *The Permittee shall install, operate*, and maintain *the air pollution control devices identified in Condition III.A.1 above to capture and control emissions of particulate matter from the associated process equipment and material handling emission points according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

b. *The Permittee shall install, operate*, and maintain *a water suppression fogging system to control emissions from the Oxide Ore Feed Bin, Oxide Ore Rock Breaker, and Oxide Feed Bin to Primary Crusher transfer point according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

c. *The Permittee shall install, operate*, and maintain *a water suppression fogging system to control emissions from the Sulfide Ore Feed Bin, Sulfide Ore Rock Breaker, and Sulfide Feed Bin to Primary Crusher transfer point according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

d. The Permittee shall install and maintain rubber sealing strips and chutes at the material transfer points to minimize fugitive particulate matter emissions.

[A.A.C. R18-2-306.01]

e. At points where material accumulates around process equipment, the Permittee shall implement Best Management Practices to ensure that open areas are maintained to minimize fugitive emissions of particulate matter as described in the Dust Control Plan.

[A.A.C. R18-2-306.01]

3. Monitoring, Recordkeeping, and Reporting Requirements

a. The Permittee shall install, operate, and maintain instrumentation to measure change in pressure of the gas stream across the air pollution control equipment identified in Condition III.A.1 above. 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.

[A.A.C. R18-2-306.A.3.d and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

b. *The Permittee shall install, operate,* and maintain *instrumentation to measure inlet flow rate of scrubber solution across the wet scrubbers identified in Condition III.A.1 above. The monitoring device shall 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.*

[A.A.C. R18-2-306.A.3.d and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

c. The Permittee shall conduct weekly inspections of the change in pressure of the gas stream and scrubber inlet flow rate for the equipment specified in Condition III.A.1 above. The Permittee shall record each inspection, including date and time of inspection, pressure drop reading, and any corrective actions taken.

[A.A.C. R18-2-306.A.3.c]

d. For air pollution control equipment identified in Condition III.A.1 above, the Permittee shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, appendix A-7). The Method 22 (40 CFR part 60, appendix A-7) test shall be conducted while the air pollution control equipment is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee shall initiate corrective action within 24 hours to return the air pollution control equipment to normal operation. The Permittee shall record each Method 22 (40 CFR part 60, appendix A-7) test, including the date and any corrective actions taken.

[A.A.C. R18-2-306.A.3.c]

e. The Permittee shall conduct weekly periodic inspections of the dust suppression fogging system to ensure that water is properly flowing to discharge from the spray nozzles while not causing excessive water discharge and mud formation/clogging of system. The Permittee shall initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles. The Permittee shall record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken.

[A.A.C. R18-2-306.A.3.c]

f. The Permittee shall conduct weekly surveys of visible emissions emanating from all operations subject to Condition III.A.1 in accordance with Condition II.C above.

Equipment subject to Section III.B below shall conduct observations for the opacity limitation in Condition III.B.4.a(2). Equipment subject to Section III.C shall conduct observations for the opacity limitation in Condition III.C.2.c**.** Equipment subject to Section III.D shall conduct observations for the opacity limitation in Condition III.D.2.c

[A.A.C. R18-2-306.A.3.c]

4. Performance Testing Requirements

a. Performance testing completed pursuant to this Section may occur concurrently with performance testing required by Condition III.B.7.

b. Dust Collector Performance Testing Requirements

(1) Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the

Permittee shall demonstrate compliance with the particulate matter standards for dust collectors in Condition III.A.1 utilizing EPA Reference Method 201A.

[A.A.C. R18-2-306.A.3.c and -312]

(2) To demonstrate continuous compliance with the emissions standards in Condition III.A.1, the Permittee shall conduct subsequent performance testing for dust collectors on an annual basis.

[A.A.C. R18-2-306.A.3.c and -312]

c. Wet Scrubber Performance Testing Requirements

(1) Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the Permittee shall demonstrate compliance with the particulate matter standards for wet scrubbers in Condition III.B.2 utilizing EPA Reference Methods 5 and 202. All particulate matter shall be assumed to be PM_{10} and $PM_{2.5}$.

[A.A.C. R18-2-312]

(2) To demonstrate continuous compliance with the emissions standards in Condition III.A.1, the Permittee shall conduct subsequent performance testing for wet scrubbers on an annual basis.

[A.A.C. R18-2-312]

B. Metallic Mineral Processing Operations Subject to New Source Performance Standards Subpart LL

1. Applicability

The requirements of this Section apply to equipment identified in the Equipment List in Attachment "C" as subject to New Source Performance Standard Subpart LL for Metallic Mineral Processing Operations.

2. Notification Requirements

The Permittee shall furnish to the Director written notification as follows:

a. A notification of the date of construction of an affected facility is commenced postmarked no later than 30 days after such date.

[40 CFR 60.7(a)(1)]

b. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

[40 CFR 60.7(a)(3)]

c. A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1). The notification shall also include, if appropriate, a request for the Director to provide a visible

emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

[40 CFR 60.7(a)(6)]

3. Operating Requirements

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

4. Emission Standards

a. On and after the date on which the performance test required to be conducted by Condition III.B.7.a is completed, the Permittee shall not cause to be discharged into the atmosphere from an affected facility any stack emissions that:

[40 CFR 60.382(a)]

(1) Contain particulate matter in excess of 0.05 grams per dry standards cubic meter (0.05 g/dscm).

[40 CFR 60.382(a)(1)]

(2) *Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing emission control device.*

[40 CFR 60.382(a)(2) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated with underlines and italics]

b. *On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected facility any process fugitive emissions that exhibit greater than 10 percent opacity.*

[40 CFR 60.382(b) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated with underlines and italics]

5. Monitoring Requirements

a. *The Permittee shall install, calibrate,* maintain, and *operate a monitoring device 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.*

[40 CFR 60.384(a) and A.A.C. R18-2-331.A.3.c]

[Material Permit Conditions are indicated with underlines and italics]

b. *The Permittee shall install, calibrate,* maintain, and *operate a monitoring device 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 shall 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.*

[40 CFR 60.384(b) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

6. Recordkeeping and Reporting Requirements

a. The Permittee shall conduct a performance test and submit to the Director a written report of the results of the test as specified in 40 CFR 60.8(a).

[40 CFR 60.385(a)]

b. The Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate during the initial performance test of a wet scrubber, and at least weekly thereafter.

[40 CFR 60.385(b)]

c. After the initial performance test of a wet scrubber, the Permittee shall submit semiannual reports to the Director 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.

[40 CFR 60.385(c)]

7. Performance Testing Requirements

a. Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the Permittee shall demonstrate compliance with the particulate matter standards in Condition III.B.4 as follows:

[40 CFR 60.8, 60.386(a), and 60.386(b)]

(1) Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (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 shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121 °C (250 °F) in order to prevent water condensation on the filter.

[40 CFR 60.386(b)(1)]

(2) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall 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:

[40 CFR 60.386(b)(2)]

(a) No more than three emission points are read concurrently;

(b) 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

(c) 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.

b. To demonstrate compliance with Condition III.B.6.c, the Permittee shall use the monitoring devices in Conditions III.B.5.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 shall be computed.

[40 CFR 60.386(c)]

8. Permit Shield

Compliance with Section III.B shall be deemed compliance with the requirements of 40 CFR 60.382(a)(1), -(2), 60.382(b), 60.384(a), 60.384(b), 60.385(a), 60.385(b), 60.385(c), 60.386(a), 60.386(b)(1), -(2), and 60.386(c).

[A.A.C. R18-2-325]

C. Metallic Mineral Processing Operations Not Subject to New Source Performance Standards Subpart LL

1. Applicability

The requirements of this Section apply to equipment identified in the Equipment List in Attachment "C" as subject to Pima County Code (P.C.C.) 17.16.360.B.

2. Emission Limitations and Standards

a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any process source subject to the provisions of this section in total quantities in excess of the amounts calculated by one of the following equations:

[P.C.C. 17.16.360.B]

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

[P.C.C. 17.16.360.B.1]

$E = 3.59P^{0.62}$

where:

E = the maximum, allowable particulate emission rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

(2) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

[P.C.C. 17.16.360.B.2]

$E = 17.31P^{0.16}$

Where "E" and "P" are defined as indicated above.

b. For purposes of this Subsection, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[P.C.C. 17.16.360.D]

c. The opacity of any plume or effluent from the equipment associated with the applicable sources shall not be greater than 20 percent. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.

[P.C.C. 17.16.130.B.3 and -130.C]

3. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall record the daily process rates and hours of operation of all material handling facilities.

[P.C.C. 17.16.360.F]

4. Permit Shield

Compliance with Section III.C shall be deemed compliance with the requirements of P.C.C. 17.16.130.B.3, -C, 17.16.360.B.1, -2, 17.16.360.D, and 17.16.360.F.

[A.A.C. R18-2-325]

D. Precious Metals Refinery, Analytical Laboratory, and Supporting Processes

1. Applicability

The requirements of this Section apply to equipment associated with the precious metals' refinery, electric induction furnace, analytical laboratory, storage silos and bins, material handling, and supporting processes identified in the Equipment List in Attachment "C" as subject to P.C.C. 17.16.430.

2. Emissions Standards

a. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from the equipment associated with the solvent extraction and electrowinning plant in total quantities in excess of the amounts calculated by one of the following equations:

[P.C.C. 17.16.430.A.1.a and -b]

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$E = 3.59P^{0.62}$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

(2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$E = 17.31P^{0.16}$

Where "E" and "P" are defined in Condition above.

b. For purposes of Condition III.D.2.a above, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[P.C.C. 17.16.430.B]

c. The opacity of any plume or effluent from the equipment associated with the applicable sources shall not be greater than 20 percent. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.

[P.C.C. 17.16.130.B.3 and -130.C]

d. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under the Permittee's control in such quantities or concentrations as to cause air pollution.

[P.C.C. 17.16.430.D]

e. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used, and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so 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, the installation and use of such control methods, devices, or equipment shall be mandatory.

[P.C.C. 17.16.430.F]

f. Where a stack, vent or other outlet is at such a level that fumes, gas, mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.

[P.C.C. 17.16.430.G]

3. Recordkeeping Requirements

The Permittee shall record the daily process rates and hours of operation of all equipment associated with the precious metals refinery.

4. Permit Shield

Compliance with Section III.D shall be deemed compliance with the requirements of P.C.C. 17.16.130.B.3, 17.16.430.A.1.a, 17.16.430.A.1.b, 17.16.430.B, 17.16.430.D, 17.16.430.F, and 17.16.430.G.

[A.A.C. R18-2-325]

IV. SOLVENT EXTRACTION AND ELECTROWINNING PLANT

A. Applicability

The requirements of this Section apply to the Solvent Extraction and Electrowinning Plant and associated equipment identified in the Equipment List in Attachment "C." Equipment subject to the requirements of this Section include:

1. DOP Tanks (13.125' D x 9.83' H each) (5)

2. DOP Turbine Tanks (5.25'D x 5.73' H each) (5)

3. Spirok Mixer Tanks (13.125' D x 19.6875' H each) (5)

4. Spirok Mixer Tanks (9.28' D x 15.135' H each) (5)

5. Extraction Settlers (104' Lx 47.99' W x 8' H each) (5)

6. Albion Electrowinning Plant Scrubber (AE-015)

7. Oxide Electrowinning Plant Scrubber (AE-016)

B. Emission Standards

1. Acid Mist, Particulate Matter, and Opacity

a. On and after the date on which the performance test required to be conducted by Condition IV.E.1 below is completed, the Permittee shall not cause to be discharged into the atmosphere from the Electrowinning Plant Scrubbers any gases which exceed the following emissions standards:

[A.A.C. R18-2-306.01.A and -331.A.3.a]

Table 3: Electrowinning Tankhouse Scrubber Particulate Matter Emissions Standards

Electrowinning Plant Scrubber	PM Emissions Standard (gr/dscf)	PM_{10} Emissions Standard (gr/dscf)	$PM_{2.5}$ Emissions Standard (gr/dscf)
Albion Electrowinning Plant Scrubber (AE-015)	0.005	0.00236	0.00036
Oxide Electrowinning Plant Scrubber (AE-016)	0.005	0.00236	0.00036

b. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from the equipment associated with the solvent extraction and electrowinning plant in total quantities in excess of the amounts calculated by one of the following equations:

[P.C.C. 17.16.430.1.a and -b]

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$E = 3.59P^{0.62}$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

(2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$E = 17.31P^{0.16}$

Where "E" and "P" are defined in Condition above.

c. For purposes of Condition IV.B.1.b above, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
[P.C.C. 17.16.430.B]

d. The opacity of any plume or effluent from the equipment associated with the Solvent Extraction and Electrowinning Plant shall not be greater than 20 percent. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.
[P.C.C. 17.16.130.B.3 and -C]

2. Volatile Organic Compounds

a. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under the Permittee's control in such quantities or concentrations as to cause air pollution.
[P.C.C. 17.16.430.D]

b. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used, and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so 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, the installation and use of such control methods, devices, or equipment shall be mandatory.
[P.C.C. 17.16.430.F]

c. Where a stack, vent or other outlet is at such a level that fumes, gas, mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
[P.C.C. 17.16.430.G]

C. Air Pollution Control Requirements

1. *The Permittee shall install, operate,* and maintain *the Electrowinning Albion Plant Scrubber to control emissions from the Electrowinning Albion Plant Tankhouse according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

2. *The Permittee shall install, operate,* and maintain *the Electrowinning Oxide Plant Scrubber to control emissions from the Electrowinning Oxide Plant Tankhouse according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

3. *The Permittee shall install* and maintain *covers on the solvent extraction mixer-settlers to minimize emissions from the Solution Extraction Plant.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

4. *The Permittee shall use one or more of the following methods to control emissions from the Electrowinning Tankhouse Cells:*

   a. *Foam;*

   b. *Dispersion Balls/Poly Balls;*

   c. *Surfactants, or;*

   d. *Other effective means of controlling sulfuric acid emissions approved by the Director.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]
[Material Permit Conditions are indicated with underlines and italics]

D. Monitoring, Recordkeeping, and Reporting Requirements

1. The Permittee shall conduct weekly surveys of visible emissions emanating from the Electrowinning Tankhouse Scrubbers in accordance with Condition II.C above.

[A.A.C. R18-2-306.A.3.c]

2. *The Permittee shall install, operate,* and maintain *a system that monitors scrubber motor amperage and damper position for each of the Electrowinning Tankhouse Scrubbers.*

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

3. The Permittee shall *install, operate*, maintain, and *calibrate instrumentation to measure pressure drop across each of the Electrowinning Tankhouse Scrubbers.*

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

4. The Permittee shall maintain records of the method(s) used to control emissions from the Electrowinning Tankhouse Cells.

[A.A.C. R18-2-306.A.3.c]

5. The Permittee shall submit to the Director an Operations and Maintenance Plan for the Electrowinning Tankhouse Scrubbers including the manufacturer-specified operating parameters, maintenance procedures, and inspection frequency of equipment and operating parameters. The Permittee shall maintain a log of all inspections and maintenance procedures conducted on the Electrowinning Tankhouse Scrubbers.

[A.A.C. R18-2-306.A.3.c]

E. Performance Testing Requirements

1. Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the Permittee shall conduct performance tests utilizing EPA Reference Methods 5 and 202 to demonstrate compliance with the emissions standards in Condition IV.B.1.a above. All particulate matter shall be assumed to be PM_{10} and $PM_{2.5}$.

[A.A.C. R18-2-312]

2. To demonstrate continuous compliance with the emissions standards in Condition IV.B.1.a, the Permittee shall conduct subsequent performance testing on an annual basis.

[A.A.C. R18-2-312]

F. Permit Shield

Compliance with Section IV shall be deemed compliance with the requirements of P.C.C. 17.16.130.B.3, -C, 17.16.430.A, 17.16.430.B, 17.16.430.D, 17.16.430.F, and 17.16.430.G.
[A.A.C. R18-2-325]

V. SULFURIC ACID PLANT

A. Applicability

The requirements of this Section apply to the sulfuric acid plant identified in the Equipment List in Attachment "C" as subject to New Source Performance Standard Subpart H for Sulfuric Acid Plants

B. Emission Standards

1. Sulfur Dioxide

a. *The Permittee shall not cause to be discharged into the atmosphere from the sulfuric acid plant any gases which contain sulfur dioxide in excess of 3.12 pounds per hour (lb/hr) based on a rolling 24-hour average.*

[A.A.C. R18-2-306.01.A and -331.A.3.a]
[Material Permit Conditions are indicated with underlines and italics]

b. On and after the date on which the performance test required to be conducted by Condition V.F.1 is completed, the Permittee shall not cause to be discharged into the atmosphere from any affected facility any gases

which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H_2SO_4.

[40 CFR 60.82(a)]

2. Acid Mist, Particulate Matter, and Opacity

a. *The Permittee shall not cause to be discharged into the atmosphere from the sulfuric acid plant any gases which contain particulate matter (includes acid mist) in excess of 3.82 lb/hr.*

[A.A.C. R18-2-306.01.A and -331.A.3.a]
[Material Permit Conditions are indicated with underlines and italics]

b. On and after the date on which the performance test required to be conducted by Condition V.F.1 is completed, the Permittee shall not cause to be discharged into the atmosphere from any affected facility any gases which:

[40 CFR 60.83(a)]

(1) Contain acid mist, expressed as H_2SO_4, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H_2SO_4.

[40 CFR 60.83(a)(1)]

(2) *Exhibit 10 percent opacity, or greater.*

[40 CFR 60.83(a)(2) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated by underlines and italics]

3. Nitrogen Oxides

The Permittee shall not cause to be discharged into the atmosphere from the sulfuric acid plant any gases which contain nitrogen oxides in excess of 4.15 lb/hr.

[A.A.C. R18-2-306.01.A and -331.A.3.f]
[Material Permit Conditions are indicated with underlines and italics]

C. Air Pollution Control Requirements

The Permittee shall install, operate, and maintain *a scrubber to minimize emissions from the sulfuric acid plant according to manufacturer's specifications.*

[A.A.C. R18-2-306.01, -331.A.3.d, and -331.A.3.e]

D. Monitoring Requirements

1. The Permittee shall conduct weekly surveys of visible emissions emanating from the acid plant stack in accordance with Condition II.C above.

[A.A.C. R18-2-306.A.3.c]

2. Continuous Emissions Monitoring Requirements

a. *The Permittee shall install, calibrate,* maintain, and *operate a continuous monitoring system for the measurement of sulfur dioxide from the acid plant stack. The continuous monitoring system shall meet the*

requirements of under Performance Specification 2 and for calibration checks under 40 CFR 60.13(d). The span value shall be set to 1,000 ppm of sulfur dioxide.

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

b. *The Permittee shall install, calibrate,* maintain, and *operate a continuous monitoring system for the measurement of nitrogen oxides from the acid plant stack. The continuous monitoring system shall meet the requirements under Performance Specification 2 and for calibration checks under 40 CFR 60.13(d). The span value shall be set to 60 ppm of nitrogen oxides.*

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

c. *The Permittee shall install, calibrate,* maintain, and *operate a continuous monitoring system to measure volumetric flow rate of gases from the acid plant stack. The continuous monitoring system shall meet the requirements of Performance Specification 6.*

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

d. *A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated,* maintained, and *operated by the Permittee. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under 40 CFR 60.13(d), shall be sulfur dioxide (SO_2). Method 8 shall be used for conducting monitoring system performance evaluations under 40 CFR 60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.*

[40 CFR 60.84(a) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines and italics]

3. The Permittee shall compute 1-hour averages for each continuous emissions monitoring system (CEMS) and flow measurement sensor according to the requirements below:

[A.A.C. R18-2-306.A.3.c]

a. Except as provided under Condition V.D.3.c below, for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, i.e., one data point in each of the 15-minute quadrants of the hour.

b. Except as provided under Condition V.D.3.c below, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.

c. For any operating hour in which required maintenance or quality-assurance activities are performed:

(1) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or

(2) If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

d. If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of Condition V.D.3.c above are met, based solely on valid data recorded after the successful calibration.

e. For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.

f. Except as provided under Condition V.D.3.g below, data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.

g. When specified in an applicable subpart, hourly averages for certain partial operating hours shall not be computed or included in the emission averages.

h. Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

4. The Permittee shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

[40 CFR 60.84(b)]

$$CF = k\frac{1.000-0.015r}{r-s}$$

Where:

CF = conversion factor (kg/metric ton per ppm, lb/ton per ppm).

k = constant derived from material balance. For determining CF in metric units, k = 0.0653. For determining CF in English units, k = 0.1306.

r = percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.

s = percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under Condition V.D.2.d.

5. The Permittee shall record all conversion factors and values under Condition V.D.4 above from which they were computed (i.e., CF, r, and s).

[40 CFR 60.84(c)]

6. Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO_2 emission rates in terms of the standard. This procedure is not required but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO_2, O_2, and CO_2 (if required) shall be installed, calibrated, maintained, and operated by the Permittee and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO_2 monitor shall be as specified in Condition V.D.2.a above. The span value for CO_2 (if required) shall be 10 percent and for O_2 shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO_2 emission rate as follows:

[40 CFR 60.84(d)]

$$E_S = \frac{C_S S}{0.265 - (0.0126\ \%O_2) - (A\ \%CO_2)}$$

Where:

E_S = emission rate of SO_2, kg/metric ton (lb/ton) of 100 percent of H2SO4 produced.

C_S = concentration of SO_2, kg/dscm (lb/dscf).

S = acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H2SO4 produced.

$\%O_2$ = oxygen concentration, percent dry basis.

A = auxiliary fuel factor.

$\%CO_2$ = carbon dioxide concentration, percent dry basis.

7. For the purposes of reports under Condition V.E.1 below, periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the standards under Condition V.B.1.b.

[40 CFR 60.84(e)]

E. Recordkeeping and Reporting Requirements

1. Excess Emissions and Monitoring Systems Performance Report and/or Summary Report Form for Sulfur Dioxide and Nitrogen Oxide CEMS

a. The Permittee shall submit excess emissions and monitoring systems performance report and/or a summary report form to the Director semiannually. All reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.7(c) and A.A.C. R18-2-306.A.3.c]

b. Written reports of excess emissions shall include the following information:

[40 CFR 60.7(c) and A.A.C. R18-2-306.A.3.c]

(1) The magnitude of excess emissions computed in accordance with Condition V.D.7 above, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken, or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

c. The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d).

[40 CFR 60.7(d) and A.A.C. R18-2-306.A.3.c]

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and continuous monitoring system downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted, and the excess emission report described in Condition V.E.1.b above need not be submitted unless requested by the Director.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting

period or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in Condition V.E.1.b above shall both be submitted.

2. Data Assessment Reports for the Sulfur Dioxide and Nitrogen Oxides CEMS
[40 CFR 60.13(a), A.A.C. R18-2-306.A.3.c]

a. The Permittee shall include results of quarterly CEMS data accuracy determinations (i.e., relative accuracy test audits, cylinder gas audits, or relative accuracy audits) and daily calibration drift assessments in the Data Assessment Reports (DARs) required by Section 7 of 40 CFR 60 Appendix F Procedure 1.

b. The Permittee shall complete quarterly DARs for all CEMS and the flow measurement sensor. The DARs completed in each six-month period shall be submitted to the Director semiannually at the same time as submittal of the excess emissions and monitoring systems performance report and-or a summary report form for the SO_2 CEMS.

3. The Permittee shall 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; or any periods during which a continuous monitoring system or monitoring device is inoperative.
[40 CFR 60.7(b)]

4. Each day, the Permittee shall maintain operating logs containing the information below. The Permittee shall make these records available to the Director upon request.
[A.A.C. R18-2-306.A.3.c]

a. Total quantity of sulfuric acid produced;

b. Total quantity of sulfur burned in the sulfur furnace;

c. Total quantity of molten sulfur delivered to the facility; and

d. Total quantity of sulfur recovered from the sulfur flotation process.

F. Performance Testing Requirements

1. Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the Permittee shall demonstrate compliance with the sulfur dioxide, acid mist, and opacity limits in Conditions V.B.1 through 3 as follows:
[40 CFR 60.8, 60.85(a), and 60.85(b)]

a. The emission rate of acid mist or SO_2 shall be computed for each run using the following equation:
[40 CFR 60.85(b)(1)]

$$E = \frac{CQ_{sd}}{PK}$$

Where:

E = emission rate of acid mist or SO_2 kg/metric ton (lb/ton) of 100 percent H_2SO_4 produced.

C = concentration of acid mist or SO_2, g/dscm (lb/dscf).

Q_{sd} = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P = production rate of 100 percent H_2SO_4, metric ton/hr (ton/hr).

K = conversion factor, 1000 g/kg (1.0 lb/lb).

b. Method 8 shall be used to determine the acid mist and SO_2 concentrations (C's) and the volumetric flow rate (Q_{sd}) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

[40 CFR 60.85(b)(2)]

c. Suitable methods shall be used to determine the production rate (P) of 100 percent H_2SO4 for each run. Material balance over the production system shall be used to confirm the production rate.

[40 CFR 60.85(b)(3)]

d. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

[40 CFR 60.85(b)(4)]

2. The Permittee may use the following as alternatives to the reference methods and procedures specified below:

If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

[40 CFR 60.85(c)(1)]

a. The integrated technique of Method 3 is used to determine the O_2 concentration and, if required, CO_2 concentration.

[40 CFR 60.85(c)(1)(i)]

b. The SO_2 or acid mist emission rate is calculated as described in Condition V.D.6, substituting the acid mist concentration for Cs as appropriate.

[40 CFR 60.85(c)(1)(ii)]

3. Within 60 days of achieving the maximum production rate at the facility, but no later than 180 days after initial start-up, the Permittee shall demonstrate

compliance with the nitrogen oxides emissions standard in Condition V.B.3 above according to EPA Reference Method 7E.

[A.A.C. R18-2-312]

G. Permit Shield

Compliance with Section V shall be deemed compliance with the requirements of 40 CFR 60.82(a), 60.83(a), -(a)(1), -(a)(2), 60.84(a), 60.84(b), 60.84(c), 60.84(d), 60.85(a), 60.85(b), and 60.85(c)(1).

[A.A.C. R18-2-325]

VI. INTERNAL COMBUSTION ENGINES

A. Applicability

This Section is applicable to the internal combustion engines (ICE) listed in the Equipment List in Attachment "C" as subject to 40 CFR 60 Subpart IIII for Stationary Compression Ignition (CI) ICEs. Internal Combustion Engines subject to the requirements of this Section include:

1. Emergency Power Generator #1
2. Emergency Power Generator #2
3. Emergency Power Generator #3
4. Primary Crusher Fire Water Pump

B. Fuel Requirements

1. The Permittee shall use diesel fuel that meets the following requirements:

[40 CFR 60.4207(b)]

a. Sulfur content – maximum 15 ppm; and

[40 CFR 1090.305(b)]

b. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40 CFR 1090.305(c)(1)-(2)]

C. National Emission Standards for Hazardous Air Pollutants Requirements

The Permittee shall comply with National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR 63 Subpart ZZZZ by complying with New Source Performance Standards (NSPS) requirements.

[40 CFR 63.6590(c)]

D. New Source Performance Standards Requirements

1. Operational Requirements

The Permittee shall operate and maintain the stationary CI ICE that achieve the emission standards as required in Condition VI.D.2 over the entire life of the engine.

[40 CFR 60.4206]

2. Emergency ICE Emission Limitations and Standards

a. For 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines, the Permittee shall 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.

[40 CFR 60.4205(b)]

b. For fire pump engines with a displacement of less than 30 liters per cylinder, the Permittee shall comply with the emission standards in Table 4 to 40 CFR 60 Subpart IIII, for all pollutants.

[40 CFR 60.4205(c)]

3. Compliance Requirements

a. The Permittee shall comply with the following requirements:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions.

[40 CFR 60.4211(a)(1)]

(2) Change only those emission-related settings that are permitted by the manufacturer.

[40 CFR 60.4211(a)(2)]

(3) Meet the requirements of 40 CFR Part 1068, as applicable.

[40 CFR 60.4211(a)(3)]

b. The Permittee shall purchase an engine certified to the emission standards in Conditions VI.D.2.a and VI.D.2.b, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition VI.D.3.d.

[40 CFR 60.4211(c)]

c. The Permittee shall operate the emergency stationary ICE according to the requirements in Conditions VI.D.3.c(1) through (3) below. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions VI.D.3.c(1) through (3), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions

VI.D.3.c(1) through (3), the engine will not be considered an emergency engine under this subpart and shall meet all requirements for non-emergency engines.

[40 CFR 60.4211(f)]

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

[40 CFR 60.4211(f)(1)]

(2) The Permittee may operate an emergency stationary ICE for any combination of the purposes specified in Condition VI.D.3.c(2)(a) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph Condition VI.D.3.c(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph VI.D.3.c(2).

[40 CFR 60.4211(f)(2)]

(a) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition VI.D.3.c(2) above. Except as provided in Condition VI.D.3.c(3)(a) below, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 CFR 60.4211(f)(3)]

(a) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

[40 CFR 60.4211(f)(3)(i)]

(i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(ii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(iii) The dispatch follows reliability, emergency operation or similar protocols that follow specific North American Electric Reliability Corporation (NERC), regional, state, public utility commission or local standards or guidelines.

(iv) The power is provided only to the facility itself or to support the local transmission and distribution system.

(v) The Permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

d. If the Permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the Permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as follows:

[40 CFR 60.4211(g)]

(1) For the CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes the emission-related settings in a way that is not permitted by the manufacturer.

[40 CFR 60.4211(g)(2)]

(2) For the CI internal combustion engine greater than 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. The Permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[40 CFR 60.4211(g)(3)]

4. Monitoring Requirements

a. *The Permittee shall install a non-resettable hour meter prior to startup of the internal combustion engine.*

[A.A.C. R18-2-306.A.3.c and -331.A.3.c]

b. For engines equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.

[40 CFR 60.4209(b)]

5. Reporting Requirements

a. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time.

[40 CFR 60.4214(b)]

b. For emergency CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in Condition VI.D.3.c(2)(a), the Permittee shall submit an annual report according to the following requirements:

[40 CFR 60.4214(d)]

(1) The report shall contain the following information:

[40 CFR 60.4214(d)(1)]

(a) Company name and address where the engine is located.

(b) Date of the report and beginning and ending dates of the reporting period.

(c) Engine site rating and model year.

(d) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(e) Hours spent for operation for the purposes specified in Condition VI.D.3.c(2)(a), including the date, start time, and end time for engine operation for the purposes specified in Condition VI.D.3.c(2)(a). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

[40 CFR 60.4214(d)(2)]

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

[40 CFR 60.4214(d)(3)]

E. Permit Shield

Compliance Section VI shall be deemed compliance with the requirements of 40 CFR 60.4205(b), 60.4205(c), 60.4206, 60.4207(b), 60.4209(b), 60.4211(a)(1), -(2), -(3), 60.4211(c), 60.4211(f), -(f)(1), -(f)(2), -(f)(3), 60.4211(g), -(g)(2), -(g)(3), 60.4214(b), 40 CFR 60.4214(d), -(d)(1), -(d)(2), and –(d)(3) and 40 CFR 63.6590(c).

[A.A.C. R18-2-325]

VII. GASOLINE STORAGE AND DISPENSING

A. Applicability

1. This Section applies to the following:

a. Gasoline dispensing facilities (GDFs), storage tanks at the GDFs listed in the Equipment List, Attachment “C”, associated equipment components in vapor or liquid gasoline service, pressure/vacuum vents on gasoline storage tanks, and equipment necessary to unload product from cargo tanks into storage tanks at GDFs. The equipment used for the refueling of motor vehicles is not covered.

[40 CFR 63.11111 (a), (b), & (c), and 63.11112(a)]

b. Each gasoline cargo tank during the delivery of product to a GDF.
[40 CFR 63.11111(a)]

2. Definition of Monthly Throughput

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.
[40 CFR 63.11132]

B. Operating Requirements

1. The Permittee shall at all times, 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. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director or 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.
[40 CFR 63.11115(a)]

2. The Permittee shall 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, but are not limited to, the following:
[40 CFR 63.11116(a)]

a. Minimize gasoline spills;

b. Clean up spills as expeditiously as practicable;

c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasket seal when not in use; and

d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

3. Submerged Fill Pipes
[40 CFR 63.11117(b) and PCC 17.16.520]

a. The Permittee shall only load gasoline into storage tanks by utilizing submerged fill pipes that are no more than 6 inches from the bottom of the storage tank.

b. If the submerged fill pipes do not meet the specifications specified above, the Permittee shall demonstrate 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 Director or Administrator's delegated representative during the course of a site visit.

4. If any GDF referenced above increases the monthly throughput over 10,000 or 100,000 gallons per month, the Permittee shall comply with new applicable provisions of 40 CFR 63 Subpart CCCCCC within 3 years of the GDF unit becoming subject to the new requirements.

[40 CFR 63.11113(c)]

5. All gasoline storage tanks shall be equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions.

[P.C.C. 17.16.230.B]

6. All pumps and compressors which handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent the release of organic contaminants into the atmosphere.

[P.C.C. 17.16.230.D]

C. Recordkeeping Requirements

1. The Permittee shall maintain monthly record of the gasoline throughput of each GDF as detailed in Condition VII.A.2.

[A.A.C. R18-2-306.A.3.c]

2. The Permittee shall have records available within 24 hours of request by the Director documenting the gasoline throughput.

[40 CFR 63.11117(d)]

3. The Permittee shall, for the gasoline storage tanks, maintain a file of the typical Reid vapor pressure of gasoline stored and of dates of storage. Dates on which the storage vessel is empty shall be shown.

[P.C.C. 17.16.230.E.1]

4. If the gasoline stored has a true vapor pressure greater than 470 mm Hg (9.1 psia), the Permittee shall record the average monthly temperature, and true vapor pressure of gasoline at such temperature.

[P.C.C. 17.16.230.E.2.b]

5. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperature determined at least once every seven days.

[P.C.C. 17.16.230.E.3]

6. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid

vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used.

[P.C.C. 17.16.230.E.4]

D. Permit Shield

Compliance with Section VII shall be deemed compliance with the requirements of P.C.C. 17.16.230.B, -D, -E.1, -E.2.b, -E.3 and -E.4, and 40 CFR 63.11111(a), -(b), -(c), 63.11112(a), 63.11113(c), 63.11115(a), 63.11116(b), 63.11117(a), and -(d).

[A.A.C. R18-2-325]

VIII. STORAGE TANKS

A. Applicability

This Section is applicable to the storage tanks identified in the Equipment List in Attachment "C".

B. Operating Requirements

1. The Permittee shall not emit gaseous or odorous materials from the storage tanks in such quantities or concentrations as to cause air pollution.

[P.C.C. 17.16.430.D]

2. Materials including solvents or other volatile compounds, paints, acids, and alkalies shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to effectively reduce the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory.

[P.C.C. 17.16.430.F]

3. Where a stack, vent, or other outlet is at such a level that odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution into adjoining property.

[P.C.C. 17.16.430.G]

C. Recordkeeping Requirements

The Permittee shall maintain logs of the following information for each delivery of material to the storage tanks:

[A.A.C. R18-2-306.A.3.c]

1. Date of material delivery;

2. Type of material delivered; and

3. Quantity of material delivered.

D. Permit Shield

Compliance with Section VIII shall be deemed compliance with the requirements of P.C.C. 17.16.430.D, -430.F, and -430.G.

[A.A.C. R18-2-325]

IX. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any nonpoint source of fugitive dust associated with the facility.

B. Operating Requirements

1. Fugitive Dust Producing Activities

a. The Permittee whose permit specifically allows fugitive dust producing operations or activities is responsible for controlling windblown dust, dust from haul roads, and dust emitted from land clearing, earthmoving, demolition, trenching, blasting, road construction, mining, racing event, and other activities, as applicable.

[P.C.C. 17.16.060.A]

(1) Until the area becomes permanently stabilized by paving, landscaping or otherwise, dust emissions shall be controlled by applying adequate amounts of water, chemical stabilizer, or other effective dust suppressant.

[P.C.C. 17.16.060.A.1]

(2) The Permittee shall not leave land in such a state that fugitive dust emissions (including windblown dust or dust caused by vehicular traffic on the area) would violate Condition II.B.1 above.

[P.C.C. 17.16.060.A.2]

b. The Permittee whose permit specifically allows fugitive dust producing operations or activities is responsible for controlling windblown dust, dust from haul roads, and dust emitted from land clearing, earthmoving, demolition, trenching, blasting, road construction, mining, racing event, and other activities to ensure compliance with Condition II.B.1 above.

[P.C.C. 17.16.060.B]

2. Vacant Lots and Open Spaces

a. The Permittee shall not cause, suffer, allow, or permit a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or

leveled, or the earth to be moved or excavated, without taking reasonable precautions to limit excessive amounts of particulate matter from becoming airborne. The Permittee shall keep dust and other types of air contaminants to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means.

[P.C.C. 17.16.080.A]

b. No vacant lot, housing plot, building site, parking area, sales lot, playground, livestock feedlot, or other open area—other than those used solely for soil-cultivation or vegetative crop-producing and harvesting agricultural purposes—shall be used or left in such a state after construction, alteration, clearing, leveling, or excavation that naturally induced wind blowing over the area causes a violation of Condition II.B.1 above. Dust emissions must be permanently suppressed by landscaping, covering with gravel or vegetation, paving, or applying equivalently effective controls.

[P.C.C. 17.16.080.B]

c. No vacant lot, parking area, sales lot, or other open urban area shall be used by motor vehicles in such a manner that visible dust emissions induced by vehicular traffic on the area cause a violation of Condition II.B.1 above.

[P.C.C. 17.16.080.C]

3. Roads and Streets

a. The Permittee shall not cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust suppressants, wetting down, detouring or by other reasonable means.

[P.C.C. 17.16.090.A]

b. Dust emissions from the construction phase of a new road must be minimized by applying the same measures specified in Condition IX.B.3.a.

[P.C.C. 17.16.090.B]

c. The Permittee shall not construct a new unpaved service road or unpaved haul road unless dust will be suppressed after construction by intermittently watering, limiting access, or applying chemical dust suppressants to the road, in such a way that visible dust emissions caused by vehicular traffic on the road do not violate Condition II.B.1 above.

[P.C.C. 17.16.090.D]

d. The Permittee shall not surface the roadways with asbestos tailings.

[P.C.C. 17.16.090.F]

e. The Permittee shall not cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable precautions, such as wetting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming airborne. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits.
[P.C.C. 17.16.090.G]

4. Particulate Materials

a. The Permittee shall not cause, suffer, allow, or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.
[P.C.C. 17.16.100.A]

b. Dust emissions from construction activity shall be effectively controlled by applying adequate amounts of water or other equivalently effective dust controls.
[P.C.C. 17.16.100.B]

c. Dust emissions from the transportation of materials shall be effectively controlled by covering stock loads in open-bodied trucks, limiting vehicular speeds, or other equivalently effective controls.
[P.C.C. 17.16.100.C]

5. Storage Piles

a. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne.
[P.C.C. 17.16.110.A]

b. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to minimize and control to ensure compliance with Condition II.B.1 above.
[P.C.C. 17.16.110.B]

6. Mineral Tailings

a. The Permittee shall not cause, suffer, allow, or permit construction of, or otherwise own or operate, mineral tailing facilities without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the Director.

[P.C.C. 17.16.120.A]

b. The Permittee shall not cause, suffer, allow, or permit construction of, or otherwise own or operate, mineral tailings piles without taking reasonable precautions (i.e., wetting, chemical stabilization and revegetation) to minimize and control to ensure compliance with Condition II.B.1 above.
[P.C.C. 17.16.120.B]

7. The Permittee shall implement shrouds and pre-watering measures to control emissions of particulate matter resulting from rotary blast drilling operations.
[A.A.C. R18-2-334]

8. The Permittee shall comply with the approved dust control plan submitted to the Director for the control of fugitive dust emissions from fugitive dust producing activities (e.g. haul roads, storage piles, etc.) associated with the Copper World Project. The Permittee may implement changes to the dust control plan upon approval by the Director. These changes are assumed approved upon submission unless the Director objects within 30 days.
[A.A.C. R18-2-334]

9. The Permittee shall comply with the approved tailings dust management plan submitted to the Director for the control of fugitive dust emissions from tailings storage facilities associated with the Copper World Project. The Permittee may implement changes to the tailings dust management plan upon approval by the Director. These changes are assumed approved upon submission unless the Director objects within 30 days.
[A.A.C. R18-2-334]

C. Monitoring and Recordkeeping Requirements

1. Opacity Monitoring Requirements

a. On a weekly basis, the Permittee shall conduct a survey of visible emissions emanating from nonpoint sources of fugitive dust (excluding tailings storage facilities) in accordance with Condition II.C.
[A.A.C. R18-2-306.A.3.c]

b. At least twice daily during active operations, the Permittee shall conduct a survey of visible emissions emanating from the tailings storage facilities in accordance with Condition II.C.
[A.A.C. R18-2-306.A.3.c]

2. Dust Control Plan

a. The Permittee shall maintain on-site records of dust suppressant applications as detailed in the dust control plan.
[A.A.C. R18-2-306.A.3.c]

b. The Permittee shall review the effectiveness of the dust control plan in controlling fugitive dust on an annual basis. The review shall be submitted to the Director by January 31st of each year (covering the

period of January 1st to December 31st of the previous year). If review of the existing plan proves to be ineffective in controlling fugitive dust, the Permittee shall submit a revised plan for approval by April 1st. The annual review shall consider the Copper World Project's compliance history, including compliance inspection results and validated complaints reported to the Department. The revised plan shall propose methods to improve the control of fugitive dust emissions. Requirements may be prescribed by the Department if the Permittee's annual review identifies necessary changes, but does not propose new control methods.

[A.A.C. R18-2-306.A.3.c]

3. Tailings Dust Management Plan

a. The Permittee shall maintain records of all monitoring activities required by the approved tailings dust management plan.

[A.A.C. R18-2-306.A.3.c]

b. When wind speeds meet or exceed 15 miles per hour, or gusts meet or exceed 20 miles per hour, the Permittee shall conduct physical inspections of the tailings storage facilities to stabilize easily erodible areas. The Permittee shall maintain records of each inspection and the methods utilized to stabilize any easily erodible areas.

[A.A.C. R18-2-306.A.3.c]

c. The Permittee shall review the effectiveness of the tailings dust management plan in controlling fugitive dust on an annual basis. The review shall be submitted to the Director by January 31st of each year (covering the period of January 1st to December 31st of the previous year). If review of the existing plan proves to be ineffective in controlling fugitive dust, the Permittee shall submit a revised plan for approval by April 1st. The annual review shall consider the Copper World Project's compliance history, including compliance inspection results and validated complaints reported to the Department. The revised plan shall propose methods to improve the control of fugitive dust emissions from the tailings storage facilities. Requirements may be prescribed by the Department if the Permittee's annual review identifies necessary changes, but does not propose new control methods.

[A.A.C. R18-2-306.A.3.c]

D. Permit Shield

Compliance with Section IX shall be deemed compliance with the requirements of P.C.C. 17.16.060, 17.16.080, 17.16.090, 17.16.100, 17.16.110, 17.16.120.

[A.A.C. R18-2-325]

X. OTHER PERIODIC ACTIVITIES

A. Abrasive Blasting

1. Particulate Matter and Opacity

a. Emission Limitations and Standards

The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

[A.A.C. R18-2-726]

(1) Wet blasting;

(2) Effective enclosures with necessary dust collecting equipment; or

(3) Any other method approved by the Director.

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity.

[A.A.C. R18-2-702.B.3]

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, the Permittee shall make a record of the following:

[A.A.C. R18-2-306.A.3.c]

a. The date the project was conducted;

b. The duration of the project; and

c. Type of control measures employed.

3. Permit Shield

Compliance with the requirements of Condition X.A.1.a shall be deemed compliance with A.A.C. R18-2-702.B.3 and -726.

[A.A.C. R18-2-325]

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations and Standards

While performing spray painting operations, the Permittee shall comply with the following requirements:

(1) The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and

spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.
[A.A.C. R18-2-727.A]

(2) The Permittee, or their designated contractor, shall 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.
[A.A.C. R18-2-727.B]

(3) For the purposes of Condition X.B.1.a(1), a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Condition X.B.1.a(2), or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:
[A.A.C. R18-2-727.C]

(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 percent.

(b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.

(c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

(4) 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 of organic compounds described in Condition X.B.1.a(3), it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.
[A.A.C. R18-2-727.D]

b. Monitoring and Recordkeeping Requirements

(1) Each time a spray painting project is conducted, the Permittee shall make a record of the following:

(a) The date the project was conducted;

(b) The duration of the project;

(c) Type of control measures employed;

(d) Safety Data Sheets (SDS) for all paints and solvents used in the project; and

(e) The amount of paint consumed during the project.

(2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition X.B.1.b(1).

[A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with the requirements of Condition X.B.1.a shall be deemed compliance with A.A.C. R18-2-727.

[A.A.C. R18-2-325]

2. Opacity

a. Emission Limitation and Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity.

[A.A.C. R18-2-702.B.3]

b. Permit Shield

Compliance with the requirements of Condition X.B.2.a shall be deemed compliance with A.A.C. R18-2-702.B.3.

[A.A.C. R18-2-325]

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation and Standard

The Permittee shall comply with all of the requirements of 40 CFR 61 Subpart M for National Emissions Standards for Hazardous Air Pollutants - Asbestos.

[A.A.C. R18-2-1101.A.12]

2. Monitoring and Recordkeeping Requirements

The Permittee shall keep all required records in a file. The required records shall include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the requirements of Condition X.C.1 shall be deemed compliance with A.A.C. R18-2-1101.A.12.

[A.A.C. R18-2-325]

XI. PUBLIC ACCESS RESTRICTION PLAN

At least 90 days prior to beginning actual construction of the Copper World Project, the Permittee shall submit to the Director for approval a Public Access Restriction Plan that detailing measures to restrict access to the Copper World Project site, including measures such as fencing, natural topographical barriers, signage, security patrols, and access restrictions to adjacent properties. The Public Access Restriction Plan shall be implemented within 30 days following approval by the Director.

[A.A.C. R18-2-306.A.3.c]

XII. AMBIENT AIR MONITORING REQUIREMENTS

[A.A.C. R18-2-306.A.3.d]

A. General Requirements

1. Prior to beginning actual construction, the Permittee shall submit to the Director for approval a written quality assurance project plan (QAPP) for meteorological data, PM_{10}, and $PM_{2.5}$. ADEQ shall provide approval or review comments within 30 days of submission to the Director.

[A.A.C. R18-2-306.A.3.c]

2. All ambient air quality monitoring required under this Subsection shall be conducted in accordance with the following:

a. Only those methods which have been either designated by the EPA as reference or equivalent methods or approved by the Director shall be used to monitor ambient air.

[A.A.C. R18-2-215.A]

b. The Permittee shall have a written and ADEQ-approved quality assurance project/program plan (QAPP) prior to the start of ambient air monitoring.

[A.A.C. R18-2-215.B]

c. The Director may approve other procedures upon a finding that the proposed procedures are substantially equivalent or superior to procedures in the Appendices to 40 CFR 58.

[A.A.C. R18-2-215.C]

d. Unless otherwise specified, interpretation of all ambient air quality standards contained in this Subsection shall be in accordance with 40 CFR 50.

[A.A.C. R18-2-216]

B. Reporting and Recordkeeping Requirements

[A.A.C. R18-2-306.A.3.c]

1. The Permittee shall retain records the following in accordance with Condition XIII of Attachment "A". These shall be available upon request to ADEQ.

2. Quarterly reports, annual reports and the associated quality assurance information shall be submitted to the Facilities Emissions and Control Section of the Air Quality Division of ADEQ. The fourth quarterly report for the year should include an annual summary of measurements and QA/QC data, as applicable for each monitor.

3. Updated site and monitor metadata information shall be included in the annual reports as applicable.

4. The annual reports shall be submitted within 90 days (i.e. by March 31st) after the end of each calendar year quarter unless otherwise stated by the applicable requirement.

5. Summary data reports shall be consistent with EPA data handling requirements.

6. The Permittee may submit reports electronically to the Department.

7. All data submitted to the Director shall be reviewed, quality assured, and certified by the Permittee. All of the field documents, QC check documents, etc., need to be submitted with the applicable reports.

8. The Permittee shall provide electronic files of the validated hourly data at the request of the Department.

    a. All the following data and quarterly reports shall be submitted electronically:

        (1) Data recovery reports;

        (2) Any field service activities;

        (3) Any other information required in the monitoring protocol;

        (4) Description of any instrument problems affecting the data, any data validation concerns, and any comments on meteorological conditions occurring during the quarter; and

        (5) Performance results of calibration and audits.

9. Notwithstanding the reporting and data submittal requirements of this Subsection, units shall be consistent with EPA standards for the NAAQS and reporting requirements. If EPA standards or reporting requirements change, the data reporting format and units shall be changed accordingly.

C. Meteorological Monitoring Requirements

[A.A.C. R18-2-306.A.3.c]

1. The Permittee shall comply with the approved monitoring and reporting protocol as well as a Quality Assurance Project Plan (QAPP) for the installation, maintenance, and operation of a meteorological monitoring station in accordance with Condition XII.A.1 of Attachment "B". The Permittee may implement proposed changes to the monitoring and reporting protocol or the QAPP upon submittal to the Director. These changes are assumed approved upon submission unless the Director objects within 30 days. The Permittee shall utilize appropriate EPA guidance for the collection of the meteorological data to be used in air quality dispersion models.

2. At least 90 days prior to the startup of the mine operations, the Permittee shall install, maintain and operate a meteorological monitoring station to record wind speed, vector wind direction, standard deviation of wind direction, Δt, and relative humidity. The station will be installed, maintained, and operated in accordance with the written and approved QAPP, which is consistent with the monitoring protocol approved by the Director, addressing all general requirements, meteorological station operations, and quality assurance initiatives.

3. Sampling Frequency

    a. The Permittee shall operate the monitors continuously, collecting consecutive hourly readings except during periods of routine maintenance, instrument calibration or malfunction.

    b. In the event of system malfunction, the unit shall be repaired or replaced as soon as possible. Monitoring shall resume as soon as practicable after the correction of the malfunction problem. The Permittee shall report the malfunction to the Director within 24 hours of discovery. A malfunction shall mean equipment or operation issues other than routine maintenance or instrument calibration that result in invalidating a 24-hour sampling day. The report shall contain the probable reason for the malfunction and a plan for repairing or replacing the affected equipment. The Permittee shall notify ADEQ if any malfunctions are not corrected within 5 business days.

4. Meteorological Monitoring Quality Assurance/Quality Control

    a. The Permittee shall have a written and approved QAPP prior to the start of meteorological monitoring.

    b. The Permittee shall conduct quality assurance activities as stated in the written and approved QAPP in accordance with Condition XII.A.1 of Attachment "B".

    c. The Permittee and/or its monitoring contractor shall participate in technical systems audits or performance audits periodically conducted by the Department. The Department shall provide a minimum of 30 days' notice of a technical systems audit and a minimum of 48 hours' notice of a performance audit.

5. Reporting Requirements

a. The Permittee shall provide an electronic report summarizing the meteorological data measurements collected pursuant to this Subsection shall be submitted in accordance with Condition XII.B of Attachment "B".

b. The Permittee shall provide wind rose plots of the winds in the quarterly report.

c. The Permittee shall provide electronic files of the validated hourly data at the request of the Department.

D. PM_{10} and $PM_{2.5}$ Monitoring

[A.A.C. R18-2-306.A.3.c]

1. At least 90 days prior to the startup of mine operations, the Permittee shall install, operate, and maintain a continuous PM_{10} monitor and a continuous $PM_{2.5}$ monitor at a location approved by ADEQ. The monitors shall be installed, maintained, and operated in accordance with the written and approved QAPP, which is consistent with the monitoring protocol approved by the Director, addressing all general requirements, particulate matter station operations, and quality assurance initiatives. The Permittee may implement proposed changes to the monitoring and reporting protocol or the QAPP upon submittal to the Director. These changes are assumed approved upon submission unless the Director objects within 30 days.

2. The Permittee shall calculate the monitored daily average PM_{10} value and $PM_{2.5}$ value in accordance with 40 CFR Parts 50 and 58 and their appendices.

3. Sampling Frequency

a. The Permittee shall operate the monitor continuously, collecting consecutive hourly readings except during periods of routine maintenance, instrument calibration or malfunction. For the purposes of this section, "continuous" means that 24-hour filters are placed and collected, at a minimum (but it may be more frequent consistent with the requirements of 40 CFR 58.12), every 6 days for the PM_{10} monitors and every 3 days for the $PM_{2.5}$ monitors.

b. In the event of system malfunction, the unit shall be repaired or replaced as soon as possible. Monitoring shall resume as soon as practicable after the correction of the malfunction problem. The Permittee shall report the malfunction to the Director within 24 hours of discovery. A malfunction shall mean equipment or operation issues other than routine maintenance or instrument calibration that result in invalidating a 24-hour sampling day. The report shall contain the probable reason for malfunction and a plan for repairing or replacing the affected equipment. The Permittee shall notify ADEQ if any malfunctions are not corrected within 5 business days.

4. PM_{10} and $PM_{2.5}$ Monitoring Quality Assurance/Quality Control

a. The Permittee shall have a written and approved QAPP prior to the start of PM_{10} and $PM_{2.5}$ monitoring.

b. The Permittee shall conduct quality assurance activities as stated in the written and approved QAPP in accordance with Condition XII.A.1 of Attachment "B".

c. The Permittee shall conduct monthly flow checks on the monitoring equipment during the 1st half of every calendar month.

d. The Permittee shall conduct semiannual (every six months) performance audits of the monitoring equipment in accordance with the requirements pertaining to sampler accuracy as specified in Appendix A of 40 CFR Part 58. The performance audits shall be conducted by a qualified auditor that is independent of the Permittee.

e. The Permittee shall conduct technical systems audits of the PM_{10} and $PM_{2.5}$ ambient air monitoring program consistent with the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, U.S. Environmental Protection Agency. The technical systems audits shall be conducted by a qualified auditor that is independent of the Permittee at least once in every three (3) years.

f. The Permittee and/or its monitoring contractor shall participate in technical systems audits or performance audits periodically conducted by the Department. The Department shall provide a minimum of 30 days' notice of a technical system audit and a minimum of 48 hours' notice of a performance audit.

5. PM_{10} and $PM_{2.5}$ Monitoring Reporting Requirements

a. The Permittee shall calculate the quarterly and annual summary statistics in accordance with the procedures of 40 CFR Part 50 and Appendices.

b. The Permittee shall calculate the precision and accuracy statistics in accordance with the procedures of 40 CFR Part 58 Appendix A.

c. Valid data recovery shall meet the EPA minimum data completeness requirement of 75 percent per quarter or the percentage specified in 40 CFR Part 50. Valid data shall refer to all observations collected for the specific monitoring purpose. Data collected during precision, audit, flow checks and during servicing shall not be considered valid for data completeness purposes.

d. The Permittee shall submit to the Director, an electronic report summarizing the PM_{10} and $PM_{2.5}$ data measurements collected pursuant to this section shall be submitted in accordance with Condition XII.B of Attachment "B".

e. The Permittee shall submit daily 24-hour average concentrations in the quarterly report based on the EPA data rules in 40 CFR Part 50 Appendix K.

f. The Permittee shall provide electronic files of the validated hourly data at the request of the Department.

ATTACHMENT "C": EQUIPMENT LIST

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Oxide Ore Process							
Oxide ROM Feed Bin	45,000 tons per day (tpd)	TBD	TBD	TBD	TBD	OBN-001	P.C.C. 17.16.360
Oxide Rock Breaker	45,000 tpd	TBD	TBD	TBD	TBD	OXX-001	NSPS Subpart LL
Oxide Primary Crusher	45,000 tpd	TBD	TBD	TBD	TBD	OCR-001	NSPS Subpart LL
Oxide Primary Crusher Discharge Chute	45,000 tpd	TBD	TBD	TBD	TBD	ODU-001	NSPS Subpart LL
Oxide Primary Crusher Discharge Conveyor	45,000 tpd	TBD	TBD	TBD	TBD	OCV-001	NSPS Subpart LL
Oxide Primary Crusher Conveyor Discharge Chute	45,000 tpd	TBD	TBD	TBD	TBD	ODU-002	NSPS Subpart LL
Oxide Stockpile Feed Conveyor	45,000 tpd	TBD	TBD	TBD	TBD	OCV-002	P.C.C. 17.16.360
Oxide Stockpile Reclaim Feeder (3)	45,000 tpd	TBD	TBD	TBD	TBD	OFE-001 OFE-002 OFE-003	NSPS Subpart LL
Oxide Stockpile Reclaim Feeder Discharge Chute (3)	45,000 tpd	TBD	TBD	TBD	TBD	ODU-003 ODU-004 ODU-005	NSPS Subpart LL
Oxide Stockpile Reclaim Conveyor	45,000 tpd	TBD	TBD	TBD	TBD	OCV-003	NSPS Subpart LL
Oxide Stockpile Reclaim Conveyor Discharge Chute	45,000 tpd	TBD	TBD	TBD	TBD	ODU-006	NSPS Subpart LL
Oxide Secondary Feeder Screen	45,000 tpd	TBD	TBD	TBD	TBD	OSN-001	NSPS Subpart LL

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Oxide Secondary Feeder Screen Discharge Chute	36,000 tpd	TBD	TBD	TBD	TBD	ODU-007	NSPS Subpart LL
Oxide Secondary Crusher Discharge Conveyor	36,000 tpd	TBD	TBD	TBD	TBD	OCV-004	NSPS Subpart LL
Oxide Secondary Crusher Feed Bin	9,000 tpd	TBD	TBD	TBD	TBD	OBN-002	NSPS Subpart LL
Oxide Secondary Crusher Belt Feeder	9,000 tpd	TBD	TBD	TBD	TBD	OFE-004	NSPS Subpart LL
Oxide Secondary Crusher Belt Feeder Discharge Chute	9,000 tpd	TBD	TBD	TBD	TBD	ODU-008	NSPS Subpart LL
Oxide Secondary Crusher	9,000 tpd	TBD	TBD	TBD	TBD	OCR-002	NSPS Subpart LL
Oxide Secondary Crusher Discharge Chute	9,000 tpd	TBD	TBD	TBD	TBD	ODU-009	NSPS Subpart LL
Agglomerator	45,000 tpd	TBD	TBD	TBD	TBD	TBD	NSPS Subpart LL
Heap Feed Conveyor	45,000 tpd	TBD	TBD	TBD	TBD	TBD	NSPS Subpart LL
Heap Feed Stackers (6)	45,000 tpd	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.360
Sulfide Ore Process							
Sulfide ROM Feed Bin	60,000 tpd	TBD	TBD	TBD	TBD	SBN-001	P.C.C. 17.16.360
Sulfide Rock Breaker	60,000 tpd	TBD	TBD	TBD	TBD	SXX-001	NSPS Subpart LL
Sulfide Primary Crusher	60,000 tpd	TBD	TBD	TBD	TBD	SCR-001	NSPS Subpart LL
Sulfide Primary Crusher Discharge Chute	60,000 tpd	TBD	TBD	TBD	TBD	SDU-001	NSPS Subpart LL
Sulfide Primary Crusher Discharge Conveyor	60,000 tpd	TBD	TBD	TBD	TBD	SCV-001	NSPS Subpart LL

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Sulfide Primary Crusher Discharge Conveyor Discharge Chute	60,000 tpd	TBD	TBD	TBD	TBD	SDU-002	NSPS Subpart LL
Sulfide Stockpile Feed Conveyor	60,000 tpd	TBD	TBD	TBD	TBD	SCV-002	P.C.C. 17.16.360
Sulfide Stockpile Reclaim Feeders (3)	60,000 tpd	TBD	TBD	TBD	TBD	SFE-001 SFE-002 SFE-003	NSPS Subpart LL
Sulfide Stockpile Reclaim Feeder Discharge Chutes (3)	60,000 tpd	TBD	TBD	TBD	TBD	SDU-003 SDU-004 SDU-005	NSPS Subpart LL
Sulfide SAG Mill Feed Conveyor	72,000 tpd	TBD	TBD	TBD	TBD	SCV-003	NSPS Subpart LL
Sulfide SAG Mill	60,000 tpd	TBD	TBD	TBD	TBD	SAG-001	NSPS Subpart LL
Sulfide Pebble Crusher Feed Bin	12,000 tpd	TBD	TBD	TBD	TBD	SBN-002	NSPS Subpart LL
Sulfide Pebble Crusher Belt Feeder	12,000 tpd	TBD	TBD	TBD	TBD	SFE-004	NSPS Subpart LL
Sulfide Pebble Crusher Belt Feeder Discharge Chute	12,000 tpd	TBD	TBD	TBD	TBD	SDU-006	NSPS Subpart LL
Sulfide Pebble Crusher	12,000 tpd	TBD	TBD	TBD	TBD	SCR-002	NSPS Subpart LL
Sulfide Pebble Crusher Discharge Chute	12,000 tpd	TBD	TBD	TBD	TBD	SDU-007	NSPS Subpart LL
Sulfide Pebble Crusher Product Conveyor	12,000 tpd	TBD	TBD	TBD	TBD	SCV-004	NSPS Subpart LL
Sulfide Pebble Crusher Product Conveyor Discharge Chute	72,000 tpd	TBD	TBD	TBD	TBD	SDU-008	NSPS Subpart LL

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Copper Concentrate Dewatering							
Copper Concentrate Stockpile Building	1,400 tpd	TBD	TBD	TBD	TBD	CSP-001	NSPS Subpart LL
Copper Concentrate Stockpile Building Dust Collector	1,400 tpd	TBD	TBD	TBD	TBD	CDC-001	NSPS Subpart LL
Molybdenum Dewatering and Packaging							
Molybdenum Dryer Screw Feeder/Conveyor	9 tpd	TBD	TBD	TBD	TBD	MCV-001	NSPS Subpart LL
Molybdenum Dryer	9 tpd	TBD	TBD	TBD	TBD	MDR-001	NSPS Subpart LL
Molybdenum Concentrate Storage Bin	9 tpd	TBD	TBD	TBD	TBD	MBN-001	NSPS Subpart LL
Molybdenum Concentrate Bag Feeder	9 tpd	TBD	TBD	TBD	TBD	MBF-001	NSPS Subpart LL
Molybdenum Concentrate Bag Feeder/Conveyor	9 tpd	TBD	TBD	TBD	TBD	MCV-001	NSPS Subpart LL
Molybdenum Concentrate Bag Loader	9 tpd	TBD	TBD	TBD	TBD	MBL-001	NSPS Subpart LL
Internal Combustions Engines							
Emergency Power Generator #1	1,345 kilowatts (kW)	TBD	TBD	TBD	TBD	GEN-001	NSPS Subpart IIII
Emergency Power Generator #2	1,345 kW	TBD	TBD	TBD	TBD	GEN-002	NSPS Subpart IIII
Emergency Power Generator #3	1,345 kW	TBD	TBD	TBD	TBD	GEN-003	NSPS Subpart IIII
Primary Crusher Fire Water Pump	400 horsepower (hp)	TBD	TBD	TBD	TBD	GEN-004	NSPS Subpart IIII

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Supporting Processes - Quicklime							
QuickLime Storage Silo	TBD	TBD	TBD	TBD	TBD	LSO-001	P.C.C. 17.16.430
QuickLime Screw Feeder/Conveyor	TBD	TBD	TBD	TBD	TBD	LCV-001	P.C.C. 17.16.430
Lime Slaking Mill Feed Chute	TBD	TBD	TBD	TBD	TBD	LDU-001	P.C.C. 17.16.430
QuickLime Slaking Mill	TBD	TBD	TBD	TBD	TBD	LML-001	P.C.C. 17.16.430
Lime Transfer Pump Discharge Chute	TBD	TBD	TBD	TBD	TBD	LDU-002	P.C.C. 17.16.430
Supporting Processes – Flocculant (Concentrate Leach)							
Concentrate Leach Flocculant Bulk Bags	TBD	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Concentrate Leach Flocculant Feed Bin	TBD	TBD	TBD	TBD	TBD	FBN-001	P.C.C. 17.16.430
Concentrate Leach Flocculant Screw Feeder/Conveyor	TBD	TBD	TBD	TBD	TBD	FCV-001	P.C.C. 17.16.430
Concentrate Leach Flocculant Heated Receiving Hopper	TBD	TBD	TBD	TBD	TBD	FHP-001	P.C.C. 17.16.430
Concentrate Leach Flocculant Venturi and Mixing Tank	TBD	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Supporting Processes – Flocculant (Mill Tailings)							
Mill Tailings Flocculant Bulk Bags	TBD	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Mill Tailings Flocculant Feed Bin	TBD	TBD	TBD	TBD	TBD	FBN-002	P.C.C. 17.16.430

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Mill Tailings Flocculant Screw Feeder/Conveyor	TBD	TBD	TBD	TBD	TBD	FCV-002	P.C.C. 17.16.430
Mill Tailings Flocculant Heated Receiving Hopper	TBD	TBD	TBD	TBD	TBD	FHP-002	P.C.C. 17.16.430
Mill Tailings Flocculant Venturi and Mixing Tank	TBD	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Solvent Extraction and Electrowinning Plant							
DOP Tanks (13.125' D x 9.83' H each) (5)	676.5 square feet (ft^2)	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
DOP Turbine Tanks (5.25' D x 5.73' H each) (5)	108.2 ft^2	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Spirok Mixer Tanks (13.125' D x 19.6875' H each) (5)	676.5 ft^2	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Spirok Mixer Tanks (9.28' D x 15.135' H each) (5)	338.2 ft^2	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Extraction Settlers (104' L x 47.99' W x 8' H each) (5)	24,955 ft^2	TBD	TBD	TBD	TBD	TBD	P.C.C. 17.16.430
Electrowinning Oxide Plant Scrubber (AE-015)	30,000 standard cubic feet per minute (scfm)	TBD	TBD	TBD	TBD	ESB-001	P.C.C. 17.16.430
Electrowinning Albion Plant Scrubber (AE-016)	18,000 scfm	TBD	TBD	TBD	TBD	ESB-002	P.C.C. 17.16.430
Sulfuric Acid Plant							
Sulfuric Acid Plant	413,000 tpy	TBD	TBD	TBD	TBD	TBD	NSPS Subpart H
Storage Tanks							
C7 Distribution Tank	11,845 gallons	TBD	TBD	TBD	TBD	T-C7D	P.C.C. 17.16.430
MIBC Storage Tank	11,845 gallons	TBD	TBD	TBD	TBD	T-MIBCS	P.C.C. 17.16.430

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Diesel Fuel Storage Tank (2)	100,000 gallons	TBD	TBD	TBD	TBD	T-DFS-HV1	P.C.C. 17.16.430
Gasoline Fuel Storage Tank	10,000 gallons	TBD	TBD	TBD	TBD	TBD	NESHAP Subpart CCCCCC P.C.C. 17.16.230
Air Pollution Control Equipment							
Primary Crushing Fog System – Oxide Ore (AE-001)	TBD	TBD	TBD	TBD	TBD	OFG-001	NSPS Subpart LL
Primary Crusher Cartridge Dust Collector – Oxide Ore (AE-002)	5,000 actual cubic feet per minute (acfm)	TBD	TBD	TBD	TBD	ODC-001	NSPS Subpart LL
Oxide Secondary Crusher Cartridge Dust Collector (AE-003)	33,000 acfm	TBD	TBD	TBD	TBD	ODC-002	NSPS Subpart LL
Primary Crushing Fog System – Sulfide Ore (AE-004)	TBD	TBD	TBD	TBD	TBD	SFG-001	NSPS Subpart LL
Primary Crusher Cartridge Dust Collector – Sulfide Ore (AE-005)	10,000 acfm	TBD	TBD	TBD	TBD	SDC-001	NSPS Subpart LL
Sulfide Reclaim Tunnel & Pebble Crusher Cartridge Dust Collector (AE-006)	66,000 acfm	TBD	TBD	TBD	TBD	SDC-002	NSPS Subpart LL
Copper Concentrate Building Dust Collector (AE-007)	55,000 acfm	TBD	TBD	TBD	TBD	CDC-001	NSPS Subpart LL

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Molybdenum Flotation Scrubber (AE-008)	1,500 acfm	TBD	TBD	TBD	TBD	MSB-001	NSPS Subpart LL
Molybdenum Concentrate Storage Bin Dust Collector (AE-009)	500 acfm	TBD	TBD	TBD	TBD	MDC-001	NSPS Subpart LL
Molybdenum Bag Loader Dust Collector (AE-010)	500 acfm	TBD	TBD	TBD	TBD	MDC-002	NSPS Subpart LL
Molybdenum Dryer Scrubber (AE-011)	500 acfm	TBD	TBD	TBD	TBD	MSB-002	NSPS Subpart LL
Quicklime Dust Collector (AE-012)	1,159 acfm	TBD	TBD	TBD	TBD	LDC-001	P.C.C. 17.16.430
Lime Scrubber (AE-013)	500 acfm	TBD	TBD	TBD	TBD	LSB-001	P.C.C. 17.16.430
Concentrate Leach Flocculant Feed Bin Cartridge Dust Collector (AE-014)	500 acfm	TBD	TBD	TBD	TBD	FDC-001	P.C.C. 17.16.430
Laboratory Dust Collector (AE-018)	10,000 acfm	TBD	TBD	TBD	TBD	BDC-001	P.C.C. 17.16.430
Laboratory Scrubber (AE-017)	10,000 acfm	TBD	TBD	TBD	TBD	BSB-001	P.C.C. 17.16.430
Mill Tailings Flocculant Feed Bin Cartridge Dust Collector (AE-019)	500 acfm	TBD	TBD	TBD	TBD	FDC-002	P.C.C. 17.16.430
Collector Storage and Distribution Tanks Stack (AE-020)	1,000 acfm	TBD	TBD	TBD	TBD	TFA-001	P.C.C. 17.16.430

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / P.C.C. / NSPS / NESHAP
Collector Area Ventilation Fan Stack (AE-021)	500 acfm	TBD	TBD	TBD	TBD	TFA-002	P.C.C. 17.16.430
Acid Plant Scrubber (AE-022)	30,000 acfm	TBD	TBD	TBD	TBD	ASB-001	NSPS Subpart H
Refinery Dust Collector (AE-027)	10,000 acfm	TBD	TBD	TBD	TBD	3842-DC-002	P.C.C. 17.16.430
Metallurgy Laboratory Dust Collector (AE-028)	10,000 acfm	TBD	TBD	TBD	TBD	BDC-002	P.C.C. 17.16.430