



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9349 • ndep.nv.gov/air

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA CORPORATION (HEREINAFTER REFERRED TO AS PERMITTEE)

Mailing Address: 3685 LAKESIDE DRIVE, RENO, NV 89509

Driving Directions: FROM OROVADA TRAVEL APPROXIMATELY 19 MILES WEST FROM THE US ROUTE 95 JUNCTION ON STATE ROUTE 293, THEN TURN NORTH (RIGHT) ONTO THE PROJECT MAIN ACCESS ROAD.

General Facility Location:

SECTIONS 1 AND 12, T 44 N, R 34 E, MDB&M
SECTIONS 2 – 17, T 44 N, R 35 E, MDB&M
SECTIONS 7, 8, 14 - 23, 29, T 44 N, R 36 E, MDB&M
HA 30A – KINGS RIVER VALLEY/RIO KING
HA 33A – QUINN RIVER VALLEY/OROVADA
HUMBOLDT COUNTY
NORTH 4,616,776 M, EAST 413,910 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 1 - Ore Handling Circuit

- PF1.001 ROM Feed Hopper 1 Loading
- PF1.002 ROM Feed Hopper 1 transfer to Sizer Feed Conveyor (via feed belt)
- PF1.003 ROM Feed Hopper 2 loading
- PF1.004 ROM Feed Hopper 2 transfer to Sizer Feed Conveyor (via feed belt)

B. System 2 - Mineral Sizer

- PF1.005 Mineral Sizer and Associated Transfers (In: Sizer Feed Conveyor, Out: Scrubber Feed Conveyor)

C. System 3 - Attrition Scrubber Feed

- PF1.006 Scrubber Feed Conveyor to Attrition Scrubber (wet process)

D. System 4 - Oversize Material Handling Circuit

- PF1.007 Wet Screen to Oversize ~~Stacker~~ Conveyor
- PF1.008 Oversize Stacker to Oversize Stockpile

E. System 5 - Gangue Handling Circuit

- PF1.009 Gangue Dewatering Screen to Gangue Conveyor
- PF1.010 Gangue Conveyor to Gangue Stacker
- PF1.011 Gangue Stacker to Gangue Stockpile

F. System 6 - Leach Tanks

- S2.001 Leach Tank 1
- S2.002 Leach Tank 2
- S2.003 Leach Tank 3

G. System 7 - Neutralization Filter Vents

- S2.004 Neutralization Filter Vent 1
- S2.005 Neutralization Filter Vent 2
- S2.006 Neutralization Filter Vent 3
- S2.007 Neutralization Filter Vent 4



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Emission Unit List: (continued)

H. System 8 - Neutralization Filter Filtrate Blow Vent

S2.008 Neutralization Filter Filtrate Blow Vent

I. System 9 – Tailings Feed Circuit

PF1.012 Neutralization Filter 1 to Discharge Feeder 1
PF1.013 Discharge Feeder 1 to Tailings Collection Conveyor
PF1.014 Neutralization Filter 2 to Discharge Feeder 2
PF1.015 Discharge Feeder 2 to Tailings Collection Conveyor
PF1.016 Neutralization Filter 3 to Discharge Feeder 3
PF1.017 Discharge Feeder 3 to Tailings Collection Conveyor
PF1.018 Neutralization Filter 4 to Discharge Feeder 4
PF1.019 Discharge Feeder 4 to Tailings Collection Conveyor

J. System 10 - Tailings Collection

PF1.020 Tailings Collection Conveyor to Tailings Conveyor 1

K. System 11 - Tailings Stacking

PF1.021 Tailings Conveyor 1 to Tailings Stacker
PF1.022 Tailings Stacker to Clay Tailings Filter Stack

L. System 12 - Sulfate Tailings Circuit

PF1.023 Na/K Sulfate Centrifuge discharge to Na/K Conveyor 1 ~~or Lithium Carbonate Dryer~~
PF1.024 Na/K Conveyor 1 transfer to Na/K Conveyor 2
PF1.025 Na/K Conveyor 2 to Tailings Collection Conveyor

M. System 13 - Magnesium Precipitation Filter Vents

S2.009 Magnesium Precipitation Filter Vent 1
S2.010 Magnesium Precipitation Filter Vent 2

N. System 14 - Magnesium Precipitation Filter Filtrate Blow Vent

S2.011 Magnesium Precipitation Filter Filtrate Blow Vent

O. System 15 - Lithium Carbonate Dryer

S2.012 Lithium Carbonate Dryer ~~transfer to Lithium Carbonate Material Handling~~

P. System 16 - Lithium Carbonate Material Handling

S2.013 Lithium Carbonate Material Handling ~~transfer to Lithium Carbonate Storage Bin Loading~~

Q. System 17 - Lithium Carbonate Storage Bin

S2.014 Lithium Carbonate Storage Bin Loading ~~transfer to Lithium Carbonate Packaging~~

R. System 18 - Lithium Carbonate Packaging

S2.015 Lithium Carbonate Packaging

S. System 19 - Lime Silo

S2.016 Truck transfer of Lime to Underground Hopper
S2.017 Underground Hopper and transfer to Silo (silo unloading through sealed transfers)



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Emission Unit List: (continued)

T. System 20 - Soda Ash Silo

S2.018 Soda Ash Silo loading (silo unloading through sealed transfers)

U. System 21 - Sulfur Storage

S2.019 Sulfur Storage 1

S2.020 Sulfur Storage 2

V. System 22 - Package Boiler

S2.021 Package Boiler

W. System 23 - Start-Up Burner

S2.022 Start-Up Burner

X. System 24 - Sulfuric Acid Plant

S2.023 Sulfuric Acid Plant

Y. System 25 - Fire Pumps

S2.024 Fire Pump 1 (Mine, 422 hp, John Deere, 2015 or newer)

S2.025 Fire Pump 2 (Process, 422 hp, John Deere, 2015 or newer)

Z. System 26 - Emergency Generators

S2.026 Emergency Generator 1 (Mine, 168 hp, Generac, 2009 or newer)

S2.027 Emergency Generator 2 (Mine, 168 hp, Generac, 2009 or newer)

AA. System 27 - Gasoline Tank

S2.028 Gasoline Tank, 1,000 gallons

******End of Emission Unit List******



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Section I. General Provisions

- A. Prohibited acts; penalty; establishment of violation; request for prosecution (NRS 445B.470) (*State Only Requirement*)
1. A person shall not knowingly:
 - a. Violate any applicable provision, the terms or conditions of any permit or any provision for the filing of information;
 - b. Fail to pay any fee;
 - c. Falsify any material statement, representation or certification in any notice or report; or
 - d. Render inaccurate any monitoring device or method, required pursuant to the provisions of NRS 445B.100 to 445B.450, inclusive, or 445B.470 to 445B.640, inclusive, or any regulation adopted pursuant to those provisions.
 2. Any person who violates any provision of subsection 1 shall be punished by a fine of not more than \$10,000 for each day of the violation.
 3. The burden of proof and degree of knowledge required to establish a violation of subsection 1 are the same as those required by 42 U.S.C. § 7413(c), as that section existed on October 1, 1993.
 4. If, in the judgment of the Director of the Department or the Director's designee, any person is engaged in any act or practice which constitutes a criminal offense pursuant to NRS 445B.100 to 445B.640, inclusive, the Director of the Department or the designee may request that the Attorney General or the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
 5. If, in the judgment of the control officer of a local air pollution control board, any person is engaged in such an act or practice, the control officer may request that the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
- B. Visible emissions: Maximum opacity; determination and monitoring of opacity (NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
1. Except as otherwise provided in this section and NAC 445B.2202, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:
 - a. If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A of 40 CFR Part 60.
 - b. If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 CFR 60.13(h).
 2. The provisions of this section and NAC 445B.2202 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.
 3. If the provisions of 40 CFR Part 60, Subpart D or Da apply to an emission unit, the emission unit must be allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR 60.42(a)(2) and 40 CFR 60.42a(b).
 4. The continuous monitoring system for monitoring opacity at a facility must be operated and maintained by the owner or operator specified in the permit for the facility in accordance with NAC 445B.256 to 445B.267, inclusive.
- C. Visible emissions: Exceptions for stationary sources (NAC 445B.2202) (*Federally Enforceable SIP Requirement*)
- The provisions of NAC 445B.22017 do not apply to:
1. Smoke from the open burning described in NAC 445B.22067;
 2. Smoke discharged in the course of training air pollution control inspectors to observe visible emissions, if the facility has written approval of the Commission;
 3. Emissions from an incinerator as set forth in NAC 445B.2207; or
 4. Emissions of stationary diesel-powered engines during warm-up for not longer than 15 minutes to achieve operating temperatures.



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Section I. General Provisions (continued)

D. Odors (NAC 445B.22087) (*State Only Requirement*)

1. No person may discharge or cause to be discharged, from any stationary source, any material or regulated air pollutant which is or tends to be offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents the comfortable enjoyment of life or property.
2. The Director shall investigate an odor when 30 percent or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy. The sample must be at least 20 people or 75 percent of those exposed if fewer than 20 people are exposed.
3. The Director shall deem the odor to be a violation if he or she is able to make two odor measurements within a period of 1 hour. These measurements must be separated by at least 15 minutes. An odor measurement consists of a detectable odor after the odorous air has been diluted with eight or more volumes of odor-free air.

E. Prohibited Conduct: Concealment of Emissions (NAC 445B.225) (*Federally Enforceable SIP Requirement*)

No person may install, construct or use any device which conceals any emission without reducing the total release of regulated air pollutants to the atmosphere.

F. Prohibited conduct: Operation of source without required equipment; removal or modification of required equipment; modification of required procedure (NAC 445B.227) (*Federally Enforceable SIP Requirement*)

Except as otherwise provided in NAC 445B.001 to 445B.390, inclusive, no person may:

1. Operate a stationary source of air pollution unless the control equipment for air pollution which is required by applicable requirements or conditions of this Operating Permit is installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the permit.

G. Excess Emissions (NAC 445B.232) (*State Only Requirement*)

1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive, must be approved in advance by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. Each owner or operator shall notify the Director of the proposed time and expected duration at least 30 days before any scheduled maintenance or testing which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled maintenance or testing must not be conducted unless the scheduled maintenance or testing is approved pursuant to subsection 1.
3. Each owner or operator shall notify the Director of the proposed time and expected duration at least 24 hours before any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled repairs must not be conducted unless the scheduled repairs are approved pursuant to subsection 1.
4. Each owner or operator shall notify the Director of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during start-up or shutdown of that equipment.



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Section I. General Provisions (continued)

G. Excess Emissions (NAC 445B.232) (*State Only Requirement*) (continued)

5. Each owner or operator shall provide the Director, within 15 days after any malfunction, upset, start-up, shutdown or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
 - a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
 - b. The estimated magnitude of the excess emissions expressed in opacity or in the units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
 - c. The time and duration of the excess emissions.
 - d. The identity of the equipment causing the excess emissions.
 - e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
 - f. The steps taken to limit the excess emissions.
 - g. Documentation that the equipment for controlling air pollution, process equipment or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.
6. Each owner or operator shall ensure that any notification or related information submitted to the Director pursuant to this section is provided in a format specified by the Director.

H. Testing and Sampling (NAC 445B.252) (*Federally Enforceable SIP Requirement*)

1. To determine compliance with NAC 445B.001 to 445B.390, inclusive, before the approval or the continuance of an operating permit or similar class of permits, the Director may either conduct or order the owner of any stationary source to conduct or have conducted such testing and sampling as the Director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the Director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial start-up of the facility and at such other times as may be required by the Director.
2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the Director:
 - a. Specifies or approves, in specific cases, the use of a method of reference with minor changes in methodology;
 - b. Approves the use of an equivalent method;
 - c. Approves the use of an alternative method, the results of which the Director has determined to be adequate for indicating whether a specific stationary source is in compliance; or
 - d. Waives the requirement for tests of performance because the owner or operator of a stationary source has demonstrated by other means to the Director's satisfaction that the affected facility is in compliance with the standard.
3. Tests of performance must be conducted under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the Director such records as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a performance test unless otherwise specified in the applicable standard.
4. The owner or operator of an affected facility shall give notice to the Director 30 days before the test of performance to allow the Director to have an observer present. A written testing procedure for the test of performance must be submitted to the Director at least 30 days before the test of performance to allow the Director to review the proposed testing procedures.
5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must 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 means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the Director's approval.
6. All testing and sampling will be performed in accordance with recognized methods and as specified by the Director.



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Section I. General Provisions (continued)

H. Testing and Sampling (NAC 445B.252) (*Federally Enforceable SIP Requirement*) (continued)

7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power and other pertinent allied facilities as may be required and specified in writing by the Director must be provided and paid for by the owner of the stationary source.
8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of these regulations, and copies of these results must be provided to the Director no later than 60 days after the testing or sampling, or both.
9. Notwithstanding the provisions of subsection 2, the Director shall not approve an alternative method or equivalent method to determine compliance with a standard or emission limitation contained in Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations for:
 - a. An emission unit that is subject to a testing requirement pursuant to Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations; or
 - b. An affected source.

I. Permit Revision (NAC 445B.287(1)(b)) (*Federally Enforceable SIP Requirement*)

If a stationary source is a Class II source, a revision of the operating permit or the permit to construct is required pursuant to the requirements of NAC 445B.3465 before the stationary source may be modified.

J. Violations: Acts constituting: notice (NAC 445B.275) (*Federally Enforceable SIP Requirement*)

1. Failure to comply with any requirement of NAC 445B.001 to 445B.390, inclusive, any applicable requirement or any condition of an operating permit constitutes a violation. As required by NRS 445B.450, the Director shall issue a written notice of an alleged violation to any owner or operator for any violation, including, but not limited to:
 - a. Failure to apply for and obtain an operating permit;
 - b. Failure to construct a stationary source in accordance with the application for an operating permit as approved by the Director;
 - c. Failure to construct or operate a stationary source in accordance with any condition of an operating permit;
 - d. Commencing construction or modification of a stationary source without applying for and receiving an operating permit or a modification of an operating permit as required by NAC 445B.001 to 445B.3477, inclusive, or a mercury operating permit to construct as required by NAC 445B.3611 to 445B.3689, inclusive;
 - e. Failure to comply with any requirement for recordkeeping, monitoring, reporting or compliance certification contained in an operating permit; or
 - f. Failure to pay fees as required by NAC 445B.327 or 445B.3689.
2. The written notice must specify the provision of NAC 445B.001 to 445B.390, inclusive, the condition of the operating permit or the applicable requirement that is being violated.
3. Written notice shall be deemed to have been served if delivered to the person to whom addressed or if sent by registered or certified mail to the last known address of the person.

K. Operating permits: Imposition of more stringent standards for emissions (NAC 445B.305)

(*Federally Enforceable SIP Requirement*)

1. The Director may impose standards for emissions on a proposed stationary source that are more stringent than those found in NAC 445B.001 to 445B.390, inclusive, as a condition of approving an operating permit for the proposed stationary source.



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Section I. General Provisions (continued)

- L. Contents of operating permits: Exception for operating permits to construct; required conditions (NAC 445B.315)
(*Federally Enforceable SIP Requirement*)
1. Notwithstanding any provision of this section to the contrary, the provisions of this section do not apply to operating permits to construct.
 2. The Director shall cite the legal authority for each condition contained in an operating permit.
 3. An operating permit must contain the following conditions:
 - a. The term of the operating permit is 5 years.
 - b. The holder of the operating permit shall retain records of all required monitoring data and supporting information for 5 years after the date of the sample collection, measurement, report or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.
 - c. Each of the conditions and requirements of the operating permit is severable, and if any are held invalid, the remaining conditions and requirements continue in effect.
 - d. The holder of the operating permit shall comply with all conditions of the operating permit. Any noncompliance constitutes a violation and is a ground for:
 - (1) An action for noncompliance;
 - (2) Revising, revoking, reopening and revising, or terminating the operating permit by the Director; or
 - (3) Denial of an application for a renewal of the operating permit by the Director.
 - e. The need to halt or reduce activity to maintain compliance with the conditions of the operating permit is not a defense to noncompliance with any condition of the operating permit.
 - f. The Director may revise, revoke and reissue, reopen and revise, or terminate the operating permit for cause.
 - g. The operating permit does not convey any property rights or any exclusive privilege.
 - h. The holder of the operating permit shall provide the Director, in writing and within a reasonable time, with any information that the Director requests to determine whether cause exists for revising, revoking and reissuing, reopening and revising, or terminating the operating permit, or to determine compliance with the conditions of the operating permit.
 - i. The holder of the operating permit shall pay fees to the Director in accordance with the provisions set forth in NAC 445B.327 and 445B.331.
 - j. The holder of the operating permit shall allow the Director or any authorized representative, upon presentation of credentials, to:
 - (1) Enter upon the premises of the holder of the operating permit where:
 - (a) The stationary source is located;
 - (b) Activity related to emissions is conducted; or
 - (c) Records are kept pursuant to the conditions of the operating permit;
 - (2) Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the operating permit;
 - (3) Inspect, at reasonable times, any facilities, practices, operations or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the operating permit; and
 - (4) Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the operating permit or applicable requirements.
 - k. A responsible official of the stationary source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of the operating permit are true, accurate and complete.



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Section I. General Provisions (continued)

M. Operating permits: Assertion of emergency as affirmative defense to action for noncompliance (NAC 445B.326) *(State Only Requirement)*

1. A holder of an operating permit may assert an affirmative defense to an action brought for noncompliance with a technology-based emission limitation contained in the operating permit if the holder of the operating permit demonstrates through signed, contemporaneous operating logs or other relevant evidence, that:
 - a. An emergency occurred and the holder of the operating permit can identify the cause of the emergency;
 - b. The facility was being properly operated at the time of the emergency;
 - c. During the emergency, the holder of the operating permit took all reasonable steps to minimize excess emissions; and
 - d. The holder of the operating permit submitted notice of the emergency to the Director within 2 working days after the emergency. The notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken to restore the normal operation of the facility.
2. In any action for noncompliance, the holder of an operating permit who asserts the affirmative defense of an emergency has the burden of proof.

N. Operating permits: Revocation and reissuance (NAC 445B.3265) *(State Only Requirement)*

1. An operating permit may be revoked if the control equipment is not operating.
2. An operating permit may be revoked by the Director upon determining that there has been a violation of NAC 445B.001 to 445B.390, inclusive, or the provisions of 40 CFR 52.21, or 40 CFR Part 60 or 61, Prevention of Significant Deterioration, New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants, adopted by reference in NAC 445B.221.
3. The revocation is effective 10 days after the service of a written notice, unless a hearing is requested.
4. To reissue a revoked operating permit, the holder of the revoked permit must file a new application with the Director, accompanied by the fee for an initial operating permit as specified in NAC 445B.327. An environmental review of the stationary source must be conducted as though construction had not yet commenced.

O. Required contents of permit (NAC 445B.346) *(Federally Enforceable SIP Requirement)*

In addition to the conditions set forth in NAC 445B.315, Class II operating permits must contain, as applicable:

1. Emission limitations and standards, including those operational requirements and limitations that ensure compliance with the conditions of the operating permit.
2. All requirements for monitoring, testing and reporting that apply to the stationary source.
3. A requirement that the owner or operator of the stationary source promptly report any deviations from any requirements of the operating permit.
4. The terms and conditions for any reasonably anticipated alternative operating scenarios identified by the owner or operator of the stationary source in his or her application and approved by the Director. Such terms and conditions must require the owner or operator to keep a contemporaneous log of changes from one alternative operating scenario to another.
5. A schedule of compliance for stationary sources that are not in compliance with any applicable requirement or NAC 445B.001 to 445B.390, inclusive, at the time the operating permit is issued, including:
 - a. Semiannual progress reports and a schedule of dates for achieving milestones;
 - b. Prior notice of and explanations for missed deadlines; and
 - c. Any preventive or corrective measures taken.

*****End of General Provisions*****



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Section II. General Monitoring, Recordkeeping, and Reporting Conditions

- A. Records Retention (NAC 445B.315(3)(b)) (*Federally Enforceable SIP Requirement*)
The holder of the operating permit shall retain records of all required monitoring data and supporting information for 5 years after the date of the sample collection, measurement, report or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.
- B. Deviations (NAC 445B.346(3)) (*Federally Enforceable SIP Requirement*)
Under the authority of NAC 445B.346(3), and in addition to the conditions set forth in NAC 445B.315, the owner or operator of the stationary source shall promptly report to the Director any deviations from the requirements of the operating permit. The report to the Director shall include the probable cause of all deviations and any action taken to correct the deviations. For the operating permit, prompt is defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 as reproduced in **Section I.G.**
E-mail notifications to: enotify@ndep.nv.gov
- C. Yearly Reports (NAC 445B.315(3)(h), NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
Under the authority of NAC 445B.315(3)(h) and NAC 445B.346(2), the Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, and emissions. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year.

*****End of General Monitoring, Recordkeeping, and Reporting Conditions*****



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Section III. General Construction Conditions

A. Notification (NAC 445B.250; NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

Under the authority of NAC 445B.250 and NAC 445B.346; the Director shall be notified in writing of the following for **PF1.001 through PF1.025 and S2.001 through S2.028**:

1. The date construction (or reconstruction as defined under NAC 445B.247) of the affected facility is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
2. The anticipated date of initial startup of an affected facility, postmarked no more than 60 days and no less than 30 days prior to such date.
3. The actual date of initial startup of the affected facility, postmarked within 15 days after such date.
4. The date upon which demonstration of the continuous monitoring system performance commences in accordance with NAC 445B.256 to 445B.267, inclusive. Notification must be postmarked not less than 30 days before such date.

*****End of General Construction Conditions*****



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Section IV. Specific Construction Requirements

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(Federally Enforceable SIP Requirement)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:

Table IV-1: Initial Opacity Compliance Demonstration

System	Emission Units	Pollutant To Be Tested	Testing Methods/Procedures
System 1 - Ore Handling Circuit	PF1.001 <u>and PF1.003</u>	Opacity	Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.
System 4 - Oversize Material Handling Circuit	PF1.007 - PF1.008		
System 5 - Gangue Handling Circuit	PF1.009 – PF1.011		
System 6 - Leach Tanks	S2.001 – S2.003		
System 7 - Neutralization Filter Vents	S2.004 – S2.007		
System 8 - Neutralization Filter Filtrate Blow Vent	S2.008		
System 9 - Tailings Feed Circuit	PF1.012 - PF1.019		
System 10 - Tailings Collection	PF1.020		
System 11 - Tailings Stacking	PF1.021 - PF1.022		
System 12 - Sulfate Tailings Circuit	PF1.023 - PF1.025		
System 13 - Magnesium Precipitation Filter Vents	S2.009 – S2.010		
System 14 - Magnesium Precipitation Filter Filtrate Blow Vent	S2.011		
System 15 - Lithium Carbonate Dryer	S2.012		
System 16 - Lithium Carbonate Material Handling	S2.013		
System 17 - Lithium Carbonate Storage Bin	S2.014		
System 18 - Lithium Carbonate Packaging	S2.015		
System 19 - Lime Silo	S2.016 – S2.017		
System 20 - Soda Ash Silo	S2.018		
System 21 - Sulfur Storage	S2.019 – S2.020		
System 22 - Package Boiler	S2.021		
System 23 - Start-Up Burner	S2.022		
System 24 - Sulfuric Acid Plant	S2.023		
System 25 - Fire Pumps	S2.024 – S2.025		
System 26 - Emergency Generators	S2.026 – S2.027		



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

System	Emission Units	Pollutant To Be Tested	Testing Methods/Procedures
System 1 - Ore Handling Circuit	PF1.002 <u>and</u> PF1.004	Opacity	Method 9 in Appendix A-4 of 40 CFR Part 60.11 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations must be 30 minutes (five 6-minute averages).
System 2 - Mineral Sizer	PF1.005		
System 3 - Attrition Scrubber Feed	PF1.006		

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 4 - Oversize Material Handling Circuit	PF1.008	Moisture Content of Material	Material sample to be taken from drop location and analyzed for moisture content. Moisture content shall be equal to or exceed 4% moisture.
System 5 - Gangue Handling Circuit	PF1.011		
System 9 – Tailings Feed Circuit	PF1.013, PF1.015, PF1.017, and PF1.019		
J. System 10 - Tailings Collection	PF1.020		
System 11 - Tailings Stacking	PF1.022		



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

- Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 6 - Leach Tanks	S2.001 – S2.003	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		H ₂ SO ₄	Method 8 in Appendix A of 40 CFR Part 60 and Conditional Test Method CTM-013 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 7— Neutralization Filter Vents	S2.004— S2.007	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
System 13— Magnesium Precipitation Filter Vents	S2.009— S2.010	PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 8 – Neutralization Filter Filtrate Blow Vent	S2.008	TDS Content	Sample TDS concentration in percent by weight. The TDS shall be determined by sampling methods approved in advance by the director
		PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
System 14 – Magnesium Precipitation Filter Filtration Blow Vents	S2.011	PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM_{2.5} for determination of compliance.

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 15 – Lithium Carbonate Dryer	S2.012	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
System 18 – Lithium Carbonate Packaging	S2.015	PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
System 19 – Lime Silo	S2.016 – S2.017		The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test . All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

Table IV-2: Initial Performance Tests

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 21 – Sulfur Storage	S2.019 – S2.020	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		SO ₂	Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
		H ₂ S	Method 15 in Appendix A of 40 CFR Part 60 shall be used to determine the hydrogen sulfide concentration. Each test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

Table IV-2: Initial Performance Tests (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 22 – Package Boiler	S2.021	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
System 23 – Start-Up Burner	S2.022	NO _x	Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
		CO	Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.
		VOC	Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(s). Each Method 25A test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

Table IV-2: Initial Performance Tests

System	Emission Unit	Pollutants To Be Tested	Testing Methods/Procedures
System 24 - Sulfuric Acid Plant	S2.023	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		SO ₂	Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
		NO _x	Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
		H ₂ SO ₄	Method 8 in Appendix A of 40 CFR Part 60 and Conditional Test Method CTM-013 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

- A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(*Federally Enforceable SIP Requirement*) (continued)
2. All initial opacity compliance demonstrations and initial performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of **Section I.H. Testing and Sampling** (NAC 445B.252) of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All initial performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B.252(5))
 3. Testing shall be conducted on the exhaust stack (post controls).
 4. Initial opacity compliance demonstrations and initial performance tests, as specified in Table IV-1 and Table IV-2 above, must be conducted under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the initial opacity compliance demonstrations and initial performance tests. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of the initial opacity compliance demonstrations and initial performance tests unless otherwise specified in the applicable standard. (NAC 445B.252(3))
 5. The Permittee shall give notice to the Director 30 days before the initial opacity compliance demonstrations and initial performance tests to allow the Director to have an observer present. A written testing procedure must be submitted to the Director at least 30 days before the initial opacity compliance demonstrations and initial performance tests to allow the Director to review the proposed testing procedures. (NAC 445B.252(4) and 40 CFR Part 60.7(a)(6))
 6. Within 60 days after completing the initial opacity compliance demonstrations and initial performance tests contained in Table IV-1 and Table IV-2 of this section, the Permittee shall furnish the Director a written report of the results. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.390, inclusive. (NAC 445B.252(8))
 7. Initial opacity compliance demonstrations and initial performance tests required under this section that are conducted below the maximum allowable throughput, shall be subject to the Director's review to determine if the throughputs during the initial opacity compliance demonstrations and initial performance tests were sufficient to provide adequate compliance demonstration. Should the Director determine that the initial opacity compliance demonstrations and initial performance tests do not provide adequate compliance demonstration, the Director may require additional testing.

******End of Specific Construction Requirements******



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Section V. Specific Operating Conditions

A. Emission Units PF1.001 through PF1.004

System 1 - Ore Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.001	ROM Feed Hopper 1 Loading	4,617,041	411,344
PF1.002	ROM Feed Hopper 1 transfer to Sizer Feed Conveyor (via feed belt)	4,617,041	411,344
PF1.003	ROM Feed Hopper 2 loading	4,617,034	411,356
PF1.004	ROM Feed Hopper 2 transfer to Sizer Feed Conveyor (via feed belt)	4,617,034	411,356

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
PF1.001 through PF1.004, each, have no add-on controls.

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **PF1.001 through PF1.004, each**, shall not exceed **480.0** tons of **Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.001 through PF1.004, each**, may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.001 through PF1.004, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **1.44** pounds per hour, nor more than **6.31** tons per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.53** pounds per hour, nor more than **2.31** tons per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.087** pounds per hour, nor more than **0.38** tons per 12-month rolling period.
 - d. The opacity from **PF1.001 and PF1.003, each**, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.001 through PF1.004, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.001 through PF1.004, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. The Permittee, upon issuance of this operating permit, 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))



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Section V. Specific Operating Conditions (continued)

A. Emission Units PF1.001 through PF1.004 (continued)

5. Federal Requirements (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)

a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which **PF1.002 and PF1.004** will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

(1) Process fugitive emissions from **PF1.002 and PF1.004, each**, will not exceed **7 percent** opacity. (40 CFR Part 60.672(b)).

(2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))

b. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))

c. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate **PF1.002 and PF1.004, each**, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))

d. A repeat performance test according to 40 CFR Part 60.11 of this part and 40 CFR Part 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in 40 CFR Part 60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement. (40 CFR 60.672, Table 3)



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Section V. Specific Operating Conditions (continued)

B. Emission Units PF1.005

System 2 - Mineral Sizer		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.005	Mineral Sizer and Associated Transfers (In: Sizer Feed Conveyor, Out: Scrubber Feed Conveyor)	4,616,990	411,439

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from **PF1.005** shall be controlled by **Water Sprays**.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **PF1.005** shall not exceed **960.0** tons of **Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.005** may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.005** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **1.30** pounds per hour, nor more than **5.68** tons per year per 12 month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.58** pounds per hour, nor more than **2.52** tons per year per 12 month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.42** tons per year per 12 month rolling period.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.005** on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.005** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Water Sprays** controlling **PF1.005** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. The Permittee of any affected facility that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must 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 must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken.
 - f. The Permittee, upon issuance of this operating permit, 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



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equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

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Section V. Specific Operating Conditions (continued)

B. Emission Units PF1.005 (continued)

5. Federal Requirements (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)
 - a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which **PF1.005** will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

 - (1) Process fugitive emissions from **PF1.005** will not exceed **12 percent** opacity. (40 CFR Part 60.672(b)).
 - (2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))
 - b. The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b). (40 CFR 60.674(b))
 - c. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))
 - d. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate **PF1.005** including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))



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Section V. Specific Operating Conditions (continued)

C. Emission Units PF1.006

System 3 - Attrition Scrubber Feed		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.006	Scrubber Feed Conveyor to Attrition Scrubber (wet process)	4,616,998	411,444

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
Emissions from **PF1.006** shall be controlled by **Water Sprays**.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **PF1.006** shall not exceed **960.0** tons of **Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.006** may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.006** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.72** pounds per hour, nor more than **3.15** tons per year per 12 month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.26** pounds per hour, nor more than **1.16** tons per year per 12 month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.044** pounds per hour, nor more than **0.19** tons per year per 12 month rolling period.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.006** on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.006** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Water Sprays** controlling **PF1.006** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. The Permittee of any affected facility that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must 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 must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken.
 - f. The Permittee, upon issuance of this operating permit, 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))



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Section V. Specific Operating Conditions (continued)

C. Emission Units PF1.006 (continued)

5. Federal Requirements (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)
 - a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which **PF1.006** will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

 - (1) Process fugitive emissions from **PF1.006** will not exceed **7 percent** opacity. (40 CFR Part 60.672(b)).
 - (2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))
 - b. The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b). (40 CFR 60.674(b))
 - c. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))
 - d. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate **PF1.006** including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))



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Section V. Specific Operating Conditions (continued)

D. Emission Units PF1.007 and PF1.008

System 4 - Oversize Material Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.007	Wet Screen to Oversize Stacker Conveyor	4,617,033	411,464
PF1.008	Oversize Stacker to Oversize Stockpile	4,617,011	411,505

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
Emissions from **PF1.007 and PF1.008, each**, shall be controlled by **Moisture Carryover**.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **PF1.007 and PF1.008, each**, shall not exceed **16.0 tons of Gangue** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.007 and PF1.008, each**, operate a total of **24 hours** per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.007 and PF1.008, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.0072 pounds per hour**, nor more than **0.032 tons per year per 12 month rolling period**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.0026 pounds per hour**, nor more than **0.012 tons per year per 12 month rolling period**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.00040 pounds per hour**, nor more than **0.0018 tons per year per 12 month rolling period**.
 - d. The opacity from **PF1.007 and PF1.008, each**, shall not equal or exceed **20 percent**.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.007 and PF1.008, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.007 and PF1.008, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on **PF1.007 and PF1.008, each**, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

E. Emission Units PF1.009 through PF1.011

System 5 – Gangue Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.009	Gangue Dewatering Screen to Gangue Conveyor	4,617,236	414,414
PF1.010	Gangue Conveyor to Gangue Stacker	4,617,280	414,458
PF1.011	Gangue Stacker to Gangue Stockpile	4,617,326	414,453

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
Emissions from **PF1.009 through PF1.011, each**, shall be controlled by **Moisture Carryover**.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **PF1.009 through PF1.011, each**, shall not exceed **430.0 tons of Gangue** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.009 through PF1.011, each**, may operate a total of **24 hours** per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.009 through PF1.011, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.19 pounds** per hour, nor more than **0.85 tons** per year per 12 month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.071 pounds** per hour, nor more than **0.31 tons** per year per 12 month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.011 pounds** per hour, nor more than **0.047 tons** per year per 12 month rolling period.
 - d. The opacity from **PF1.009 through PF1.011, each**, shall not equal or exceed **20 percent**.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.009 through PF1.011, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.009 through PF1.011, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on **PF1.009 through PF1.011, each**, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

F. Emission Units S2.001 through S2.003

System 6 - Leach Tanks		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.001	Leach Tank 1	4,617,186	414,430
S2.002	Leach Tank 2	4,617,186	414,430
S2.003	Leach Tank 3	4,617,186	414,430

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **S2.001 through S2.003, combined, each**, shall be controlled by a **Wet Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 60 feet
 Stack Diameter: 2.5 feet
 Stack Temperature: 180 °F
 Exhaust Flow: 13,869 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.001 through S2.003, each**, shall not exceed **1,080.0** tons of **Slurry** per any one-hour period averaged over a daily basis.
 - b. **S2.001 through S2.003, each**, shall not exceed the following parameters:
 - (1) The maximum **TDS** (Total Dissolved Solids) concentration of outlet leach solution shall not exceed **26** percent.
 - (2) The maximum **H₂SO₄** (Sulfuric Acid) concentration of outlet leach solution shall not exceed **5** percent.
 - c. Hours
 - (1) **S2.001 through S2.003, each**, may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.001 through S2.003, combined**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.30** pounds per hour, nor more than **1.33** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.30** pounds per hour, nor more than **1.33** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.30** pounds per hour, nor more than **1.33** tons per year per 12-month rolling period.
 - d. The discharge of **H₂SO₄** to the atmosphere shall not exceed **0.058** pounds per hour, nor more than **0.26** tons per year per 12-month rolling period.
 - e. The opacity from **S2.001 through S2.003, each**, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.001 through S2.003, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.001 through S2.003, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Sample the outlet leach solution of S2.001 through S2.003, each combined, on a quarterly basis for the **TDS** concentration in percent. The **TDS** shall be determined by sampling methods approved in advance by the Director.



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Section V. Specific Operating Conditions (continued)

F. Emission Units S2.001 through S2.003 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. (continued)
 - e. Sample the outlet leach solution of S2.001 through S2.003, combined each, on a quarterly basis for the H₂SO₄ concentration in percent. The H₂SO₄ shall be determined by sampling methods approved in advance by the Director.
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Wet Scrubber** controlling **S2.001 through S2.003** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the **Wet Scrubber** installed on **S2.001 through S2.003** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct annual performance testing within 90 days of the anniversary date of the previous initial performance testing or annual performance testing, and annually thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM_{2.5} for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 8 in Appendix A of 40 CFR Part 60 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - e. The Method 8 test required in this section may be replaced by a Conditional Test Method CTM-013 test based on prior approval from the Administrator. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - ef. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

G. Emission Units S2.004 through S2.007

System 7 - Neutralization Filter Vents		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.004	Neutralization Filter Vent 1	4,617,143	414,474
S2.005	Neutralization Filter Vent 2	4,617,145	414,477
S2.006	Neutralization Filter Vent 3	4,617,149	414,480
S2.007	Neutralization Filter Vent 4	4,617,152	414,483

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.004 through S2.007, each, ~~have no add-on control~~ shall be controlled by Mist Eliminator.**
 - b. Descriptive Stack Parameters
 Stack Height: 30 feet
 Stack Diameter: 1.7 feet
 Stack Temperature: 120 °F
 Exhaust Flow: 6,200 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.004 through S2.007, each**, shall not exceed **1,080.0** tons of **Slurry** per any one-hour period averaged over a daily basis.
 - b. The maximum **PM** (particulate matter) concentration for **S2.004 through S2.007, each**, shall not exceed **10** ppmw (parts per million by weight).
 - c. Hours
 - (1) **S2.004 through S2.007, each**, may operate a total of **24** hours per day.
 - (2) **S2.004 through S2.007, each**, shall not operate in excess of **500** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.004 through S2.007, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** to the atmosphere shall not exceed **0.22** pounds per hour, nor more than **0.056** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.22** pounds per hour, nor more than **0.056** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.22** pounds per hour, nor more than **0.056** tons per year per 12-month rolling period.
 - d. The opacity from **S2.004 through S2.007, each**, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.004 through S2.007, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.004 through S2.007, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.



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Section V. Specific Operating Conditions (continued)

G. Emission Units S2.004 through S2.007 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stacks** of the **Mist Eliminator** controlling **S2.009 and S2.010, each**, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Mist Eliminator** installed on **S2.009 and S2.010** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results, and any corrective actions taken.
 - g. Maintain documentation onsite showing that the PM concentration at the outlet of the mist eliminators will not exceed the concentration specified in G.2.b of this section.

~~G. Emission Units S2.004 through S2.007 (continued)~~

- ~~5. Performance Testing (NAC 445B.346(2))
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. ~~All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).~~
 - b. ~~Testing shall be conducted on the exhaust stack (post controls).~~
 - c. ~~Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dsef). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.~~
 - d. ~~Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.~~
 - e. ~~The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of~~
 - f. ~~40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.~~
 - g. ~~Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals), unless otherwise specified by an applicable subpart.~~~~



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

H. Emission Units S2.008

System 8 - Neutralization Filter Filtrate Blow Vent		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.008	Neutralization Filter Filtrate Blow Vent	4,617,147	414,479

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.008** has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 20 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 1,355 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum **TDS** (Total Dissolved Solids) concentration of **S2.008** shall not exceed **40** percent by weight.
 - b. Hours
 - (1) **S2.008** may operate a total of **24** hours per day.
 - (2) **S2.008** shall not operate in excess of **50** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.008** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.20** pounds per hour, nor more than **0.0049** tons per year, per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.20** pounds per hour, nor more than **0.0049** tons per year, per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.20** pounds per hour, nor more than **0.0049** tons per year, per 12-month rolling period.
 - d. The opacity from **S2.008** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for **S2.008**.
 - b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
 - c. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** for **S2.008** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - d. Sample **S2.008** on a quarterly basis for the **TDS** concentration in percent by weight. The **TDS** shall be determined by sampling methods approved in advance by the director.



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Section V. Specific Operating Conditions (continued)

I. Emission Units PF1.012 through PF1.019

Table with 4 columns: Emission Unit ID, Description, Location UTM (Zone 11, NAD 83) m North, and Location UTM (Zone 11, NAD 83) m East. Rows include PF1.012 through PF1.019 for System 9 - Tailings Feed Circuit.

- 1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement) Emissions from PF1.012 through PF1.019, each, shall be controlled by Moisture Carryover.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
a. The maximum allowable throughput rate for PF1.012 through PF1.019, each, shall not exceed 240.0 tons of Clay/Neutral Tailings per any one-hour period averaged over a daily basis.
b. Hours
(1) PF1.012 through PF1.019, each, may operate a total of 24 hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.012 through PF1.019, each, the following pollutants in excess of the following specified limits:
a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.11 pounds per hour, nor more than 0.47 tons per year per 12-month rolling period.
b. The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.040 pounds per hour, nor more than 0.17 tons per year per 12-month rolling period.
c. The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.0065 pounds per hour, nor more than 0.029 tons per year per 12-month rolling period.
d. The opacity from PF1.012 through PF1.019, each, shall not equal or exceed 20 percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
a. Monitor and record the throughput for PF1.012 through PF1.019, each, on a daily basis.
b. Monitor and record the hours of operation for PF1.012 through PF1.019, each, on a daily basis.
c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.012 through PF1.019, each, on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

J. Emission Units PF1.020

System 10 - Tailings Collection		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.020	Tailings Collection Conveyor to Tailings Conveyor 1	4,617,151	414,484

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from **PF1.020** shall be controlled by **Moisture Carryover**.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **PF1.020** shall not exceed **1,000.0** tons of **Clay/Neutral Tailings** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.020** may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.020** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.45** pounds per hour, nor more than **1.97** tons per year, per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.17** pounds per hour, nor more than **0.72** tons per year, per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.027** pounds per hour, nor more than **0.12** tons per year, per 12-month rolling period.
 - d. The opacity from **PF1.020** shall not equal or exceed **20** percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.020** on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.020** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on **PF1.020** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

K. Emission Units PF1.021 and PF1.022

System 11 – Tailings Stacking		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.021	Tailings Conveyor 1 to Tailings Stacker	4,617,251	414,584
PF1.022	Tailings Stacker to Clay Tailings Filter Stack	4,617,231	414,625

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
Emissions from **PF1.021 and PF1.022, each**, shall be controlled by **Moisture Carryover**.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **PF1.021 and PF1.022, each**, shall not exceed **1,000.0** tons of **Clay/Neutral Tailings** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.021 and PF1.022, each**, may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.021 and PF1.022, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.45** pounds per hour, nor more than **1.97** tons per year per 12 month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.17** pounds per hour, nor more than **0.72** tons per year per 12 month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.027** pounds per hour, nor more than **0.12** tons per year per 12 month rolling period.
 - d. The opacity from **PF1.021 and PF1.022, each**, shall not equal or exceed **20** percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.021 and PF1.022, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.021 and PF1.022, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on **PF1.021 and PF1.022, each**, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

L. Emission Units PF1.023 through PF1.025

System 12 - Sulfate Tailings Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.023	Na/K Sulfate Centrifuge discharge to Na/K Conveyor 1 or Lithium Carbonate Dryer	4,617,137	414,470
PF1.024	Na/K Conveyor 1 transfer to Na/K Conveyor 2	4,617,139	414,471
PF1.025	Na/K Conveyor 2 to Tailings Collection Conveyor	4,617,141	414,474

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **PF1.023** shall be controlled by **Enclosure**.
 - b. **PF1.024 and PF1.025, each**, has no add-on controls.

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **PF1.023 through PF1.025, each**, shall not exceed **40.0 tons of Sulfate Tailings** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.023 through PF1.025, each**, may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.023** the following pollutants in excess of the following specified limits:
 - (1) The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.060 pounds per hour**, nor more than **0.26 tons per year per 12-month rolling period**.
 - (2) The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.022 pounds per hour**, nor more than **0.096 tons per year per 12-month rolling period**.
 - (3) The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0036 pounds per hour**, nor more than **0.016 tons per year per 12-month rolling period**.
 - (4) The opacity from **PF1.023** shall not equal or exceed **20 percent**.
 - b. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.024 and PF1.025, each**, the following pollutants in excess of the following specified limits:
 - (1) The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.12 pounds per hour**, nor more than **0.53 tons per year per 12-month rolling period**.
 - (2) The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.044 pounds per hour**, nor more than **0.19 tons per year per 12-month rolling period**.
 - (3) The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0073 pounds per hour**, nor more than **0.032 tons per year per 12-month rolling period**.
 - (4) The opacity from **PF1.024 and PF1.025, each**, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

 - a. Monitor and record the throughput for **PF1.023 through PF1.025, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.023 through PF1.025, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.



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Section V. Specific Operating Conditions (continued)

L. Emission Units PF1.023 through PF1.025 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the enclosure controlling **PF1.023** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. Inspect the **Enclosure** installed on **PF1.023** on a monthly basis to confirm that the enclosure is in place and functioning properly. If the enclosure is in disrepair, the Permittee shall initiate corrective action within 24 hours and complete corrective action as expeditiously as practical to ensure that the enclosure is functioning properly. The Permittee must record each inspection of the enclosures, including the date of each inspection and any corrective actions taken.

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Section V. Specific Operating Conditions (continued)

M. Emission Units S2.009 and S2.010

Table with 4 columns: System 13 - Magnesium Precipitation Filter Vents, Location UTM (Zone 11, NAD 83), m North, m East. Rows for S2.009 and S2.010.

- 1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
a. Emissions from S2.009 and S2.010, each, shall be controlled by Mist Eliminator.
b. Descriptive Stack Parameters
Stack Height: 38 feet
Stack Diameter: 1.30 feet
Stack Temperature: 120 °F
Exhaust Flow: 4,046 actual cubic feet per minute (acfm)
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
a. The maximum PM (particulate matter) concentration of S2.009 and S2.010, each, shall not exceed 10 ppmw (parts per million by weight).
b. Hours
(1) S2.009 and S2.010, each, may operate a total of 24 hours per day.
(2) S2.009 and S2.010, each, shall not operate in excess of 200 hours per year.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.009 and S2.010, each, the following pollutants in excess of the following specified limits:
a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.14 pounds per hour, nor more than 0.014 tons per year per 12-month rolling period.
b. The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.14 pounds per hour, nor more than 0.014 tons per year per 12-month rolling period.
c. The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.14 pounds per hour, nor more than 0.014 tons per year per 12-month rolling period.
d. The opacity from S2.009 and S2.010, each, shall not equal or exceed 20 percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
a. Monitor and record the total daily hours of operation for S2.009 and S2.010, each.
b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year
c. Conduct and record an observation of visible emissions (excluding water vapor) on the stacks of the Mist Eliminator controlling S2.009 and S2.010, each, on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

M. Emission Units S2.009 and S2.010 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - d. Inspect the **Mist Eliminator** installed on **S2.009 and S2.010** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results, and any corrective actions taken.
 - e. Maintain documentation onsite showing that the PM concentration at the outlet of the mist eliminators will not exceed the concentration specified in M.2.a of this section. Sample S2.009 through S2.010, each, on a quarterly basis for the PM concentration in ppmw. The PM shall be determined by sampling methods approved in advance by the director

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Section V. Specific Operating Conditions (continued)

N. Emission Units S2.011

System 14 - Magnesium Precipitation Filter Filtrate Blow Vent		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.011	Magnesium Precipitation Filtrate Blow Vent	4,617,147	414,404

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.011** has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 20 feet
 Stack Diameter: 0.5 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 498 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum **TDS** (Total Dissolved Solids) concentration of **S2.011** shall not exceed **8.24** percent by weight.
 - b. Hours
 - (1) **S2.011** may operate a total of **24** hours per day.
 - (2) **S2.011** shall not operate in excess of **50** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.011** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.015** pounds per hour, nor more than **0.00037** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.015** pounds per hour, nor more than **0.00037** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.015** pounds per hour, nor more than **0.00037** tons per year per 12-month rolling period.
 - d. The opacity from **S2.011** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for **S2.011**.
 - b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
 - c. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** for **S2.011** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - d. Sample **S2.011** on a quarterly basis for **TDS** concentration in percent by weight. The **TDS** shall be determined by sampling methods approved in advance by the director.



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Section V. Specific Operating Conditions (continued)

O. Emission Units S2.012

System 15 - Lithium Carbonate Dryer		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.012	Lithium Carbonate Dryer transfer to Lithium Carbonate Material Handling	4,617,110	414,388

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.012** shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters
 Stack Height: 60 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: 302 °F
 Exhaust Flow: 2,898 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.012** shall not exceed **5.0** tons of **Lithium Carbonate** per any one-hour period [averaged over a daily basis](#).
 - b. Hours
 (1) **S2.012** may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.012** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.50** pounds per hour, nor more than **2.18** tons [per year per 12 month rolling period](#).
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.50** pounds per hour, nor more than **2.18** tons [per year per 12 month rolling period](#).
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.50** pounds per hour, nor more than **2.18** tons [per year per 12 month rolling period](#).
 - d. The opacity from **S2.012** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.012** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.012** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Baghouse** controlling **S2.012** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. [If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken.](#) ~~If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A to eliminate visible emissions.~~
 - e. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken.



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- f. Inspect the **Baghouse** installed on **S2.012** on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g. the condition of the **Baghouse**) and any corrective actions taken.

Section V. Specific Operating Conditions (continued)

O. Emission Units S2.012 (continued)

- 5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

P. Emission Units S2.013

System 16 – Lithium Carbonate Material Handling		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.013	Lithium Carbonate Material Handling transfer to Lithium Carbonate Storage Bin Loading	4,617,108	414,385

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **S2.013** shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.013
 Stack Height: 10 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 101 °F
 Exhaust Flow: 1,268 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.013** shall not exceed **5.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) **S2.013** may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.013** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.012 pounds per hour**, nor more than **0.053 tons per year per 12-month rolling period**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.0070 pounds per hour**, nor more than **0.031 tons per year per 12-month rolling period**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0012 pounds per hour**, nor more than **0.0051 tons per year per 12-month rolling period**.
 - d. The opacity from **S2.013** shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.013** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.013** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack** of the **Vent Filter** controlling **S2.013** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on **S2.013** on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

Q. Emission Units S2.014

System 17 - Lithium Carbonate Storage Bin		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.014	Lithium Carbonate Storage Bin Loading transfer to Lithium Carbonate Packaging	4,617,112	414,380

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.014** shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.014
 Stack Height: 79 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 101 °F
 Exhaust Flow: 1,268 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.014** shall not exceed **5.0** tons of **Lithium Carbonate** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) **S2.014** may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.014** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.0050** pounds per hour, nor more than **0.022** tons per 12 month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.0017** pounds per hour, nor more than **0.0074** tons per 12 month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.00028** pounds per hour, nor more than **0.0012** tons per 12 month rolling period.
 - d. The opacity from **S2.014** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.014** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.014** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack of the Vent Filter** controlling **S2.014** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on **S2.014** on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

R. Emission Units S2.015

System 18 – Lithium Carbonate Packaging		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.015	Lithium Carbonate Packaging	4,617,113	414,360

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.015** shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters for S2.015
 Stack Height: 20 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 3,900 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.015** shall not exceed **16.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis, nor more than **43,800 tons per year per 12-month rolling period**.
 - b. Hours
 - (1) **S2.015** may operate a total of **24 hours** per day.
 - (2) **S2.015** shall not operate in excess of **4,380 hours** per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.015** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons per year per 12-month rolling period**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons per year per 12-month rolling period**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons per year per 12-month rolling period**.
 - d. The opacity from **S2.015** shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.015** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.015** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Monitor and record the total yearly throughput rate in tons per year. The annual throughput shall be determined as the sum of the monthly throughput rates for the year for all previous months of that year. Record the throughput rate of material (in tons) on a cumulative monthly basis, for each 12-month rolling period.
 - e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year



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Section V. Specific Operating Conditions (continued)

R. Emission Units S2.015 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack** of the **Baghouse** controlling **S2.015** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the **Baghouse** installed on **S2.015** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

S. Emission Units S2.016 and S2.017

System 19 – Lime Silo		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.016	Truck transfer of Lime to Underground Hopper	4,617,197	414,358
S2.017	Underground Hopper and transfer to Silo (silo unloading through sealed transfers)	4,617,197	414,358

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **S2.016 and S2.017, combined, each**, shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters for S2.016 and S2.017
 Stack Height: 100 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 3,100 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.016 and S2.017, each**, shall not exceed **80.0** tons of **Lime** per any one-hour period averaged over a daily basis, nor more than **350,400** tons per 12-month rolling period.
 - b. Hours
 - (1) **S2.016 and S2.017, each**, may operate a total of **24** hours per day.
 - (2) **S2.016 and S2.017, each**, shall not operate in excess of **4,380** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.016 and S2.017, combined**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.53** pounds per hour, nor more than **1.16** tons per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.53** pounds per hour, nor more than **1.16** tons per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.53** pounds per hour, nor more than **1.16** tons per 12-month rolling period.
 - d. The opacity from **S2.016 and S2.017, each**, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.016 and S2.017, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.016 and S2.017, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Monitor and record the total yearly throughput rate in tons per year. The annual throughput shall be determined as the sum of the monthly throughput rates for the year for all previous months of that year. Record the throughput rate of material (in tons) on a cumulative monthly basis, for each 12-month rolling period.
 - e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.



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Section V. Specific Operating Conditions (continued)

S. Emission Units S2.016 and S2.017 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Baghouse S2.016 and S2.017** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the **Baghouse** installed on **S2.016 and S2.017** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

T. Emission Units S2.018

System 20 - Soda Ash Silo		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.018	Soda Ash Silo loading (silo unloading through sealed transfers)	4,617,088	414,456

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.018** shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.018
 Stack Height: 100 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 1,930 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.018** shall not exceed **80.0** tons of **Soda Ash** per any one-hour period averaged over a daily basis, nor more than **153,900** tons per year per 12-month rolling period.
 - b. Hours
 (1) **S2.018** may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.018** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.079** pounds per hour, nor more than **0.076** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.027** pounds per hour, nor more than **0.026** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0045** pounds per hour, nor more than **0.0043** tons per year per 12-month rolling period.
 - d. The opacity from **S2.018** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.018** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.018** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Record the throughput rate of material (in tons) on a cumulative monthly basis, for each 12-month rolling period.
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Vent Filter** controlling **S2.018** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on **S2.018** on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g. the condition of the vent filter), and any corrective actions taken.



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

U. Emission Units S2.019 and S2.020

System 21 - Sulfur Storage		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.019	Sulfur Storage 1	4,616,946	414,290
S2.020	Sulfur Storage 2	4,616,942	414,293

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.019 and S2.020, each**, shall be controlled by **Caustic Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 30 feet
 Stack Diameter: 3.0 feet
 Stack Temperature: 140 °F
 Exhaust Flow: 3,100 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.019 and S2.020, each**, shall not exceed **47.0** tons of **Sulfur** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) **S2.019 and S2.020, each**, may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.019 and S2.020, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.44** tons per 12-month rolling period per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.40, 44** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.44** tons per year per 12-month rolling period.
 - d. The discharge of **SO₂** (Sulfur Dioxide) to the atmosphere shall not exceed **0.34** pounds per hour, nor more than **1.49** tons per year per 12-month rolling period.
 - e. The discharge of **H₂S** (Hydrogen Sulfide) to the atmosphere shall not exceed **0.12** pounds per hour, nor more than **0.53** tons per year per 12-month rolling period.
 - f. The opacity from **S2.019 and S2.020, each**, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.019 and S2.020, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.019 and S2.020, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. The Permittee shall notify the Director within 72 hours if sulfur will be sourced from a different supplier than the fuel energy industry.
 - d. Monitor and record the total yearly throughput rate in tons per year. The annual throughput shall be determined as the sum of the monthly throughput rates for the year for all previous months of that year.



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Section V. Specific Operating Conditions (continued)

U. Emission Units S2.019 and S2.020 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. (continued)
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Caustic Scrubber** controlling **S2.019 and S2.020** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Caustic Scrubber** installed on **S2.019 and S2.020** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing on **S2.019 and S2.020, each**, at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM_{2.5} for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - e. Method 15 in Appendix A of 40 CFR Part 60 shall be used to determine the hydrogen sulfide concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021

System 22 - Package Boiler		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.021	Package Boiler	4,616,986	414,165

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.021** has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 27 feet
 Stack Diameter: 3.0 feet
 Stack Temperature: 363 °F
 Exhaust Flow: 14,832 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.021** may consume only **Propane**.
 - b. The maximum allowable fuel consumption rate for **S2.021** shall not exceed **451.0 gallons** per any one-hour period averaged over a daily basis, nor more than **248,050 gallons per year** per 12-month rolling period.
 - c. Hours
 - (1) **S2.021** may operate a total of **24** hours per day.
 - (2) **S2.021** shall not operate in excess of **550** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.021** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.47** pounds per hour, nor more than **0.13** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.47** pounds per hour, nor more than **0.13** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.47** pounds per hour, nor more than **0.13** tons per year per 12-month rolling period.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.72** pounds per hour, nor more than **0.20** tons per year per 12-month rolling period.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **8.79** pounds per hour, nor more than **2.42** tons per years per 12-month rolling period.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **6.77** pounds per hour, nor more than **1.86** tons per year per 12-month rolling period.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **1.08** pounds per hour, nor more than **0.30** tons per year per 12-month rolling period.
 - h. The opacity from **S2.021** shall not equal or exceed **20** percent.



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Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021 (continued)

4. Monitoring and Recordkeeping (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

a. Monitor and record the hours of operation for **S2.021** on a daily basis.

b. Monitor and record the consumption rate of **Propane** on a daily basis for **S2.021** (in gallons).

c. Record the corresponding average hourly consumption rate of Propane in gallons per hour. The average hourly consumption rate shall be determined from the total daily consumption and the total daily hours of operation.

d. Monitor and record the total yearly consumption rate of Propane in gallons per year. The annual consumption shall be determined as the sum of the monthly consumption rates for the year for all previous months of that year. Record the consumption rate of Propane (in gallons) on a cumulative monthly basis, for each 12-month rolling period.

~~d.~~ Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.

5. Performance and Compliance Testing (NAC 445B.346(2)), (NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing on **S2.021** at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).

b. Testing shall be conducted on the exhaust stack (post controls).

c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

d. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

e. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM_{2.5} for determination of compliance.

f. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.

g. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.

h. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.

i. Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(s). Each Method 25A test will be run for a minimum of one hour.



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Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021 (continued)

6. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
 - a. Reporting and Recordkeeping Requirements (40 CFR Part 60.48c)
 - (1) The Permittee shall submit notification of the date of construction or reconstruction and actual startup, as provided by 40 CFR 60.7. This notification shall include: (40 CFR Part 60.48c(a))
 - (a) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. (40 CFR 60.48c(a)(1))
 - (b) The annual capacity factor at which the permittee anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired. (40 CFR 60.48c(a)(3))
 - (2) Except as provided under 40 CFR 60.48(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day. (40 CFR Part 60.48c(g))
 - (a) As an alternative to meeting the requirements of 40 CFR Part 60.48c (g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. (40 CFR 60.48c(g)(2))
 - (b) As an alternative to meeting the requirements of 40 CFR 60.48c (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. (40 CFR Part 60.48c(g)(3))
 - (3) All records required under 40 CFR Part 60.48c shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. (40 CFR Part 60.48c(i))
 - (4) The reporting period for the reports required under 40 CFR Part 60, Subpart Dc, is each six-month period. All reports shall be submitted to the Director and shall be postmarked by the 30th day following the end of the reporting period. (40 CFR Part 60.48c(j))



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Section V. Specific Operating Conditions (continued)

W. Emission Unit S2.022

System 23 - Start-Up Burner		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.022	Start-Up Burner	4,617,002	414,213

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.022 has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 50 feet
 Stack Diameter: 5.0 feet
 Stack Temperature: 950 °F
 Exhaust Flow: 206,338 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.022 may consume only **Propane**.
 - b. The maximum allowable fuel consumption rate for S2.022 shall not exceed **315.0 gallons** per any one-hour period averaged over a daily basis, nor more than **63,000 gallons per year** per 12-month rolling period.
 - c. Hours
 - (1) S2.022 may operate a total of **24** hours per day.
 - (2) S2.022 shall not operate in excess of **200** hours per 12-month rolling period.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.022 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.33** pounds per hour, nor more than **0.033** tons per year per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.33** pounds per hour, nor more than **0.033** tons per year per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.33** pounds per hour, nor more than **0.033** tons per year per 12-month rolling period.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.50** pounds per hour, nor more than **0.050** tons per year per 12-month rolling period.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **6.14** pounds per hour, nor more than **0.61** tons per year per 12-month rolling period.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **4.73** pounds per hour, nor more than **0.47** tons per year per 12-month rolling period.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.76** pounds per hour, nor more than **0.076** tons per year per 12-month rolling period.
 - h. The opacity from S2.022 shall not equal or exceed **20** percent.



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Section V. Specific Operating Conditions (continued)

W. Emission Unit S2.022 (continued)

4. Monitoring and Recordkeeping (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

a. Monitor and record the hours of operation for **S2.022** on a daily basis.

b. Monitor and record the consumption rate of **Propane** on a daily basis for **S2.022** (in gallons).

~~c. Record the corresponding average hourly consumption rate of **Propane** in gallons per hour. The average hourly consumption rate shall be determined from the total daily consumption and the total daily hours of operation.~~

~~d. Monitor and record the total yearly consumption rate of **Propane** in gallons per year. The annual consumption shall be determined as the sum of the monthly consumption rates for the year for all previous months of that year.~~

~~e. Record the consumption rate of Propane (in gallons) on a cumulative monthly basis, for each 12 month rolling period.~~

~~de.~~ Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.

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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023

System 24 - Sulfuric Acid Plant		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.023	Sulfuric Acid Plant	4,617,058	414,255

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from **S2.023** shall be controlled by a **Tail Gas Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 199 feet
 Stack Diameter: 8.5 feet
 Stack Temperature: 79 °F
 Exhaust Flow: 165,245 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for **S2.023** shall not exceed **51.0** tons of **Sulfur** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) **S2.023** may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.023** the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - d. The discharge of **SO₂** (Sulfur Dioxide) to the atmosphere shall not exceed **10.2** pounds per hour, nor more than **44.6** tons per 12-month rolling period.
 - e. The discharge of **NO_x** (Oxides of Nitrogen) to the atmosphere shall not exceed **19.5** pounds per hour, nor more than **85.3** tons per 12-month rolling period.
 - f. The discharge of **H₂SO₄** (Sulfuric Acid) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - g. The opacity from **S2.023** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.023** on a daily basis.
 - b. Monitor and record the hours of operation for **S2.023** on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Tail Gas Scrubber** controlling **S2.023** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. If visible emissions are observed, the Permittee shall conduct and record a Method 9 visible emission test and take corrective actions. Each Method 9 visible emission test shall be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the



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calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.

Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. (continued)
 - e. Inspect the **Tail Gas Scrubber** installed on **S2.023** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.
 - f. Monitor and record the ~~pressure drop~~pH and water flow rate values for the **Tail Gas Scrubber**, when the Sulfuric Acid Plant is operating, at least once every hour.
 - (1) Sulfuric Acid Plant operation is defined as the combustion of Sulfur in air.
 - (2) Compare the values to the minimum water flow rate and ~~pressure drop~~pH established using the most recent performance test data, manufacturer's recommendations, engineering calculations, and/or historical data.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct annual performance testing within 90 days of the anniversary date of the previous initial performance testing or annual performance testing, and annually thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM_{2.5} for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
 - e. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
 - f. Method 8 in Appendix A of 40 CFR Part 60 ~~or Conditional Test Method CTM-013~~ shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - g. The Method 8 test required in this section may be replaced by a Conditional Test Method CTM-013 test based on prior approval from the Administrator. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - gh. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants

a. Emission Standards (40 CFR 60.82(a) and 60.83(a))

(1) Standard for sulfur dioxide (40 CFR 60.82(a))

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of Subpart H shall 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/~~204 lbs per hour~~), the production being expressed as 100 percent H₂SO₄.

(2) Standard for acid mist (40 CFR 60.83(a))

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of Subpart H shall cause to be discharged into the atmosphere from any affected facility any gases which:

(a) Contain acid mist, expressed as H₂SO₄, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton/~~7.65 lbs per hour~~), the production being expressed as 100 percent H₂SO₄.

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

b. Emission Monitoring (40 CFR 60.84)

(1) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. 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 (SO₂). 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))

(2) The owner or operator 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))

$$CF = k[(1.000 - 0.015r)/(r - s)]$$

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 Director's approval.

s = percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(3) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s). (40 CFR 60.84(c))



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (Federally Enforceable SIP Requirement)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants (continued)

b. Emission Monitoring (40 CFR 60.84) (continued)

(4) 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 SO2 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 SO2, O2, and CO2 (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO2 monitor shall be as specified in paragraph (b) of this section. The span value for CO2 (if required) shall be 10 percent and for O2 shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO2 emission rate as follows: (40 CFR 60.84(d))

Es = (Cs S)/[0.265 - (0.0126 %O2) - (A %CO2)]

where:

Es = emission rate of SO2, kg/metric ton (lb/ton) of 100 percent of H2SO4 produced.

Cs = concentration of SO2, kg/dscm (lb/dscf).

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

%O2 = oxygen concentration, percent dry basis.

- A = auxiliary fuel factor,
= 0.00 for no fuel.
= 0.0226 for methane.
= 0.0217 for natural gas.
= 0.0196 for propane.
= 0.0172 for No 2 oil.
= 0.0161 for No 6 oil.
= 0.0148 for coal.
= 0.0126 for coke.

%CO2 = carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

Table with 3 columns: From, To, Multiply by. Rows include conversions for g/scm to kg/scm, mg/scm to kg/scm, ppm (SO2) to kg/scm, and ppm (SO2) to lb/scf.

(5) For the purpose of reports under 40 CFR 60.7(c), 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 applicable standards under X.6.a.(1) of this section or 40 CFR 60.82. (40 CFR 60.84(e))



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants (continued)

c. Test Methods and Procedures (40 CFR 60.85)

(1) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section. (40 CFR 60.85 (a))

(2) The owner or operator shall determine compliance with the SO₂ acid mist, and visible emission standards in **X.6.a.(1) and (2)** of this section or 40 CFR 60.82 and 60.83 as follows: (40 CFR 60.85 (a))

(a) The emission rate (E) of acid mist or SO₂ shall be computed for each run using the following equation:

$$E = (CQsd) / (PK)$$

where:

E = emission rate of acid mist or SO₂ kg/metric ton (lb/ton) of 100 percent H₂SO₄ produced.

C = concentration of acid mist or SO₂, g/dscm (lb/dscf).

Qsd = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P = production rate of 100 percent H₂SO₄, 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 SO₂ concentrations (C's) and the volumetric flow rate (Qsd) 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).

(c) Suitable methods shall be used to determine the production rate (P) of 100 percent H₂SO₄ for each run. Material balance over the production system shall be used to confirm the production rate.

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

(3) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section: (40 CFR 60.85 (a))

(a) 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:

(i) The integrated technique of Method 3 is used to determine the O₂ concentration and, if required, CO₂ concentration.

(ii) The SO₂ or acid mist emission rate is calculated as described in **X.6.b.(4)** of this section or 40 CFR 60.84(d), substituting the acid mist concentration for Cs as appropriate.



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025

System 25 - Fire Pumps		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.024	Fire Pump 1 (Mine, 422 hp, John Deere, 2015 or newer)	4,617,714	410,835
S2.025	Fire Pump 2 (Process, 422 hp, John Deere, 2015 or newer)	4,617,087	414,307

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.024 and S2.025, each**, have no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 13.0 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 891 °F
 Exhaust Flow: 2,048 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.024 and S2.025, each**, may consume only **diesel**.
 - b. The maximum allowable fuel consumption rate for **S2.024 and S2.025, each**, shall not exceed **20.0 gallons** per any one-hour period.
 - c. Hours
 - (1) **S2.024 and S2.025, each**, may operate a total of **24 hours** per day.
 - (2) **S2.024 and S2.025, each**, may operate a maximum of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.024 and S2.025, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0042 pounds** per hour, nor more than **0.00021 tons** per year.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **2.45 pounds** per hour, nor more than **0.12 tons** per year.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.63 pounds** per hour, nor more than **0.032 tons** per year.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.084 pounds** per hour, nor more than **0.0042 tons** per year.
 - h. The opacity from **S2.024 and S2.025, each**, shall not equal or exceed **20 percent**.



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

- a. Monitor and record the total daily hours of operation for **S2.024 and S2.025, each**, for each day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- b. Monitor and record the consumption rate of **diesel** on a daily basis for **S2.024 and S2.025, each**, (in gallons) by multiplying the maximum hourly fuel consumption rate as stated in **Y.2.b** of this section and the total daily hours of operation.
- c. Monitor and record the total yearly hours of operation of **S2.024 and S2.025, each**, per year. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for all previous months of that year.
- d. The Permittee, upon issuance of this operating permit, 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))

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4202, 40 CFR 60.4205)

The Permittee must comply with the emission standards in Table 4 of 40 CFR Part 60 Subpart III, for all pollutants, for the same model year and National Fire Protection Association (NFPA) maximum engine power. (40 CFR 60.4202(d), 40 CFR 60.4205(c))

(1) For a 2009 model year and later stationary fire pump engine with a maximum engine power of $225 \leq \text{KW} < 450$ ($300 \leq \text{HP} < 600$) and less than 30 liters per cylinder: (40 CFR 60.4202(d), 40 CFR 60.4205(c), Table 4)

- (a) The discharge of PM to the atmosphere shall not exceed **0.20** gram/kW-hr (**0.15** gram/hp-hr) (**0.14** pounds per hour).
- (b) The discharge of non-methane hydrocarbon (NMHC) + NO_x to the atmosphere shall not exceed **4.0** grams/kW-hr (**3.0** grams/hp-hr) (**2.79** pounds per hour).

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 80.510(b))

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) Except as permitted in 40 CFR 60.4211(g), the Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 89. (40 CFR 60.4211(a))



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*) (continued)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)
 - d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211) (continued)
 - (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **Y.5.d.(5)** of this section. (40 CFR 60.4211(c))
 - (4) In order for the engine to be considered an emergency stationary ICE under 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 paragraphs **Y.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **Y.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under Subpart IIII and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **Y.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **Y.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. 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 owner or operator 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 owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))
 - (c) 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 paragraph **Y.5.d.(4)(b)** of this section. Except as provided in paragraph **Y.5.d.(4)(c)** of this section, 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))
 - i. 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 conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))
 - (5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))
 - (a) For CI ICE greater than or equal to 100 HP and less than or equal to 500 hp, the Permittee must 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 must 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 change emission-related settings in a way that is not permitted by the manufacturer. (40 CFR 60.4211(g)(2))



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*) (continued)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)
 - e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:
If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027

System 26 - Emergency Generators		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.026	Emergency Generator 1 (Mine, 168 hp, Generac, 2009 or newer)	4,617,211	410,977
S2.027	Emergency Generator 2 (Mine, 168 hp, Generac, 2009 or newer)	4,617,211	410,979

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.026 and S2.027, each**, have no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: **5.0** feet
 Stack Diameter: **0.30** feet
 Stack Temperature: **960** °F

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.026 and S2.027, each**, may consume only **Propane**.
 - b. The maximum allowable fuel consumption rate for **S2.026 and S2.027, each**, shall not exceed **13.9 gallons** per any one-hour period.
 - c. Hours
 - (1) **S2.026 and S2.027, each**, may operate a total of **24** hours per day.
 - (2) **S2.026 and S2.027, each**, may operate a total of **100** hours per year of non-emergency use. There is no time limit on operation in emergency situations.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.026 and S2.027, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0049** pounds per hour, nor more than **0.00024** tons per year.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **0.74** pounds per hour, nor more than **0.037** tons per year.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **1.21** pounds per hour, nor more than **0.060** tons per year.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.74** pounds per hour, nor more than **0.037** tons per year.
 - h. The opacity from **S2.026 and S2.027, each**, shall not equal or exceed **20** percent.



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

- a. Monitor and record the total daily hours of operation for **S2.026 and S2.027, each**, for each day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- b. Monitor and record the consumption rate of **Propane** on a daily basis for **S2.026 and S2.027, each**, (in gallons) by multiplying the maximum hourly fuel consumption rate as state in **Z.2.b** of this section and the total daily hours of operation.
- c. Monitor and record the total yearly hours of operation of **S2.026 and S2.027, each**, per year. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for all previous months of that year.
- d. The Permittee, upon issuance of this operating permit, 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)).

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4231, 40 CFR 60.4233, 40 CFR 60.4234, and 40 CFR ~~90.103~~1048.101)

- (1) The Permittee of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in 40 CFR 60.4230(a)(4) (January 1, 2009) that are rich burn engines that use LPG must comply with the emission standards in 40 CFR 60.4231(c) for their stationary SI ICE. (40 CFR 60.4233(c))
- (2) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in 40 CFR 60.4230(a)(2), or manufactured on or after the applicable date in 40 CFR 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in 40 CFR 60.4230(a)(4) to the Phase I emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. (40 CFR 60.4231(c))
 - (a) For a 2007 model year and later (40 CFR 1048.101~~(b)~~(3), ~~Table 240~~ CFR 1048.101(a)(2)):
 - (i) The discharge of HC + NO_x to the atmosphere shall not exceed ~~5.42.7~~ grams/kw-hr (1.490.74 pounds/hr).
 - (ii) The discharge of CO to the atmosphere shall not exceed ~~13.81.21~~ 50.4.4 grams/kw-hr (~~13.81.21~~ pounds/hr).
- (3) The Permittee of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. (40 CFR 60.4234)

b. Other Requirements (40 CFR 60.4237)

- (1) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter. The Permittee of



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~~an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, must install a non-resettable hour meter upon startup of the emergency engine. (40 CFR 60.4237(eb))~~

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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
 - c. Compliance Requirements (40 CFR 60.4243)
 - (1) The Permittee of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in 40 CFR 60.4233(a) through (c), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, the Permittee must meet one of the requirements specified in (a)(1) and (2) of 40 CFR 60.4243. (40 CFR 60.4243(a))
 - (a) If the Permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the Permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if the Permittee is an owner or operator. The Permittee must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the Permittee. If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the Permittee's stationary SI internal combustion engine will not be considered out of compliance. (40 CFR 60.4243(a)(1))
 - (b) If the Permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the Permittee's engine will be considered a non-certified engine, and the Permittee must demonstrate compliance according to 40 CFR 60.4243(a)(2)(ii). (40 CFR 60.4243(a)(2))
 - (i) The Permittee of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must 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, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance. The Permittee of a stationary SI internal combustion engine less than 100 HP, the must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required. (40 CFR 60.4243(a)(2)(ii))
 - (2) If the Permittee owns or operates an emergency stationary ICE, the Permittee must operate the emergency stationary ICE according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60 Subpart JJJJ, 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 paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. (40 CFR 60.4243(d))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4243(d)(1))
 - (b) The Permittee may operate their emergency stationary ICE for any combination of the purposes specified in paragraph 40 CFR 60.4243(d)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph 40 CFR 60.4243(d)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4243(d)(2). (40 CFR 60.4243(d)(2))
 - (i) 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



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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. (40 CFR 60.4243(d)(2)(i))

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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
 - c. Compliance Requirements (40 CFR 60.4243) (continued)
 - (2) If the Permittee owns or operates an emergency stationary ICE, the Permittee must operate the emergency stationary ICE according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60 Subpart JJJJ, 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 paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. (40 CFR 60.4243(d)) (continued)
 - (c) 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 paragraph 40 CFR 60.4243(d)(2). (40 CFR 60.4243(d)(3))
 - d. Notification, Reports, and Records (40 CFR 60.4245)
 - (1) The Permittee of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements: (40 CFR 60.4245)
 - (a) The Permittee of all stationary SI ICE must keep records of the information in paragraphs 40 CFR 60.4245(a)(1) through 40 CFR 60.4245(a)(4). (40 CFR 60.4245(a))
 - (i) All notifications submitted to comply with this subpart and all documentation supporting any notification. (40 CFR 60.4245(a)(1))
 - (ii) Maintenance conducted on the engine. (40 CFR 60.4245(a)(2))
 - (iii) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable. (40 CFR 60.4245(a)(3))
 - (iv) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. (40 CFR 60.4245(a)(4))
 - (2) For all stationary SI emergency ICE greater than ~~25-130~~ HP and less than ~~130-500~~ HP manufactured on or after July 1, ~~2008~~2011, that do not meet the standards applicable to non-emergency engines, the Permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. (40 CFR 60.4245(b))
 - (3) The Permittee of an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section. (40 CFR 60.4245(e))
 - (a) The report must contain the following information: (40 CFR 60.4245(e)(1))
 - (i) Company name and address where the engine is located. (40 CFR 60.4245(e)(1)(ii))
 - (ii) Date of the report and beginning and ending dates of the reporting period. (40 CFR 60.4245(e)(1)(i))
 - (iii) Engine site rating and model year. (40 CFR 60.4245(e)(1)(iii))



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
 - d. Notification, Reports, and Records (40 CFR 60.4245) (continued)
 - (3) The Permittee of an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section. (40 CFR 60.4245(e)) (continued)
 - (a) The report must contain the following information: (40 CFR 60.4245(e)(1))
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. (40 CFR 60.4245(e)(1)(iv))
 - (v) Hours operated for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii). (40 CFR 60.4245(e)(1)(v))
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii). (40 CFR 60.4245(e)(1)(vi))
 - (vii) Hours spent for operation for the purposes specified in 40 CFR 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. (40 CFR 60.4245(e)(1)(vii))
 - (b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. (40 CFR 60.4245(e)(2))
 - (c) 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 60.4245(e)(3))
 - e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:
If the spark ignition engine meets the requirements of 40 CFR Part 60 Subpart JJJJ, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))



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Section V. Specific Operating Conditions (continued)

AA. Emission Unit S2.028

System 27 - Gasoline Tank		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.028	Gasoline Tank, 1,000 gallons	4,617,430	410,878

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. **S2.028** shall be controlled by submerged fill.
 - b. Descriptive Tank Parameters
 Shell Diameter: 5.5 feet
 Shell Height: 6 feet
 Capacity: 1,000 gallons

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. **S2.028** shall only be used to store **gasoline**.
 - b. The maximum allowable throughput rate for **S2.028** shall not exceed **9,999** gallons per month, nor more than **103,000** gallons per year.
 - c. Hours
S2.028 may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.028** the following pollutants in excess of the following specified limits:
 - a. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.22** tons per year.
 - b. The opacity from **S2.028** shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput of **gasoline**, in gallons, loaded into, or dispensed from, **S2.028**, on a monthly basis, as determined from vendor invoices for tank loading or fuel pump non-resettable meter for tank dispensing.
 - b. Monitor and record the total yearly throughput rate in gallons per year. The annual throughput shall be determined at the end of each month as the sum of the monthly throughput rates for the year for all previous months of that year.

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (Federally Enforceable SIP Requirement)
National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities
 - a. Permittee must, 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 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)



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Section V. Specific Operating Conditions (continued)

AA. Emission Unit S2.028 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities (continued)
 - b. Permittee must 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:
 - (1) Minimize **gasoline** spills. (40 CFR 63.11116(a)(1))
 - (2) Clean up spills as expeditiously as practicable. (40 CFR 63.11116(a)(2))
 - (3) Cover all open **gasoline** containers and all **gasoline** storage tank fill-pipes with a gasketed seal when not in use. (40 CFR 63.11116(a)(3))
 - (4) Minimize **gasoline** sent to open waste collection systems that collect and transport **gasoline** to reclamation and recycling devices, such as oil/water separators. (40 CFR 63.11116(a)(4))
 - c. Permittee must have records available within 24 hours of a request by the Director to document your **gasoline** throughput. (40 CFR 63.111176(~~eb~~))

******End of Specific Operating Conditions******



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Section VI. Continuous Emissions Monitoring System (CEMS) Conditions

A. Continuous Emissions Monitoring System (CEMS) Requirements for **S2.023** (NAC 445B.3405)

1. On or before the date of start-up of **S2.023**, the Permittee shall install, calibrate, operate, and maintain an SO₂ and NO_x CEMS in the exhaust stacks of **S2.023**. The CEMS sampling probe must be installed at an appropriate location in the exhaust stacks to accurately and continuously measure the concentration of SO₂ and NO_x (in input appropriate concentration unit) from **S2.023**, in accordance with the requirements prescribed in Nevada Administrative Code (NAC) 445B.256 to NAC 445B.267, applicable subparts 40 CFR Part 60 Appendix B and Appendix F. Verification of the operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices.
2. The Permittee shall install CEMS as specified under 40 CFR Part 60 Appendix B Performance Specification (PS) 2 Section 8.1. (40 CFR Part 60 Appendix B PS-2 Section 8.1)
3. The Permittee shall conduct Calibration Drift (CD) tests for 7 consecutive calendar days according to the procedure given in 40 CFR Part 60 Appendix B PS-2 Sections 8.3.2 through 8.3.4. Alternatively, the CD test may be conducted over 7 consecutive unit operating days. (40 CFR Part 60 Appendix B PS-2 Section 8.3.1)
4. The Permittee shall conduct a Relative Accuracy (RA) test according to the procedure given in 40 CFR Part 60 Appendix B PS-2 Sections 8.4.2 through 8.4.6. (40 CFR Part 60 Appendix B PS-2 Section 8.4.1)
5. At a minimum, the Permittee shall summarize in tabular form the results of the CD tests and the RA tests or alternative RA procedure, as appropriate. Include all data sheets, calculations, charts (records of CEMS responses), cylinder gas concentration certifications, and calibration cell response certifications (if applicable) necessary to confirm that the performance of the CEMS met the performance specifications. (40 CFR Part 60 Appendix B PS-2 Section 8.5)
6. The Permittee shall comply with the following method performance specifications (40 CFR Part 60 Appendix B PS-2 Section 13.0):
 - a. Calibration Drift
 - b. Relative Accuracy
7. The Permittee shall develop and implement a Quality Control (QC) program. As a minimum, each QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities (40 CFR Part 60 Appendix F Procedure 1 Section 3.0):
 - a. Calibration of CEMS
 - b. CD determination and adjustment of CEMS
 - c. Preventative maintenance of CEMS (including spare parts inventory)
 - d. Data recording, calculations, and reporting
 - e. Accuracy audit procedures including sampling and analysis methods
 - f. Program of corrective action for malfunctioning CEMS
8. The written procedures under **A.7.** of this section, must be kept on record and available for inspection by the Director. (40 CFR Part 60 Appendix F Procedure 1 Section 3.0)
9. The Permittee shall conduct a Calibration Drift Assessment according to 40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2. (40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2).
10. The Permittee shall record and report all CEMS data according to 40 CFR Part 60 Appendix F Procedure 1 Section 4.4. All measurements from the CEMS must be retained on file by the Permittee for at least 2 years. (40 CFR Part 60 Appendix F Procedure 1 Section 4.4)
11. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows (40 CFR Part 60 Appendix F Procedure 1 Section 5.1):
 - a. The Relative Accuracy Test (RATA) shall be conducted once every four calendar quarters. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.1)
 - b. The Cylinder Gas Audit (CGA) shall be conducted every quarter except when a RATA is conducted. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.2)



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section VI. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. Continuous Emissions Monitoring System (CEMS) Requirements for **S2.023** (NAC 445B.3405) (continued)

12. Unless specified otherwise in the applicable subpart, the Permittee shall comply with the relative accuracy criteria:

a. For RATA (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(1)):

- (1) For SO₂ and NO_x emissions, RA shall be less than or equal to 20% (if the value determined by the Reference Method (RM) is greater than 50% of the emission limit) or RA shall be less than or equal to 10% (if the value determined by the RM is less than 50% of the emission limit). (40 CFR Part 60 Appendix B PS-2 Section 13.2)

13.2 Relative Accuracy Performance Specification.

	Calculate . . .	RA criteria (%)
If average emissions during the RATA are ≥50% of emission standard	Use Eq. 2-6, with RM in the denominator	≤20.0
If average emissions during the RATA are <50% of emission standard	Use Eq. 2-6, emission standard in the denominator	≤10.0
For SO ₂ emission standards ≤130 but ≥86 ng/J (0.30 and 0.20 lb/million Btu)	Use Eq. 2-6, emission standard in the denominator	≤15.0
For SO ₂ emission standards <86 ng/J (0.20 lb/million Btu)	Use Eq. 2-6, emission standard in the denominator	≤20.0

b. For CGA ±15 percent of the average audit value ~~for~~ or ±5 ppm, whichever is greater. (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(2))

13. The Permittee shall conduct and report to the Director a quarterly audit as specified under 40 CFR Part 60 Appendix F Procedure 1 Section 7.0. (40 CFR Part 60 Appendix F Procedure 1 Section 7.0)

B. NAC 445B.265

Monitoring systems: Records; Reports

- 1. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.
- 2. The Permittee required to install a continuous monitoring system shall submit a written report of excess emissions to the Director for every calendar quarter. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter and must include the following information:
 - a. The magnitude of excess emissions computed in accordance with NAC 445B.256 to 445B.267, inclusive, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
 - b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the affected facility.
 - c. The nature and cause of any malfunction, if known, the corrective action taken or preventative measures adopted.
 - d. Specific identification of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of any repairs or adjustments that were made.
 - (1) When no excess emissions have occurred and the continuous monitoring system has not been inoperative, repaired or adjusted, such information shall be included in the report.



CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section VI. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. NAC 445B.265 (continued)

3. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain a file of all measurements, including:
 - a. Continuous monitoring systems, monitoring devices and performance testing measurements;
 - b. All continuous monitoring system performance evaluations;
 - c. All continuous monitoring systems or monitoring device calibration checks;
 - d. Adjustments and maintenance performed on these systems or devices; and
 - e. All other information required by NAC 445B.256 to 445B.267, inclusive, recorded in a permanent form suitable for inspection.
 - (1) The file shall be retained for at least 2 years following the date of the measurements, maintenance, reports and records.

******End of Continuous Emissions Monitoring System (CEMS) Conditions******



Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section VII. Emission Caps

A. Not Applicable

*****End of Emission Caps*****

DRAFT



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section VIII. Surface Area Disturbance Conditions

The surface area disturbance for the **Thacker Pass Project** is **5,545** acres.

A. Fugitive Dust (NAC 445B.22037) (*Federally Enforceable SIP Requirement*)

1. No person may cause or permit the handling, transporting or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.
2. Except as otherwise provided in subsection 4, no person may cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, “best practical methods” includes, but is not limited to, paving, chemical stabilization, watering, phased construction and revegetation.
3. Except as otherwise provided in subsection 4, no person may disturb or cover 5 acres or more of land or its topsoil until he has obtained an operating permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.
4. The provisions of subsections 2 and 3 do not apply to:
 - a. Agricultural activities occurring on agricultural land; or
 - b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

*****End of Surface Area Disturbance Conditions*****



CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section IX. Schedules of Compliance

A. Not Applicable

*****End of Schedule of Compliance *****

DRAFT



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section X. Amendments

This permit:

1. Is non-transferable. (NAC 445B.287.3) (*Federally Enforceable SIP Requirement*)
2. Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5) (*Federally Enforceable SIP Requirement*)
3. Will expire and be subject to renewal five (5) years from: MM DD, 2021 .
(NAC 445B.315) (*Federally Enforceable SIP Requirement*)
4. A completed application for renewal of an operating permit must be submitted to the Director on the form provided by him with the appropriate fee at least 70 calendar days before the expiration date of this operating permit. (NAC 445B.3473.2) (*Federally Enforceable SIP Requirement*)
5. Any person aggrieved by a final decision of the Department may, not later than 10 days after notice of the action of the Department, appeal the decision by filing a request for a hearing before the Commission on a form 3* with the State Environmental Commission, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249. *(See adopting agency for form.) (NAC 445B.890) (*State Only Requirement*)

THIS PERMIT EXPIRES ON: MM DD, 2021

Signature: _____

Issued by: [REDACTED]
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: _____ **Date:** MM DD, 2021



Class II Insignificant Activities List

Appended to Permit #AP1479-4334

Emission Unit #	Emission Unit Description
IA1.001	Ammonium Nitrate Prill Silo - Loading
IA1.002	Ammonium Nitrate Prill Silo - Unloading
IA1.003	Sulfuric Acid Plant Cooling Tower
IA1.004	Lithium Carbonate Cooling Tower
IA1.005	Splitter 1
IA1.006	Splitter 2
IA1.007	Splitter 3
IA1.008	Splitter 4
IA1.009	Splitter 5
IA1.010	Splitter 6
IA1.011	Crusher 1
IA1.012	Crusher 2
IA1.013	Crusher 3
IA1.014	Screen 1
IA1.015	Screen 2
IA1.016	Screen 3
IA1.017	Pulverizer 1
IA1.018	Pulverizer 2
IA1.019	Pulverizer 3
IA1.020	Diesel Tank, Off Road (Mine), 25,000 gallons
IA1.021	Diesel Tank, Highway (Mine), 8,000 gallons
IA1.022	Bulk Oil Tank, 20,000 gallons
IA1.023	Bulk Coolant Tank, 3,000 gallons
IA1.024	Bulk Used Oil Tank, 3,000 gallons
IA1.025	Bulk Used Coolant Tank, 3,000 gallons



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9349 • ndep.nv.gov/air

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA CORPORATION (HEREINAFTER REFERRED TO AS PERMITTEE)

Mailing Address: 3685 LAKESIDE DRIVE, RENO, NV 89509

Driving Directions: FROM OROVADA TRAVEL APPROXIMATELY 19 MILES WEST FROM THE US ROUTE 95 JUNCTION ON STATE ROUTE 293, THEN TURN NORTH (RIGHT) ONTO THE PROJECT MAIN ACCESS ROAD.

General Facility Location:

SECTIONS 1 AND 12, T 44 N, R 34 E, MDB&M
SECTIONS 2 – 17, T 44 N, R 35 E, MDB&M
SECTIONS 7, 8, 14 - 23, 29, T 44 N, R 36 E, MDB&M
HA 30A – KINGS RIVER VALLEY/RIO KING
HA 33A – QUINN RIVER VALLEY/OROVADA
HUMBOLDT COUNTY
NORTH 4,616,776 M, EAST 413,910 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 1 - Ore Handling Circuit

- PF1.001 ROM Feed Hopper 1 Loading
- PF1.002 ROM Feed Hopper 1 transfer to Sizer Feed Conveyor (via feed belt)
- PF1.003 ROM Feed Hopper 2 loading
- PF1.004 ROM Feed Hopper 2 transfer to Sizer Feed Conveyor (via feed belt)

B. System 2 - Mineral Sizer

- PF1.005 Mineral Sizer and Associated Transfers (In: Sizer Feed Conveyor, Out: Scrubber Feed Conveyor)

C. System 3 - Attrition Scrubber Feed

- PF1.006 Scrubber Feed Conveyor to Attrition Scrubber (wet process)

D. System 4 - Oversize Material Handling Circuit

- PF1.007 Wet Screen to Oversize Stacker
- PF1.008 Oversize Stacker to Oversize Stockpile

E. System 5 - Gangue Handling Circuit

- PF1.009 Gangue Dewatering Screen to Gangue Conveyor
- PF1.010 Gangue Conveyor to Gangue Stacker
- PF1.011 Gangue Stacker to Gangue Stockpile

F. System 6 - Leach Tanks

- S2.001 Leach Tank 1
- S2.002 Leach Tank 2
- S2.003 Leach Tank 3

G. System 7 - Neutralization Filter Vents

- S2.004 Neutralization Filter Vent 1
- S2.005 Neutralization Filter Vent 2
- S2.006 Neutralization Filter Vent 3
- S2.007 Neutralization Filter Vent 4



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Emission Unit List: (continued)

H. System 8 - Neutralization Filter Filtrate Blow Vent

S2.008 Neutralization Filter Filtrate Blow Vent

I. System 9 – Tailings Feed Circuit

PF1.012 Neutralization Filter 1 to Discharge Feeder 1
PF1.013 Discharge Feeder 1 to Tailings Collection Conveyor
PF1.014 Neutralization Filter 2 to Discharge Feeder 2
PF1.015 Discharge Feeder 2 to Tailings Collection Conveyor
PF1.016 Neutralization Filter 3 to Discharge Feeder 3
PF1.017 Discharge Feeder 3 to Tailings Collection Conveyor
PF1.018 Neutralization Filter 4 to Discharge Feeder 4
PF1.019 Discharge Feeder 4 to Tailings Collection Conveyor

J. System 10 - Tailings Collection

PF1.020 Tailings Collection Conveyor to Tailings Conveyor 1

K. System 11 - Tailings Stacking

PF1.021 Tailings Conveyor 1 to Tailings Stacker
PF1.022 Tailings Stacker to Clay Tailings Filter Stack

L. System 12 - Sulfate Tailings Circuit

PF1.023 Na/K Sulfate Centrifuge discharge to Na/K Conveyor 1
PF1.024 Na/K Conveyor 1 transfer to Na/K Conveyor 2
PF1.025 Na/K Conveyor 2 to Tailings Collection Conveyor

M. System 13 - Magnesium Precipitation Filter Vents

S2.009 Magnesium Precipitation Filter Vent 1
S2.010 Magnesium Precipitation Filter Vent 2

N. System 14 - Magnesium Precipitation Filter Filtrate Blow Vent

S2.011 Magnesium Precipitation Filter Filtrate Blow Vent

O. System 15 - Lithium Carbonate Dryer

S2.012 Lithium Carbonate Dryer

P. System 16 - Lithium Carbonate Material Handling

S2.013 Lithium Carbonate Material Handling

Q. System 17 - Lithium Carbonate Storage Bin

S2.014 Lithium Carbonate Storage Bin Loading

R. System 18 - Lithium Carbonate Packaging

S2.015 Lithium Carbonate Packaging

S. System 19 - Lime Silo

S2.016 Truck transfer of Lime to Underground Hopper
S2.017 Underground Hopper and transfer to Silo (silo unloading through sealed transfers)



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Emission Unit List: (continued)

T. System 20 - Soda Ash Silo

S2.018 Soda Ash Silo loading (silo unloading through sealed transfers)

U. System 21 - Sulfur Storage

S2.019 Sulfur Storage 1

S2.020 Sulfur Storage 2

V. System 22 - Package Boiler

S2.021 Package Boiler

W. System 23 - Start-Up Burner

S2.022 Start-Up Burner

X. System 24 - Sulfuric Acid Plant

S2.023 Sulfuric Acid Plant

Y. System 25 - Fire Pumps

S2.024 Fire Pump 1 (Mine, 422 hp, John Deere, 2015 or newer)

S2.025 Fire Pump 2 (Process, 422 hp, John Deere, 2015 or newer)

Z. System 26 - Emergency Generators

S2.026 Emergency Generator 1 (Mine, 168 hp, Generac, 2009 or newer)

S2.027 Emergency Generator 2 (Mine, 168 hp, Generac, 2009 or newer)

AA. System 27 - Gasoline Tank

S2.028 Gasoline Tank, 1,000 gallons

******End of Emission Unit List******



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions

- A. Prohibited acts; penalty; establishment of violation; request for prosecution (NRS 445B.470) (*State Only Requirement*)
1. A person shall not knowingly:
 - a. Violate any applicable provision, the terms or conditions of any permit or any provision for the filing of information;
 - b. Fail to pay any fee;
 - c. Falsify any material statement, representation or certification in any notice or report; or
 - d. Render inaccurate any monitoring device or method, required pursuant to the provisions of NRS 445B.100 to 445B.450, inclusive, or 445B.470 to 445B.640, inclusive, or any regulation adopted pursuant to those provisions.
 2. Any person who violates any provision of subsection 1 shall be punished by a fine of not more than \$10,000 for each day of the violation.
 3. The burden of proof and degree of knowledge required to establish a violation of subsection 1 are the same as those required by 42 U.S.C. § 7413(c), as that section existed on October 1, 1993.
 4. If, in the judgment of the Director of the Department or the Director's designee, any person is engaged in any act or practice which constitutes a criminal offense pursuant to NRS 445B.100 to 445B.640, inclusive, the Director of the Department or the designee may request that the Attorney General or the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
 5. If, in the judgment of the control officer of a local air pollution control board, any person is engaged in such an act or practice, the control officer may request that the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
- B. Visible emissions: Maximum opacity; determination and monitoring of opacity (NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
1. Except as otherwise provided in this section and NAC 445B.2202, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:
 - a. If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A of 40 CFR Part 60.
 - b. If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 CFR 60.13(h).
 2. The provisions of this section and NAC 445B.2202 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.
 3. If the provisions of 40 CFR Part 60, Subpart D or Da apply to an emission unit, the emission unit must be allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR 60.42(a)(2) and 40 CFR 60.42a(b).
 4. The continuous monitoring system for monitoring opacity at a facility must be operated and maintained by the owner or operator specified in the permit for the facility in accordance with NAC 445B.256 to 445B.267, inclusive.
- C. Visible emissions: Exceptions for stationary sources (NAC 445B.2202) (*Federally Enforceable SIP Requirement*)
- The provisions of NAC 445B.22017 do not apply to:
1. Smoke from the open burning described in NAC 445B.22067;
 2. Smoke discharged in the course of training air pollution control inspectors to observe visible emissions, if the facility has written approval of the Commission;
 3. Emissions from an incinerator as set forth in NAC 445B.2207; or
 4. Emissions of stationary diesel-powered engines during warm-up for not longer than 15 minutes to achieve operating temperatures.



Bureau of Air Pollution Control

Facility ID No. A1270

Permit No. AP1479-4334

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions (continued)

D. Odors (NAC 445B.22087) (*State Only Requirement*)

1. No person may discharge or cause to be discharged, from any stationary source, any material or regulated air pollutant which is or tends to be offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents the comfortable enjoyment of life or property.
2. The Director shall investigate an odor when 30 percent or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy. The sample must be at least 20 people or 75 percent of those exposed if fewer than 20 people are exposed.
3. The Director shall deem the odor to be a violation if he or she is able to make two odor measurements within a period of 1 hour. These measurements must be separated by at least 15 minutes. An odor measurement consists of a detectable odor after the odorous air has been diluted with eight or more volumes of odor-free air.

E. Prohibited Conduct: Concealment of Emissions (NAC 445B.225) (*Federally Enforceable SIP Requirement*)

No person may install, construct or use any device which conceals any emission without reducing the total release of regulated air pollutants to the atmosphere.

F. Prohibited conduct: Operation of source without required equipment; removal or modification of required equipment; modification of required procedure (NAC 445B.227) (*Federally Enforceable SIP Requirement*)

Except as otherwise provided in NAC 445B.001 to 445B.390, inclusive, no person may:

1. Operate a stationary source of air pollution unless the control equipment for air pollution which is required by applicable requirements or conditions of this Operating Permit is installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the permit.

G. Excess Emissions (NAC 445B.232) (*State Only Requirement*)

1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive, must be approved in advance by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. Each owner or operator shall notify the Director of the proposed time and expected duration at least 30 days before any scheduled maintenance or testing which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled maintenance or testing must not be conducted unless the scheduled maintenance or testing is approved pursuant to subsection 1.
3. Each owner or operator shall notify the Director of the proposed time and expected duration at least 24 hours before any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled repairs must not be conducted unless the scheduled repairs are approved pursuant to subsection 1.
4. Each owner or operator shall notify the Director of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during start-up or shutdown of that equipment.



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions (continued)

G. Excess Emissions (NAC 445B.232) (*State Only Requirement*) (continued)

5. Each owner or operator shall provide the Director, within 15 days after any malfunction, upset, start-up, shutdown or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
 - a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
 - b. The estimated magnitude of the excess emissions expressed in opacity or in the units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
 - c. The time and duration of the excess emissions.
 - d. The identity of the equipment causing the excess emissions.
 - e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
 - f. The steps taken to limit the excess emissions.
 - g. Documentation that the equipment for controlling air pollution, process equipment or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.
6. Each owner or operator shall ensure that any notification or related information submitted to the Director pursuant to this section is provided in a format specified by the Director.

H. Testing and Sampling (NAC 445B.252) (*Federally Enforceable SIP Requirement*)

1. To determine compliance with NAC 445B.001 to 445B.390, inclusive, before the approval or the continuance of an operating permit or similar class of permits, the Director may either conduct or order the owner of any stationary source to conduct or have conducted such testing and sampling as the Director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the Director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial start-up of the facility and at such other times as may be required by the Director.
2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the Director:
 - a. Specifies or approves, in specific cases, the use of a method of reference with minor changes in methodology;
 - b. Approves the use of an equivalent method;
 - c. Approves the use of an alternative method, the results of which the Director has determined to be adequate for indicating whether a specific stationary source is in compliance; or
 - d. Waives the requirement for tests of performance because the owner or operator of a stationary source has demonstrated by other means to the Director's satisfaction that the affected facility is in compliance with the standard.
3. Tests of performance must be conducted under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the Director such records as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a performance test unless otherwise specified in the applicable standard.
4. The owner or operator of an affected facility shall give notice to the Director 30 days before the test of performance to allow the Director to have an observer present. A written testing procedure for the test of performance must be submitted to the Director at least 30 days before the test of performance to allow the Director to review the proposed testing procedures.
5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must 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 means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the Director's approval.
6. All testing and sampling will be performed in accordance with recognized methods and as specified by the Director.



Bureau of Air Pollution Control

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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions (continued)

H. Testing and Sampling (NAC 445B.252) (*Federally Enforceable SIP Requirement*) (continued)

7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power and other pertinent allied facilities as may be required and specified in writing by the Director must be provided and paid for by the owner of the stationary source.
8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of these regulations, and copies of these results must be provided to the Director no later than 60 days after the testing or sampling, or both.
9. Notwithstanding the provisions of subsection 2, the Director shall not approve an alternative method or equivalent method to determine compliance with a standard or emission limitation contained in Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations for:
 - a. An emission unit that is subject to a testing requirement pursuant to Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations; or
 - b. An affected source.

I. Permit Revision (NAC 445B.287(1)(b)) (*Federally Enforceable SIP Requirement*)

If a stationary source is a Class II source, a revision of the operating permit or the permit to construct is required pursuant to the requirements of NAC 445B.3465 before the stationary source may be modified.

J. Violations: Acts constituting notice (NAC 445B.275) (*Federally Enforceable SIP Requirement*)

1. Failure to comply with any requirement of NAC 445B.001 to 445B.390, inclusive, any applicable requirement or any condition of an operating permit constitutes a violation. As required by NRS 445B.450, the Director shall issue a written notice of an alleged violation to any owner or operator for any violation, including, but not limited to:
 - a. Failure to apply for and obtain an operating permit;
 - b. Failure to construct a stationary source in accordance with the application for an operating permit as approved by the Director;
 - c. Failure to construct or operate a stationary source in accordance with any condition of an operating permit;
 - d. Commencing construction or modification of a stationary source without applying for and receiving an operating permit or a modification of an operating permit as required by NAC 445B.001 to 445B.3477, inclusive, or a mercury operating permit to construct as required by NAC 445B.3611 to 445B.3689, inclusive;
 - e. Failure to comply with any requirement for recordkeeping, monitoring, reporting or compliance certification contained in an operating permit; or
 - f. Failure to pay fees as required by NAC 445B.327 or 445B.3689.
2. The written notice must specify the provision of NAC 445B.001 to 445B.390, inclusive, the condition of the operating permit or the applicable requirement that is being violated.
3. Written notice shall be deemed to have been served if delivered to the person to whom addressed or if sent by registered or certified mail to the last known address of the person.

K. Operating permits: Imposition of more stringent standards for emissions (NAC 445B.305)

(*Federally Enforceable SIP Requirement*)

1. The Director may impose standards for emissions on a proposed stationary source that are more stringent than those found in NAC 445B.001 to 445B.390, inclusive, as a condition of approving an operating permit for the proposed stationary source.



Bureau of Air Pollution Control

Facility ID No. A1270

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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions (continued)

- L. Contents of operating permits: Exception for operating permits to construct; required conditions (NAC 445B.315)
(Federally Enforceable SIP Requirement)
1. Notwithstanding any provision of this section to the contrary, the provisions of this section do not apply to operating permits to construct.
 2. The Director shall cite the legal authority for each condition contained in an operating permit.
 3. An operating permit must contain the following conditions:
 - a. The term of the operating permit is 5 years.
 - b. The holder of the operating permit shall retain records of all required monitoring data and supporting information for 5 years after the date of the sample collection, measurement, report or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.
 - c. Each of the conditions and requirements of the operating permit is severable, and if any are held invalid, the remaining conditions and requirements continue in effect.
 - d. The holder of the operating permit shall comply with all conditions of the operating permit. Any noncompliance constitutes a violation and is a ground for:
 - (1) An action for noncompliance;
 - (2) Revising, revoking, reopening and revising, or terminating the operating permit by the Director; or
 - (3) Denial of an application for a renewal of the operating permit by the Director.
 - e. The need to halt or reduce activity to maintain compliance with the conditions of the operating permit is not a defense to noncompliance with any condition of the operating permit.
 - f. The Director may revise, revoke and reissue, reopen and revise, or terminate the operating permit for cause.
 - g. The operating permit does not convey any property rights or any exclusive privilege.
 - h. The holder of the operating permit shall provide the Director, in writing and within a reasonable time, with any information that the Director requests to determine whether cause exists for revising, revoking and reissuing, reopening and revising, or terminating the operating permit, or to determine compliance with the conditions of the operating permit.
 - i. The holder of the operating permit shall pay fees to the Director in accordance with the provisions set forth in NAC 445B.327 and 445B.331.
 - j. The holder of the operating permit shall allow the Director or any authorized representative, upon presentation of credentials, to:
 - (1) Enter upon the premises of the holder of the operating permit where:
 - (a) The stationary source is located;
 - (b) Activity related to emissions is conducted; or
 - (c) Records are kept pursuant to the conditions of the operating permit;
 - (2) Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the operating permit;
 - (3) Inspect, at reasonable times, any facilities, practices, operations or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the operating permit; and
 - (4) Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the operating permit or applicable requirements.
 - k. A responsible official of the stationary source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of the operating permit are true, accurate and complete.



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section I. General Provisions (continued)

- M. Operating permits: Assertion of emergency as affirmative defense to action for noncompliance (NAC 445B.326) *(State Only Requirement)*
1. A holder of an operating permit may assert an affirmative defense to an action brought for noncompliance with a technology-based emission limitation contained in the operating permit if the holder of the operating permit demonstrates through signed, contemporaneous operating logs or other relevant evidence, that:
 - a. An emergency occurred and the holder of the operating permit can identify the cause of the emergency;
 - b. The facility was being properly operated at the time of the emergency;
 - c. During the emergency, the holder of the operating permit took all reasonable steps to minimize excess emissions; and
 - d. The holder of the operating permit submitted notice of the emergency to the Director within 2 working days after the emergency. The notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken to restore the normal operation of the facility.
 2. In any action for noncompliance, the holder of an operating permit who asserts the affirmative defense of an emergency has the burden of proof.
- N. Operating permits: Revocation and reissuance (NAC 445B.3265) *(State Only Requirement)*
1. An operating permit may be revoked if the control equipment is not operating.
 2. An operating permit may be revoked by the Director upon determining that there has been a violation of NAC 445B.001 to 445B.390, inclusive, or the provisions of 40 CFR 52.21, or 40 CFR Part 60 or 61, Prevention of Significant Deterioration, New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants, adopted by reference in NAC 445B.221.
 3. The revocation is effective 10 days after the service of a written notice, unless a hearing is requested.
 4. To reissue a revoked operating permit, the holder of the revoked permit must file a new application with the Director, accompanied by the fee for an initial operating permit as specified in NAC 445B.327. An environmental review of the stationary source must be conducted as though construction had not yet commenced.
- O. Required contents of permit (NAC 445B.346) *(Federally Enforceable SIP Requirement)*
- In addition to the conditions set forth in NAC 445B.315, Class II operating permits must contain, as applicable:
1. Emission limitations and standards, including those operational requirements and limitations that ensure compliance with the conditions of the operating permit.
 2. All requirements for monitoring, testing and reporting that apply to the stationary source.
 3. A requirement that the owner or operator of the stationary source promptly report any deviations from any requirements of the operating permit.
 4. The terms and conditions for any reasonably anticipated alternative operating scenarios identified by the owner or operator of the stationary source in his or her application and approved by the Director. Such terms and conditions must require the owner or operator to keep a contemporaneous log of changes from one alternative operating scenario to another.
 5. A schedule of compliance for stationary sources that are not in compliance with any applicable requirement or NAC 445B.001 to 445B.390, inclusive, at the time the operating permit is issued, including:
 - a. Semiannual progress reports and a schedule of dates for achieving milestones;
 - b. Prior notice of and explanations for missed deadlines; and
 - c. Any preventive or corrective measures taken.

****End of General Provisions****



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section II. General Monitoring, Recordkeeping, and Reporting Conditions

A. Records Retention (NAC 445B.315(3)(b)) (*Federally Enforceable SIP Requirement*)

The holder of the operating permit shall retain records of all required monitoring data and supporting information for 5 years after the date of the sample collection, measurement, report or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

B. Deviations (NAC 445B.346(3)) (*Federally Enforceable SIP Requirement*)

Under the authority of NAC 445B.346(3), and in addition to the conditions set forth in NAC 445B.315, the owner or operator of the stationary source shall promptly report to the Director any deviations from the requirements of the operating permit. The report to the Director shall include the probable cause of all deviations and any action taken to correct the deviations. For the operating permit, prompt is defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 as reproduced in Section I.G.

E-mail notifications to: eenotify@ndep.nv.gov

C. Yearly Reports (NAC 445B.315(3)(h), NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

Under the authority of NAC 445B.315(3)(h) and NAC 445B.346(2), the Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, and emissions. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year.

******End of General Monitoring, Recordkeeping, and Reporting Conditions******



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section III. General Construction Conditions

A. Notification (NAC 445B.250; NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

Under the authority of NAC 445B.250 and NAC 445B.346; the Director shall be notified in writing of the following for PF1.001 through PF1.025 and S2.001 through S2.028:

1. The date construction (or reconstruction as defined under NAC 445B.247) of the affected facility is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
2. The anticipated date of initial startup of an affected facility, postmarked no more than 60 days and no less than 30 days prior to such date.
3. The actual date of initial startup of the affected facility, postmarked within 15 days after such date.
4. The date upon which demonstration of the continuous monitoring system performance commences in accordance with NAC 445B.256 to 445B.267, inclusive. Notification must be postmarked not less than 30 days before such date.

******End of General Construction Conditions******



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Section IV. Specific Construction Requirements

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(Federally Enforceable SIP Requirement)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:

Table IV-1: Initial Opacity Compliance Demonstration

System	Emission Units	Pollutant To Be Tested	Testing Methods/Procedures
System 1 - Ore Handling Circuit	PF1.001 and PF1.003	Opacity	Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.
System 4 - Oversize Material Handling Circuit	PF1.007 - PF1.008		
System 5 - Gangue Handling Circuit	PF1.009 – PF1.011		
System 6 - Leach Tanks	S2.001 – S2.003		
System 7 - Neutralization Filter Vents	S2.004 – S2.007		
System 8 - Neutralization Filter Filtrate Blow Vent	S2.008		
System 9 - Tailings Feed Circuit	PF1.012 - PF1.019		
System 10 - Tailings Collection	PF1.020		
System 11 - Tailings Stacking	PF1.021 - PF1.022		
System 12 - Sulfate Tailings Circuit	PF1.023 - PF1.025		
System 13 - Magnesium Precipitation Filter Vents	S2.009 – S2.010		
System 14 - Magnesium Precipitation Filter Filtrate Blow Vent	S2.011		
System 15 - Lithium Carbonate Dryer	S2.012		
System 16 - Lithium Carbonate Material Handling	S2.013		
System 17 - Lithium Carbonate Storage Bin	S2.014		
System 18 - Lithium Carbonate Packaging	S2.015		
System 19 - Lime Silo	S2.016 – S2.017		
System 20 - Soda Ash Silo	S2.018		
System 21 - Sulfur Storage	S2.019 – S2.020		
System 22 - Package Boiler	S2.021		
System 23 - Start-Up Burner	S2.022		
System 24 - Sulfuric Acid Plant	S2.023		
System 25 - Fire Pumps	S2.024 – S2.025		
System 26 - Emergency Generators	S2.026 – S2.027		



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:
(continued)

Table IV-1: Initial Opacity Compliance Demonstration (continued)

System	Emission Units	Pollutant To Be Tested	Testing Methods/Procedures
System 1 - Ore Handling Circuit	PF1.002 and PF1.004	Opacity	Method 9 in Appendix A-4 of 40 CFR Part 60.11 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations must be 30 minutes (five 6-minute averages).
System 2 - Mineral Sizer	PF1.005		
System 3 - Attrition Scrubber Feed	PF1.006		

Table IV-2: Initial Performance Tests

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 4 - Oversize Material Handling Circuit	PF1.008	Moisture Content of Material	Material sample to be taken from drop location and analyzed for moisture content. Moisture content shall be equal to or exceed 4% moisture.
System 5 - Gangue Handling Circuit	PF1.011		
System 9 – Tailings Feed Circuit	PF1.013, PF1.015, PF1.017, and PF1.019		
J. System 10 - Tailings Collection	PF1.020		
System 11 - Tailings Stacking	PF1.022		



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(*Federally Enforceable SIP Requirement*) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:
(continued)

Table IV-2: Initial Performance Tests (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 6 - Leach Tanks	S2.001 – S2.003	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		H ₂ SO ₄	Method 8 in Appendix A of 40 CFR Part 60 and Conditional Test Method CTM-013 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:
(continued)

Table IV-2: Initial Performance Tests (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 8 – Neutralization Filter Filtrate Blow Vent	S2.008	TDS Content	Sample TDS concentration in percent by weight. The TDS shall be determined by sampling methods approved in advance by the director
System 14 – Magnesium Precipitation Filter Filtration Blow Vents	S2.011		

Table IV-2: Initial Performance Tests (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 15 – Lithium Carbonate Dryer	S2.012	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
System 18 – Lithium Carbonate Packaging	S2.015	PM ₁₀ /PM _{2.5}	Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
System 19 – Lime Silo	S2.016 – S2.017		The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM _{2.5} for determination of compliance.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below:
(continued)

Table IV-2: Initial Performance Tests

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 21 – Sulfur Storage	S2.019 – S2.020	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		SO ₂	Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
		H ₂ S	Method 15 in Appendix A of 40 CFR Part 60 shall be used to determine the hydrogen sulfide concentration. Each test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

Table IV-2: Initial Performance Tests (continued)

System	Emission Units	Pollutants To Be Tested	Testing Methods/Procedures
System 22 – Package Boiler	S2.021	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
System 23 – Start-Up Burner	S2.022	NO _x	Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
		CO	Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.
		VOC	Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(s). Each Method 25A test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2)) (Federally Enforceable SIP Requirement) (continued)

1. Under the authority of NAC 445B.22017, NAC 445B.252, and NAC 445B.346, the Permittee, upon issuance of this operating permit, shall conduct initial opacity compliance demonstrations and/or initial performance tests within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup. The Permittee shall follow the test methods and procedures referenced in Table IV-1 and Table IV-2 below: (continued)

Table IV-2: Initial Performance Tests

System	Emission Unit	Pollutants To Be Tested	Testing Methods/Procedures
System 24 - Sulfuric Acid Plant	S2.023	PM	Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
		PM ₁₀ /PM _{2.5}	Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM ₁₀ and PM _{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM _{2.5} for determination of compliance.
		SO ₂	Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
		NO _x	Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
		H ₂ SO ₄	Method 8 in Appendix A of 40 CFR Part 60 and Conditional Test Method CTM-013 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.



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Section IV. Specific Construction Requirements (continued)

- A. Initial Opacity Compliance Demonstration and Initial Performance Tests (NAC 445B.22017, NAC 445B.252, NAC 445B.346(2))
(*Federally Enforceable SIP Requirement*) (continued)
2. All initial opacity compliance demonstrations and initial performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of **Section I.H. Testing and Sampling** (NAC 445B.252) of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All initial performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B.252(5))
 3. Testing shall be conducted on the exhaust stack (post controls).
 4. Initial opacity compliance demonstrations and initial performance tests, as specified in Table IV-1 and Table IV-2 above, must be conducted under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the initial opacity compliance demonstrations and initial performance tests. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of the initial opacity compliance demonstrations and initial performance tests unless otherwise specified in the applicable standard. (NAC 445B.252(3))
 5. The Permittee shall give notice to the Director 30 days before the initial opacity compliance demonstrations and initial performance tests to allow the Director to have an observer present. A written testing procedure must be submitted to the Director at least 30 days before the initial opacity compliance demonstrations and initial performance tests to allow the Director to review the proposed testing procedures. (NAC 445B.252(4) and 40 CFR Part 60.7(a)(6))
 6. Within 60 days after completing the initial opacity compliance demonstrations and initial performance tests contained in Table IV-1 and Table IV-2 of this section, the Permittee shall furnish the Director a written report of the results. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.390, inclusive. (NAC 445B.252(8))
 7. Initial opacity compliance demonstrations and initial performance tests required under this section that are conducted below the maximum allowable throughput, shall be subject to the Director's review to determine if the throughputs during the initial opacity compliance demonstrations and initial performance tests were sufficient to provide adequate compliance demonstration. Should the Director determine that the initial opacity compliance demonstrations and initial performance tests do not provide adequate compliance demonstration, the Director may require additional testing.

******End of Specific Construction Requirements******



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Section V. Specific Operating Conditions

A. Emission Units PF1.001 through PF1.004

System 1 - Ore Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.001	ROM Feed Hopper 1 Loading	4,617,041	411,344
PF1.002	ROM Feed Hopper 1 transfer to Sizer Feed Conveyor (via feed belt)	4,617,041	411,344
PF1.003	ROM Feed Hopper 2 loading	4,617,034	411,356
PF1.004	ROM Feed Hopper 2 transfer to Sizer Feed Conveyor (via feed belt)	4,617,034	411,356

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
PF1.001 through PF1.004, each, have no add-on controls.

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **PF1.001 through PF1.004, each**, shall not exceed **480.0 tons of Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) **PF1.001 through PF1.004, each**, may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **PF1.001 through PF1.004, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **1.44 pounds** per hour, nor more than **6.31 tons** per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.53 pounds** per hour, nor more than **2.31 tons** per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.087 pounds** per hour, nor more than **0.38 tons** per 12-month rolling period.
 - d. The opacity from **PF1.001 and PF1.003, each**, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **PF1.001 through PF1.004, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **PF1.001 through PF1.004, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. The Permittee, upon issuance of this operating permit, 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))



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

A. Emission Units PF1.001 through PF1.004 (continued)

5. Federal Requirements (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)

a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which PF1.002 and PF1.004 will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

- (1) Process fugitive emissions from PF1.002 and PF1.004, each, will not exceed 7 percent opacity. (40 CFR Part 60.672(b)).
 - (2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))
- b. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))
- c. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate PF1.002 and PF1.004, each, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))
- d. A repeat performance test according to 40 CFR Part 60.11 of this part and 40 CFR Part 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in 40 CFR Part 60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement. (40 CFR 60.672, Table 3)



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Section V. Specific Operating Conditions (continued)

B. Emission Units PF1.005

System 2 - Mineral Sizer		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.005	Mineral Sizer and Associated Transfers (In: Sizer Feed Conveyor, Out: Scrubber Feed Conveyor)	4,616,990	411,439

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.005 shall be controlled by **Water Sprays**.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.005 shall not exceed **960.0** tons of **Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.005 may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.005 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **1.30** pounds per hour, nor more than **5.68** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.58** pounds per hour, nor more than **2.52** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.42** tons per year.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.005 on a daily basis.
 - b. Monitor and record the hours of operation for PF1.005 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Water Sprays** controlling PF1.005 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. The Permittee of any affected facility that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must 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 must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken.
 - f. The Permittee, upon issuance of this operating permit, 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))



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Section V. Specific Operating Conditions (continued)

B. Emission Units PF1.005 (continued)

5. Federal Requirements (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)

a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which PF1.005 will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

- (1) Process fugitive emissions from PF1.005 will not exceed **12 percent** opacity. (40 CFR Part 60.672(b)).
- (2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))

b. The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b). (40 CFR 60.674(b))

c. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))

d. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate PF1.005 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))



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Section V. Specific Operating Conditions (continued)

C. Emission Units PF1.006

System 3 - Attrition Scrubber Feed		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.006	Scrubber Feed Conveyor to Attrition Scrubber (wet process)	4,616,998	411,444

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
Emissions from PF1.006 shall be controlled by **Water Sprays**.
2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for PF1.006 shall not exceed **960.0** tons of **Ore** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.006 may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.006 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.72** pounds per hour, nor more than **3.15** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.26** pounds per hour, nor more than **1.16** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.044** pounds per hour, nor more than **0.19** tons per year.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.006 on a daily basis.
 - b. Monitor and record the hours of operation for PF1.006 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Water Sprays** controlling PF1.006 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. The Permittee of any affected facility that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must 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 must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken.
 - f. The Permittee, upon issuance of this operating permit, 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))



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Section V. Specific Operating Conditions (continued)

C. Emission Units PF1.006 (continued)

5. Federal Requirements (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60.670)
 - a. Emission Limits (40 CFR Part 60.672, Table 3)

On and after the sixtieth day after achieving the maximum production rate at which PF1.006 will be operated, but not later than 180 days after initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:

 - (1) Process fugitive emissions from PF1.006 will not exceed 7 percent opacity. (40 CFR Part 60.672(b)).
 - (2) The opacity standard set forth in this part shall apply at all times except during period of startup, shutdown, and malfunction, and as otherwise provided in the applicable standard. (40 CFR 60.11(c))
 - b. The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform **monthly** periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b). (40 CFR 60.674(b))
 - c. Notifications and reports required under Subpart OOO and under subpart A of 40 CFR Part 60 to demonstrate compliance with Subpart OOO need only to be sent to the Director. (40 CFR 60.676(k))
 - d. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate PF1.006 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR Part 60.11(d))



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Section V. Specific Operating Conditions (continued)

D. Emission Units PF1.007 and PF1.008

System 4 - Oversize Material Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.007	Wet Screen to Oversize Stacker	4,617,033	411,464
PF1.008	Oversize Stacker to Oversize Stockpile	4,617,011	411,505

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.007 and PF1.008, each, shall be controlled by Moisture Carryover.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.007 and PF1.008, each, shall not exceed 16.0 tons of Gangue per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.007 and PF1.008, each, operate a total of 24 hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.007 and PF1.008, each, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.0072 pounds per hour, nor more than 0.032 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.0026 pounds per hour, nor more than 0.012 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.00040 pounds per hour, nor more than 0.0018 tons per year.
 - d. The opacity from PF1.007 and PF1.008, each, shall not equal or exceed 20 percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.007 and PF1.008, each, on a daily basis.
 - b. Monitor and record the hours of operation for PF1.007 and PF1.008, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.007 and PF1.008, each, on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

E. Emission Units PF1.009 through PF1.011

System 5 – Gangue Handling Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.009	Gangue Dewatering Screen to Gangue Conveyor	4,617,236	414,414
PF1.010	Gangue Conveyor to Gangue Stacker	4,617,280	414,458
PF1.011	Gangue Stacker to Gangue Stockpile	4,617,326	414,453

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.009 through PF1.011, each, shall be controlled by Moisture Carryover.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.009 through PF1.011, each, shall not exceed 430.0 tons of Gangue per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.009 through PF1.011, each, may operate a total of 24 hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.009 through PF1.011, each, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.19 pounds per hour, nor more than 0.85 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.071 pounds per hour, nor more than 0.31 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.011 pounds per hour, nor more than 0.047 tons per year.
 - d. The opacity from PF1.009 through PF1.011, each, shall not equal or exceed 20 percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.009 through PF1.011, each, on a daily basis.
 - b. Monitor and record the hours of operation for PF1.009 through PF1.011, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.009 through PF1.011, each, on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

F. Emission Units S2.001 through S2.003

System 6 - Leach Tanks		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.001	Leach Tank 1	4,617,186	414,430
S2.002	Leach Tank 2	4,617,186	414,430
S2.003	Leach Tank 3	4,617,186	414,430

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **S2.001 through S2.003, combined**, shall be controlled by a **Wet Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 60 feet
 Stack Diameter: 2.5 feet
 Stack Temperature: 180 °F
 Exhaust Flow: 13,869 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.001 through S2.003, each**, shall not exceed **1,080.0 tons of Slurry** per any one-hour period averaged over a daily basis.
 - b. **S2.001 through S2.003, each**, shall not exceed the following parameters:
 - (1) The maximum TDS (Total Dissolved Solids) concentration of outlet leach solution shall not exceed **26 percent**.
 - (2) The maximum H₂SO₄ (Sulfuric Acid) concentration of outlet leach solution shall not exceed **5 percent**.
 - c. Hours
 - (1) **S2.001 through S2.003, each**, may operate a total of **24 hours per day**.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.001 through S2.003, combined**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.30 pounds per hour**, nor more than **1.33 tons per year**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.30 pounds per hour**, nor more than **1.33 tons per year**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.30 pounds per hour**, nor more than **1.33 tons per year**.
 - d. The discharge of **H₂SO₄** to the atmosphere shall not exceed **0.058 pounds per hour**, nor more than **0.26 tons per year**.
 - e. The opacity from **S2.001 through S2.003, each**, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.001 through S2.003, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.001 through S2.003, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Sample the outlet leach solution of **S2.001 through S2.003, combined**, on a quarterly basis for the TDS concentration in percent. The TDS shall be determined by sampling methods approved in advance by the Director.



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Section V. Specific Operating Conditions (continued)

F. Emission Units S2.001 through S2.003 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - e. Sample the outlet leach solution of S2.001 through S2.003, combined, on a quarterly basis for the H₂SO₄ concentration in percent. The H₂SO₄ shall be determined by sampling methods approved in advance by the Director.
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the stack of the Wet Scrubber controlling S2.001 through S2.003 on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the Wet Scrubber installed on S2.001 through S2.003 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct annual performance testing within 90 days of the anniversary date of the previous initial performance testing or annual performance testing, and annually thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM_{2.5} for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 8 in Appendix A of 40 CFR Part 60 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - e. The Method 8 test required in this section may be replaced by a Conditional Test Method CTM-013 test based on prior approval from the Administrator. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

G. Emission Units S2.004 through S2.007

System 7 - Neutralization Filter Vents		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.004	Neutralization Filter Vent 1	4,617,143	414,474
S2.005	Neutralization Filter Vent 2	4,617,145	414,477
S2.006	Neutralization Filter Vent 3	4,617,149	414,480
S2.007	Neutralization Filter Vent 4	4,617,152	414,483

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.004 through S2.007, each**, shall be controlled by **Mist Eliminator**.
 - b. Descriptive Stack Parameters
 Stack Height: 30 feet
 Stack Diameter: 1.7 feet
 Stack Temperature: 120 °F
 Exhaust Flow: 6,200 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.004 through S2.007, each**, shall not exceed **1,080.0 tons of Slurry** per any one-hour period averaged over a daily basis.
 - b. The maximum **PM** (particulate matter) concentration for **S2.004 through S2.007, each**, shall not exceed **10 ppmw** (parts per million by weight).
 - c. Hours
 - (1) **S2.004 through S2.007, each**, may operate a total of **24 hours** per day.
 - (2) **S2.004 through S2.007, each**, shall not operate in excess of **500 hours** per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.004 through S2.007, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** to the atmosphere shall not exceed **0.22 pounds** per hour, nor more than **0.056 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.22 pounds** per hour, nor more than **0.056 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.22 pounds** per hour, nor more than **0.056 tons** per year.
 - d. The opacity from **S2.004 through S2.007, each**, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.004 through S2.007, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.004 through S2.007, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.



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Section V. Specific Operating Conditions (continued)

G. Emission Units S2.004 through S2.007 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stacks of the Mist Eliminator** controlling **S2.009 and S2.010, each**, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Mist Eliminator** installed on **S2.009 and S2.010** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results, and any corrective actions taken.
 - g. Maintain documentation onsite showing that the PM concentration at the outlet of the mist eliminators will not exceed the concentration specified in G.2.b of this section.



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Section V. Specific Operating Conditions (continued)

H. Emission Units S2.008

System 8 - Neutralization Filter Filtrate Blow Vent		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.008	Neutralization Filter Filtrate Blow Vent	4,617,147	414,479

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. S2.008 has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 20 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 1,355 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum TDS (Total Dissolved Solids) concentration of S2.008 shall not exceed 40 percent by weight.
 - b. Hours
 - (1) S2.008 may operate a total of 24 hours per day.
 - (2) S2.008 shall not operate in excess of 50 hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.008 the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.20 pounds per hour, nor more than 0.0049 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.20 pounds per hour, nor more than 0.0049 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.20 pounds per hour, nor more than 0.0049 tons per year.
 - d. The opacity from S2.008 shall not equal or exceed 20 percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for S2.008.
 - b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
 - c. Conduct and record an observation of visible emissions (excluding water vapor) on the stack for S2.008 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - d. Sample S2.008 on a quarterly basis for the TDS concentration in percent by weight. The TDS shall be determined by sampling methods approved in advance by the director.



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Section V. Specific Operating Conditions (continued)

I. Emission Units PF1.012 through PF1.019

System 9 - Tailings Feed Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.012	Neutralization Filter 1 to Discharge Feeder 1	4,617,139	414,490
PF1.013	Discharge Feeder 1 to Tailings Collection Conveyor	4,617,148	414,480
PF1.014	Neutralization Filter 2 to Discharge Feeder 2	4,617,140	414,491
PF1.015	Discharge Feeder 2 to Tailings Collection Conveyor	4,617,148	414,481
PF1.016	Neutralization Filter 3 to Discharge Feeder 3	4,617,141	414,492
PF1.017	Discharge Feeder 3 to Tailings Collection Conveyor	4,617,149	414,482
PF1.018	Neutralization Filter 4 to Discharge Feeder 4	4,617,142	414,493
PF1.019	Discharge Feeder 4 to Tailings Collection Conveyor	4,617,150	414,483

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.012 through PF1.019, each, shall be controlled by **Moisture Carryover**.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.012 through PF1.019, each, shall not exceed **240.0 tons of Clay/Neutral Tailings** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.012 through PF1.019, each, may operate a total of **24 hours** per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.012 through PF1.019, each, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed **0.11 pounds** per hour, nor more than **0.47 tons** per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.040 pounds** per hour, nor more than **0.17 tons** per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0065 pounds** per hour, nor more than **0.029 tons** per year.
 - d. The opacity from PF1.012 through PF1.019, each, shall not equal or exceed **20 percent**.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.012 through PF1.019, each, on a daily basis.
 - b. Monitor and record the hours of operation for PF1.012 through PF1.019, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.012 through PF1.019, each, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

J. Emission Units PF1.020

System 10 - Tailings Collection		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.020	Tailings Collection Conveyor to Tailings Conveyor 1	4,617,151	414,484

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.020 shall be controlled by **Moisture Carryover**.

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.020 shall not exceed **1,000.0 tons of Clay/Neutral Tailings** per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.020 may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.020 the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed **0.45 pounds** per hour, nor more than **1.97 tons** per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.17 pounds** per hour, nor more than **0.72 tons** per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.027 pounds** per hour, nor more than **0.12 tons** per year.
 - d. The opacity from PF1.020 shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.020 on a daily basis.
 - b. Monitor and record the hours of operation for PF1.020 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.020 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

K. Emission Units PF1.021 and PF1.022

System 11 – Tailings Stacking		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.021	Tailings Conveyor 1 to Tailings Stacker	4,617,251	414,584
PF1.022	Tailings Stacker to Clay Tailings Filter Stack	4,617,231	414,625

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
Emissions from PF1.021 and PF1.022, each, shall be controlled by Moisture Carryover.
2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.021 and PF1.022, each, shall not exceed 1,000.0 tons of Clay/Neutral Tailings per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.021 and PF1.022, each, may operate a total of 24 hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.021 and PF1.022, each, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.45 pounds per hour, nor more than 1.97 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.17 pounds per hour, nor more than 0.72 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.027 pounds per hour, nor more than 0.12 tons per year.
 - d. The opacity from PF1.021 and PF1.022, each, shall not equal or exceed 20 percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for PF1.021 and PF1.022, each, on a daily basis.
 - b. Monitor and record the hours of operation for PF1.021 and PF1.022, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on PF1.021 and PF1.022, each, on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

L. Emission Units PF1.023 through PF1.025

System 12 - Sulfate Tailings Circuit		Location UTM (Zone 11, NAD 83)	
		m North	m East
PF1.023	Na/K Sulfate Centrifuge discharge to Na/K Conveyor 1	4,617,137	414,470
PF1.024	Na/K Conveyor 1 transfer to Na/K Conveyor 2	4,617,139	414,471
PF1.025	Na/K Conveyor 2 to Tailings Collection Conveyor	4,617,141	414,474

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from PF1.023 shall be controlled by Enclosure.
 - b. PF1.024 and PF1.025, each, has no add-on controls.

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for PF1.023 through PF1.025, each, shall not exceed 40.0 tons of Sulfate Tailings per any one-hour period averaged over a daily basis.
 - b. Hours
 - (1) PF1.023 through PF1.025, each, may operate a total of 24 hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.023 the following pollutants in excess of the following specified limits:
 - (1) The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.060 pounds per hour, nor more than 0.26 tons per year.
 - (2) The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.022 pounds per hour, nor more than 0.096 tons per year.
 - (3) The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.0036 pounds per hour, nor more than 0.016 tons per year.
 - (4) The opacity from PF1.023 shall not equal or exceed 20 percent.
 - b. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from PF1.024 and PF1.025, each, the following pollutants in excess of the following specified limits:
 - (1) The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.12 pounds per hour, nor more than 0.53 tons per year.
 - (2) The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.044 pounds per hour, nor more than 0.19 tons per year.
 - (3) The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.0073 pounds per hour, nor more than 0.032 tons per year.
 - (4) The opacity from PF1.024 and PF1.025, each, shall not equal or exceed 20 percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

 - a. Monitor and record the throughput for PF1.023 through PF1.025, each, on a daily basis.
 - b. Monitor and record the hours of operation for PF1.023 through PF1.025, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.



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Section V. Specific Operating Conditions (continued)

L. Emission Units PF1.023 through PF1.025 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the enclosure controlling **PF1.023** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - e. Inspect the **Enclosure** installed on **PF1.023** on a monthly basis to confirm that the enclosure is in place and functioning properly. If the enclosure is in disrepair, the Permittee shall initiate corrective action within 24 hours and complete corrective action as expeditiously as practical to ensure that the enclosure is functioning properly. The Permittee must record each inspection of the enclosures, including the date of each inspection and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

M. Emission Units S2.009 and S2.010

System 13 - Magnesium Precipitation Filter Vents		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.009	Magnesium Precipitation Filter Vent 1	4,617,145	414,402
S2.010	Magnesium Precipitation Filter Vent 2	4,617,148	414,405

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.009 and S2.010, each, shall be controlled by **Mist Eliminator**.
 - b. Descriptive Stack Parameters
 Stack Height: 38 feet
 Stack Diameter: 1.30 feet
 Stack Temperature: 120 °F
 Exhaust Flow: 4,046 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum **PM** (particulate matter) concentration of S2.009 and S2.010, each, shall not exceed **10 ppmw** (parts per million by weight).
 - b. Hours
 - (1) S2.009 and S2.010, each, may operate a total of **24** hours per day.
 - (2) S2.009 and S2.010, each, shall not operate in excess of **200** hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.009 and S2.010, each, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.14** pounds per hour, nor more than **0.014** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.14** pounds per hour, nor more than **0.014** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.14** pounds per hour, nor more than **0.014** tons per year.
 - d. The opacity from S2.009 and S2.010, each, shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for S2.009 and S2.010, each.
 - b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year
 - c. Conduct and record an observation of visible emissions (excluding water vapor) on the stacks of the **Mist Eliminator** controlling S2.009 and S2.010, each, on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

M. Emission Units S2.009 and S2.010 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - d. Inspect the **Mist Eliminator** installed on **S2.009 and S2.010** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results, and any corrective actions taken.
 - e. Maintain documentation onsite showing that the PM concentration at the outlet of the mist eliminators will not exceed the concentration specified in M.2.a of this section.



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

N. Emission Units S2.011

System 14 - Magnesium Precipitation Filter Filtrate Blow Vent		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.011	Magnesium Precipitation Filtrate Blow Vent	4,617,147	414,404

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. S2.011 has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 20 feet
 Stack Diameter: 0.5 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 498 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum TDS (Total Dissolved Solids) concentration of S2.011 shall not exceed 8.24 percent by weight.
 - b. Hours
 - (1) S2.011 may operate a total of 24 hours per day.
 - (2) S2.011 shall not operate in excess of 50 hours per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.011 the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.015 pounds per hour, nor more than 0.00037 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.015 pounds per hour, nor more than 0.00037 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.015 pounds per hour, nor more than 0.00037 tons per year.
 - d. The opacity from S2.011 shall not equal or exceed 20 percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for S2.011.
 - b. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
 - c. Conduct and record an observation of visible emissions (excluding water vapor) on the stack for S2.011 on a monthly basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - d. Sample S2.011 on a quarterly basis for TDS concentration in percent by weight. The TDS shall be determined by sampling methods approved in advance by the director.



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Section V. Specific Operating Conditions (continued)

O. Emission Units S2.012

System 15 - Lithium Carbonate Dryer		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.012	Lithium Carbonate Dryer	4,617,110	414,388

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. Emissions from S2.012 shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters
 Stack Height: 60 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: 302 °F
 Exhaust Flow: 2,898 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. The maximum allowable throughput rate for S2.012 shall not exceed **5.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) S2.012 may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.012 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.50 pounds** per hour, nor more than **2.18 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.50 pounds** per hour, nor more than **2.18 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.50 pounds** per hour, nor more than **2.18 tons** per year.
 - d. The opacity from S2.012 shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.012 on a daily basis.
 - b. Monitor and record the hours of operation for S2.012 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Baghouse** controlling S2.012 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken.
 - e. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken.
 - f. Inspect the **Baghouse** installed on S2.012 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the **Baghouse**) and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

O. Emission Units S2.012 (continued)

5. **Performance and Compliance Testing** (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

P. Emission Units S2.013

System 16 – Lithium Carbonate Material Handling		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.013	Lithium Carbonate Material Handling	4,617,108	414,385

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.013 shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.013
 Stack Height: 10 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 101 °F
 Exhaust Flow: 1,268 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.013 shall not exceed **5.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) S2.013 may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.013 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.012 pounds** per hour, nor more than **0.053 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.0070 pounds** per hour, nor more than **0.031 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0012 pounds** per hour, nor more than **0.0051 tons** per year.
 - d. The opacity from S2.013 shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.013 on a daily basis.
 - b. Monitor and record the hours of operation for S2.013 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack** of the **Vent Filter** controlling S2.013 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on S2.013 on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

Q. Emission Units S2.014

System 17 - Lithium Carbonate Storage Bin		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.014	Lithium Carbonate Storage Bin Loading	4,617,112	414,380

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.014 shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.014
 Stack Height: 79 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 101 °F
 Exhaust Flow: 1,268 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.014 shall not exceed **5.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) S2.014 may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.014 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.0050 pounds per hour**, nor more than **0.022 tons**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.0017 pounds per hour**, nor more than **0.0074 tons**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.00028 pounds per hour**, nor more than **0.0012 tons**.
 - d. The opacity from S2.014 shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.014 on a daily basis.
 - b. Monitor and record the hours of operation for S2.014 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack of the Vent Filter** controlling S2.014 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on S2.014 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

R. Emission Units S2.015

System 18 – Lithium Carbonate Packaging		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.015	Lithium Carbonate Packaging	4,617,113	414,360

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.015 shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters for S2.015
 Stack Height: 20 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 3,900 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.015 shall not exceed **16.0 tons of Lithium Carbonate** per any one-hour period averaged over a daily basis, nor more than **43,800 tons** per year.
 - b. Hours
 - (1) S2.015 may operate a total of **24 hours** per day.
 - (2) S2.015 shall not operate in excess of **4,380 hours** per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.015 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.67 pounds** per hour, nor more than **1.46 tons** per year.
 - d. The opacity from S2.015 shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.015 on a daily basis.
 - b. Monitor and record the hours of operation for S2.015 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Monitor and record the total yearly throughput rate in tons per year. The annual throughput shall be determined as the sum of the monthly throughput rates for the year for all previous months of that year.
 - e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year



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Section V. Specific Operating Conditions (continued)

R. Emission Units S2.015 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the **Stack** of the **Baghouse** controlling **S2.015** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the **Baghouse** installed on **S2.015** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

S. Emission Units S2.016 and S2.017

System 19 – Lime Silo		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.016	Truck transfer of Lime to Underground Hopper	4,617,197	414,358
S2.017	Underground Hopper and transfer to Silo (silo unloading through sealed transfers)	4,617,197	414,358

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.016 and S2.017, combined, shall be controlled by a **Baghouse**.
 - b. Descriptive Stack Parameters for S2.016 and S2.017
 Stack Height: 100 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 3,100 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.016 and S2.017, each, shall not exceed **80.0 tons of Lime** per any one-hour period averaged over a daily basis, nor more than **350,400 tons**.
 - b. Hours
 - (1) S2.016 and S2.017, each, may operate a total of **24 hours** per day.
 - (2) S2.016 and S2.017, each, shall not operate in excess of **4,380 hours** per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.016 and S2.017, combined, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed **0.53 pounds** per hour, nor more than **1.16 tons**.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.53 pounds** per hour, nor more than **1.16 tons**.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.53 pounds** per hour, nor more than **1.16 tons**.
 - d. The opacity from S2.016 and S2.017, each, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.016 and S2.017, each, on a daily basis.
 - b. Monitor and record the hours of operation for S2.016 and S2.017, each, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Monitor and record the total yearly throughput rate in tons per year. The annual throughput shall be determined as the sum of the monthly throughput rates for the year for all previous months of that year.
 - e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.



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Section V. Specific Operating Conditions (continued)

S. Emission Units S2.016 and S2.017 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - f. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack of the Baghouse S2.016 and S2.017** on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - g. Inspect the **Baghouse** installed on **S2.016 and S2.017** on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the filter fabric), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 201A in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
 - e. The Method 201A test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60. All particulate captured in the Method 5 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Issued to: LITHIUM NEVADA – THACKER PASS PROJECT (AS PERMITTEE)

Section V. Specific Operating Conditions (continued)

T. Emission Units S2.018

System 20 - Soda Ash Silo		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.018	Soda Ash Silo loading (silo unloading through sealed transfers)	4,617,088	414,456

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.018 shall be controlled by a **Vent Filter**.
 - b. Descriptive Stack Parameters for S2.018
 Stack Height: 100 feet
 Stack Diameter: 1.0 feet
 Stack Temperature: Ambient °F
 Exhaust Flow: 1,930 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.018 shall not exceed **80.0** tons of Soda Ash per any one-hour period averaged over a daily basis, nor more than **153,900** tons per year.
 - b. Hours
 (1) S2.018 may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.018 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.079** pounds per hour, nor more than **0.076** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.027** pounds per hour, nor more than **0.026** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.0045** pounds per hour, nor more than **0.0043** tons per year.
 - d. The opacity from S2.018 shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.018 on a daily basis.
 - b. Monitor and record the hours of operation for S2.018 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Record the throughput rate of material (in tons) on a cumulative monthly basis.
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack** of the **Vent Filter** controlling S2.018 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Vent Filter** installed on S2.018 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the vent filter), and any corrective actions taken.



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Section V. Specific Operating Conditions (continued)

U. Emission Units S2.019 and S2.020

System 21 - Sulfur Storage		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.019	Sulfur Storage 1	4,616,946	414,290
S2.020	Sulfur Storage 2	4,616,942	414,293

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from **S2.019 and S2.020, each**, shall be controlled by **Caustic Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 30 feet
 Stack Diameter: 3.0 feet
 Stack Temperature: 140 °F
 Exhaust Flow: 3,100 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for **S2.019 and S2.020, each**, shall not exceed **47.0 tons of Sulfur** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) **S2.019 and S2.020, each**, may operate a total of **24 hours** per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.019 and S2.020, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10 pounds per hour**, nor more than **0.44 tons per year**.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10 pounds per hour**, nor more than **0.44 tons per year**.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10 pounds per hour**, nor more than **0.44 tons per year**.
 - d. The discharge of **SO₂** (Sulfur Dioxide) to the atmosphere shall not exceed **0.34 pounds per hour**, nor more than **1.49 tons per year**.
 - e. The discharge of **H₂S** (Hydrogen Sulfide) to the atmosphere shall not exceed **0.12 pounds per hour**, nor more than **0.53 tons per year**.
 - f. The opacity from **S2.019 and S2.020, each**, shall not equal or exceed **20 percent**.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for **S2.019 and S2.020, each**, on a daily basis.
 - b. Monitor and record the hours of operation for **S2.019 and S2.020, each**, on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. The Permittee shall notify the Director within 72 hours if sulfur will be sourced from a different supplier than the fuel energy industry.



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Section V. Specific Operating Conditions (continued)

U. Emission Units S2.019 and S2.020 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - e. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack of the Caustic Scrubber** controlling S2.019 and S2.020 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.
 - f. Inspect the **Caustic Scrubber** installed on S2.019 and S2.020 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.

5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing on S2.019 and S2.020, **each**, at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM2.5 for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - e. Method 15 in Appendix A of 40 CFR Part 60 shall be used to determine the hydrogen sulfide concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - f. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021

System 22 - Package Boiler		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.021	Package Boiler	4,616,986	414,165

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. S2.021 has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 27 feet
 Stack Diameter: 3.0 feet
 Stack Temperature: 363 °F
 Exhaust Flow: 14,832 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. S2.021 may consume only **Propane**.
 - b. The maximum allowable fuel consumption rate for S2.021 shall not exceed **451.0 gallons** per any one-hour period averaged over a daily basis, nor more than **248,050 gallons per year**.
 - c. Hours
 - (1) S2.021 may operate a total of **24 hours** per day.
 - (2) S2.021 shall not operate in excess of **550 hours** per year.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.021 the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed **0.47 pounds** per hour, nor more than **0.13 tons** per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.47 pounds** per hour, nor more than **0.13 tons** per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.47 pounds** per hour, nor more than **0.13 tons** per year.
 - d. The discharge of SO₂ (sulfur dioxide) to the atmosphere shall not exceed **0.72 pounds** per hour, nor more than **0.20 tons** per year.
 - e. The discharge of NO_x (oxides of nitrogen) to the atmosphere shall not exceed **8.79 pounds** per hour, nor more than **2.42 tons** per year.
 - f. The discharge of CO (carbon monoxide) to the atmosphere shall not exceed **6.77 pounds** per hour, nor more than **1.86 tons** per year.
 - g. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed **1.08 pounds** per hour, nor more than **0.30 tons** per year.
 - h. The opacity from S2.021 shall not equal or exceed **20 percent**.



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Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021 (continued)

4. Monitoring and Recordkeeping (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

- a. Monitor and record the hours of operation for S2.021 on a daily basis.
- b. Monitor and record the consumption rate of **Propane** on a daily basis for S2.021 (in gallons).
- c. Record the corresponding average hourly consumption rate of **Propane** in gallons per hour. The average hourly consumption rate shall be determined from the total daily consumption and the total daily hours of operation.
- d. Monitor and record the total yearly consumption rate of **Propane** in gallons per year. The annual consumption shall be determined as the sum of the monthly consumption rates for the year for all previous months of that year..
- e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.

5. Performance and Compliance Testing (NAC 445B.346(2)), (NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon issuance of this operating permit, shall conduct renewal performance testing on S2.021 at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

- a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
- b. Testing shall be conducted on the exhaust stack (post controls).
- c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
- d. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.
- e. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM_{2.5} for determination of compliance.
- f. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
- g. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.
- h. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.
- i. Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(s). Each Method 25A test will be run for a minimum of one hour.



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Section V. Specific Operating Conditions (continued)

V. Emission Unit S2.021 (continued)

6. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
 - a. Reporting and Recordkeeping Requirements (40 CFR Part 60.48c)
 - (1) The Permittee shall submit notification of the date of construction or reconstruction and actual startup, as provided by 40 CFR 60.7. This notification shall include: (40 CFR Part 60.48c(a))
 - (a) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. (40 CFR 60.48c(a)(1))
 - (b) The annual capacity factor at which the permittee anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired. (40 CFR 60.48c(a)(3))
 - (2) Except as provided under 40 CFR 60.48(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day. (40 CFR Part 60.48c(g))
 - (a) As an alternative to meeting the requirements of 40 CFR Part 60.48c (g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. (40 CFR 60.48c(g)(2))
 - (b) As an alternative to meeting the requirements of 40 CFR 60.48c (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. (40 CFR Part 60.48c(g)(3))
 - (3) All records required under 40 CFR Part 60.48c shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. (40 CFR Part 60.48c(i))
 - (4) The reporting period for the reports required under 40 CFR Part 60, Subpart Dc, is each six-month period. All reports shall be submitted to the Director and shall be postmarked by the 30th day following the end of the reporting period. (40 CFR Part 60.48c(j))



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Section V. Specific Operating Conditions (continued)

W. Emission Unit S2.022

System 23 - Start-Up Burner		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.022	Start-Up Burner	4,617,002	414,213

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.022 has no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 50 feet
 Stack Diameter: 5.0 feet
 Stack Temperature: 950 °F
 Exhaust Flow: 206,338 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.022 may consume only Propane.
 - b. The maximum allowable fuel consumption rate for S2.022 shall not exceed 315.0 gallons per any one-hour period averaged over a daily basis, nor more than 63,000 gallons per year.
 - c. Hours
 - (1) S2.022 may operate a total of 24 hours per day.
 - (2) S2.022 shall not operate in excess of 200 hours.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.022 the following pollutants in excess of the following specified limits:
 - a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 0.33 pounds per hour, nor more than 0.033 tons per year.
 - b. The discharge of PM₁₀ (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 0.33 pounds per hour, nor more than 0.033 tons per year.
 - c. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 0.33 pounds per hour, nor more than 0.033 tons per year.
 - d. The discharge of SO₂ (sulfur dioxide) to the atmosphere shall not exceed 0.50 pounds per hour, nor more than 0.050 tons per year.
 - e. The discharge of NO_x (oxides of nitrogen) to the atmosphere shall not exceed 6.14 pounds per hour, nor more than 0.61 tons per year.
 - f. The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 4.73 pounds per hour, nor more than 0.47 tons per year.
 - g. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 0.76 pounds per hour, nor more than 0.076 tons per year.
 - h. The opacity from S2.022 shall not equal or exceed 20 percent.



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Section V. Specific Operating Conditions (continued)

W. Emission Unit S2.022 (continued)

4. Monitoring and Recordkeeping (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

- a. Monitor and record the hours of operation for S2.022 on a daily basis.
- b. Monitor and record the consumption rate of **Propane** on a daily basis for S2.022 (in gallons).
- c. Record the corresponding average hourly consumption rate of **Propane** in gallons per hour. The average hourly consumption rate shall be determined from the total daily consumption and the total daily hours of operation.
- d. Monitor and record the total yearly consumption rate of **Propane** in gallons per year. The annual consumption shall be determined as the sum of the monthly consumption rates for the year for all previous months of that year..
- e. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023

System 24 - Sulfuric Acid Plant		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.023	Sulfuric Acid Plant	4,617,058	414,255

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. Emissions from S2.023 shall be controlled by a **Tail Gas Scrubber**.
 - b. Descriptive Stack Parameters
 Stack Height: 199 feet
 Stack Diameter: 8.5 feet
 Stack Temperature: 79 °F
 Exhaust Flow: 165,245 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. The maximum allowable throughput rate for S2.023 shall not exceed **51.0** tons of **Sulfur** per any one-hour period averaged over a daily basis.
 - b. Hours
 (1) S2.023 may operate a total of **24** hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B.22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.023 the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - d. The discharge of **SO₂** (Sulfur Dioxide) to the atmosphere shall not exceed **10.2** pounds per hour, nor more than **44.6** tons per 12-month rolling period.
 - e. The discharge of **NO_x** (Oxides of Nitrogen) to the atmosphere shall not exceed **19.5** pounds per hour, nor more than **85.3** tons per 12-month rolling period.
 - f. The discharge of **H₂SO₄** (Sulfuric Acid) to the atmosphere shall not exceed **5.69** pounds per hour, nor more than **24.9** tons per 12-month rolling period.
 - g. The opacity from S2.023 shall not equal or exceed **20** percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the throughput for S2.023 on a daily basis.
 - b. Monitor and record the hours of operation for S2.023 on a daily basis.
 - c. Record the corresponding average hourly throughput rate in tons per hour. The average hourly throughput rate shall be determined from the total daily throughput and the total daily hours of operation.
 - d. Conduct and record an observation of visible emissions (excluding water vapor) on the **stack of the Tail Gas Scrubber** controlling S2.023 on a **monthly** basis while operating. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented to their back. If visible emissions are observed and exceed the applicable opacity standard, the Permittee shall take immediate corrective action. The Permittee shall maintain in a contemporaneous log the following recordkeeping: the calendar date of any required monitoring, results of the monthly observation of visible emissions, and any corrective actions taken to eliminate visible emissions.



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*) (continued)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
(continued)
 - e. Inspect the **Tail Gas Scrubber** installed on S2.023 on a monthly basis in accordance with the manufacturer's operation and maintenance manual and record the results (e.g. the condition of the water spray nozzles), and any corrective actions taken.
 - f. Monitor and record the pH and water flow rate values for the **Tail Gas Scrubber**, when the Sulfuric Acid Plant is operating, at least once every hour.
 - (1) Sulfuric Acid Plant operation is defined as the combustion of Sulfur in air.
 - (2) Compare the values to the minimum water flow rate and pH established using the most recent performance test data, manufacturer's recommendations, engineering calculations, and/or historical data.
5. Performance and Compliance Testing (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon issuance of this operating permit, shall conduct annual performance testing within 90 days of the anniversary date of the previous initial performance testing or annual performance testing, and annually thereafter, in accordance with the following:
 - a. All opacity compliance demonstrations and/or performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H. Testing and Sampling (NAC 445B.252) of this operating permit. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(5)).
 - b. Testing shall be conducted on the exhaust stack (post controls).
 - c. Method 5 and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine particulate matter emissions. All particulate captured in the Method 5 and Method 202 test shall be considered PM_{2.5} for determination of compliance. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
 - d. Method 6C in Appendix A of 40 CFR Part 60 shall be used to determine the sulfur dioxide concentration. Each test will be run for a minimum of one hour.
 - e. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.
 - f. Method 8 in Appendix A of 40 CFR Part 60 shall be used to determine the sulfuric acid mist concentration. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - g. The Method 8 test required in this section may be replaced by a Conditional Test Method CTM-013 test based on prior approval from the Administrator. The sample volume for each test run shall be at least 1.15 dscm (40.6 dscf). Each test will be run for a minimum of one hour.
 - h. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (Federally Enforceable SIP Requirement)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants

a. Emission Standards (40 CFR 60.82(a) and 60.83(a))

(1) Standard for sulfur dioxide (40 CFR 60.82(a))

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of Subpart H shall 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 H₂SO₄.

(2) Standard for acid mist (40 CFR 60.83(a))

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of Subpart H shall cause to be discharged into the atmosphere from any affected facility any gases which:

(a) Contain acid mist, expressed as H₂SO₄, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H₂SO₄.

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

b. Emission Monitoring (40 CFR 60.84)

(1) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. 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 (SO₂). 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))

(2) The owner or operator 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))

$$CF = k[(1.000 - 0.015r)/(r - s)]$$

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 Director's approval.

s = percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(3) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s). (40 CFR 60.84(c))



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (Federally Enforceable SIP Requirement) New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants (continued)

b. Emission Monitoring (40 CFR 60.84) (continued)

(4) 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 SO2 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 SO2, O2, and CO2 (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO2 monitor shall be as specified in paragraph (b) of this section. The span value for CO2 (if required) shall be 10 percent and for O2 shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO2 emission rate as follows: (40 CFR 60.84(d))

Es = (Cs S)/[0.265 - (0.0126 %O2) - (A %CO2)]

where:

Es = emission rate of SO2, kg/metric ton (lb/ton) of 100 percent of H2SO4 produced.

Cs = concentration of SO2, kg/dscm (lb/dscf).

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

%O2 = oxygen concentration, percent dry basis.

A = auxiliary fuel factor,

= 0.00 for no fuel.

= 0.0226 for methane.

= 0.0217 for natural gas.

= 0.0196 for propane.

= 0.0172 for No 2 oil.

= 0.0161 for No 6 oil.

= 0.0148 for coal.

= 0.0126 for coke.

%CO2 = carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

Table with 3 columns: From, To, Multiply by. Rows include conversions for g/scm to kg/scm, mg/scm to kg/scm, ppm (SO2) to kg/scm, and ppm (SO2) to lb/scf.

(5) For the purpose of reports under 40 CFR 60.7(c), 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 applicable standards under X.6.a.(1) of this section or 40 CFR 60.82. (40 CFR 60.84(e))



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Section V. Specific Operating Conditions (continued)

X. Emission Units S2.023 (continued)

6. Federal Requirements (NAC 445B.346(2)) (NAC 445B.252.1) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants (continued)

c. Test Methods and Procedures (40 CFR 60.85)

- (1) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section. (40 CFR 60.85 (a))
- (2) The owner or operator shall determine compliance with the SO₂ acid mist, and visible emission standards in X.6.a.(1) and (2) of this section or 40 CFR 60.82 and 60.83 as follows: (40 CFR 60.85 (a))

- (a) The emission rate (E) of acid mist or SO₂ shall be computed for each run using the following equation:

$$E = (CQsd) / (PK)$$

where:

E = emission rate of acid mist or SO₂ kg/metric ton (lb/ton) of 100 percent H₂SO₄ produced.

C = concentration of acid mist or SO₂, g/dscm (lb/dscf).

Qsd = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P = production rate of 100 percent H₂SO₄, 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 SO₂ concentrations (C's) and the volumetric flow rate (Qsd) 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).
 - (c) Suitable methods shall be used to determine the production rate (P) of 100 percent H₂SO₄ for each run. Material balance over the production system shall be used to confirm the production rate.
 - (d) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
- (3) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section: (40 CFR 60.85 (a))
 - (a) 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:
 - (i) The integrated technique of Method 3 is used to determine the O₂ concentration and, if required, CO₂ concentration.
 - (ii) The SO₂ or acid mist emission rate is calculated as described in X.6.b.(4) of this section or 40 CFR 60.84(d), substituting the acid mist concentration for Cs as appropriate.



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025

System 25 - Fire Pumps		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.024	Fire Pump 1 (Mine, 422 hp, John Deere, 2015 or newer)	4,617,714	410,835
S2.025	Fire Pump 2 (Process, 422 hp, John Deere, 2015 or newer)	4,617,087	414,307

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.024 and S2.025, each**, have no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: 13.0 feet
 Stack Diameter: 0.50 feet
 Stack Temperature: 891 °F
 Exhaust Flow: 2,048 actual cubic feet per minute (acfm)

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.024 and S2.025, each**, may consume only diesel.
 - b. The maximum allowable fuel consumption rate for **S2.024 and S2.025, each**, shall not exceed **20.0 gallons** per any one-hour period.
 - c. Hours
 - (1) **S2.024 and S2.025, each**, may operate a total of **24 hours** per day.
 - (2) **S2.024 and S2.025, each**, may operate a maximum of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.024 and S2.025, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0051 tons** per year.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0042 pounds** per hour, nor more than **0.00021 tons** per year.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **2.45 pounds** per hour, nor more than **0.12 tons** per year.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.63 pounds** per hour, nor more than **0.032 tons** per year.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.084 pounds** per hour, nor more than **0.0042 tons** per year.
 - h. The opacity from **S2.024 and S2.025, each**, shall not equal or exceed **20 percent**.



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)
The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
 - a. Monitor and record the total daily hours of operation for S2.024 and S2.025, each, for each day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
 - b. Monitor and record the consumption rate of diesel on a daily basis for S2.024 and S2.025, each, (in gallons) by multiplying the maximum hourly fuel consumption rate as stated in Y.2.b of this section and the total daily hours of operation.
 - c. Monitor and record the total yearly hours of operation of S2.024 and S2.025, each, per year. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for all previous months of that year.
 - d. The Permittee, upon issuance of this operating permit, 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))

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
 - a. Emissions Standards (40 CFR 60.4202, 40 CFR 60.4205)
The Permittee must comply with the emission standards in Table 4 of 40 CFR Part 60 Subpart IIII, for all pollutants, for the same model year and National Fire Protection Association (NFPA) maximum engine power. (40 CFR 60.4202(d), 40 CFR 60.4205(c))
 - (1) For a 2009 model year and later stationary fire pump engine with a maximum engine power of $225 \leq \text{KW} < 450$ ($300 \leq \text{HP} < 600$) and less than 30 liters per cylinder: (40 CFR 60.4202(d), 40 CFR 60.4205(c), Table 4)
 - (a) The discharge of PM to the atmosphere shall not exceed 0.20 gram/kW-hr (0.15 gram/hp-hr) (0.14 pounds per hour).
 - (b) The discharge of non-methane hydrocarbon (NMHC) + NO_x to the atmosphere shall not exceed 4.0 grams/kW-hr (3.0 grams/hp-hr) (2.79 pounds per hour).
 - b. Fuel Requirements (40 CFR 60.4207)
The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 80.510(b))
 - (1) Sulfur content to be 15 parts per million (ppm) maximum.
 - (2) A minimum cetane index of 40; or
 - (3) A maximum aromatic content of 35 volume percent.
 - c. Monitoring Requirements (40 CFR 60.4209)
If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))
 - d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)
 - (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
 - (2) Except as permitted in 40 CFR 60.4211(g), the Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 89. (40 CFR 60.4211(a))



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*) (continued)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)
 - d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211) (continued)
 - (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Y.5.d.(5) of this section. (40 CFR 60.4211(c))
 - (4) In order for the engine to be considered an emergency stationary ICE under 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 paragraphs Y.5.d.(4)(a) through (c) of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs Y.5.d.(4)(a) through (c) of this section, the engine will not be considered an emergency engine under Subpart IIII and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs Y.5.d.(4)(b) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph Y.5.d.(4)(c) of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. 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 owner or operator 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 owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))
 - (c) 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 paragraph Y.5.d.(4)(b) of this section. Except as provided in paragraph Y.5.d.(4)(c) of this section, 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))
 - i. 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 conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))
 - (5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))
 - (a) For CI ICE greater than or equal to 100 HP and less than or equal to 500 hp, the Permittee must 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 must 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 change emission-related settings in a way that is not permitted by the manufacturer. (40 CFR 60.4211(g)(2))



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Section V. Specific Operating Conditions (continued)

Y. Emission Units S2.024 and S2.025 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*) (continued)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)
 - e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:
If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027

System 26 - Emergency Generators		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.026	Emergency Generator 1 (Mine, 168 hp, Generac, 2009 or newer)	4,617,211	410,977
S2.027	Emergency Generator 2 (Mine, 168 hp, Generac, 2009 or newer)	4,617,211	410,979

1. Air Pollution Control Equipment (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.026 and S2.027, each**, have no add-on controls.
 - b. Descriptive Stack Parameters
 Stack Height: **5.0** feet
 Stack Diameter: **0.30** feet
 Stack Temperature: **960 °F**

2. Operating Parameters (NAC 445B.346(1)) (*Federally Enforceable SIP Requirement*)
 - a. **S2.026 and S2.027, each**, may consume only **Propane**.
 - b. The maximum allowable fuel consumption rate for **S2.026 and S2.027, each**, shall not exceed **13.9** gallons per any one-hour period.
 - c. Hours
 - (1) **S2.026 and S2.027, each**, may operate a total of **24** hours per day.
 - (2) **S2.026 and S2.027, each**, may operate a total of **100** hours per year of non-emergency use. There is no time limit on operation in emergency situations.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (*Federally Enforceable SIP Requirement*)
 The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.026 and S2.027, each**, the following pollutants in excess of the following specified limits:
 - a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.069** pounds per hour, nor more than **0.0034** tons per year.
 - d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0049** pounds per hour, nor more than **0.00024** tons per year.
 - e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **0.74** pounds per hour, nor more than **0.037** tons per year.
 - f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **1.21** pounds per hour, nor more than **0.060** tons per year.
 - g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.74** pounds per hour, nor more than **0.037** tons per year.
 - h. The opacity from **S2.026 and S2.027, each**, shall not equal or exceed **20** percent.



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (*Federally Enforceable SIP Requirement*)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

- a. Monitor and record the total daily hours of operation for **S2.026 and S2.027, each**, for each day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- b. Monitor and record the consumption rate of **Propane** on a daily basis for **S2.026 and S2.027, each**, (in gallons) by multiplying the maximum hourly fuel consumption rate as state in **Z.2.b** of this section and the total daily hours of operation.
- c. Monitor and record the total yearly hours of operation of **S2.026 and S2.027, each**, per year. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for all previous months of that year.
- d. The Permittee, upon issuance of this operating permit, 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)).

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4231, 40 CFR 60.4233, 40 CFR 60.4234, and 40 CFR 1048.101)

- (1) The Permittee of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in 40 CFR 60.4230(a)(4) (January 1, 2009) that are rich burn engines that use LPG must comply with the emission standards in 40 CFR 60.4231(c) for their stationary SI ICE. (40 CFR 60.4233(c))
- (2) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in 40 CFR 60.4230(a)(2), or manufactured on or after the applicable date in 40 CFR 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. (40 CFR 60.4231(c))
 - (a) For a 2007 model year and later (40 CFR 1048.101(b)(3), 40 CFR 1048.101(a)(2)):
 - (i) The discharge of HC + NO_x to the atmosphere shall not exceed 2.7 grams/kw-hr (0.74 pounds/hr).
 - (ii) The discharge of CO to the atmosphere shall not exceed 4.4 grams/kw-hr (1.21 pounds/hr).
 - (3) The Permittee of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. (40 CFR 60.4234)

b. Other Requirements (40 CFR 60.4237)

- (1) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter. (40 CFR 60.4237(b))



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
- c. Compliance Requirements (40 CFR 60.4243)
- (1) The Permittee of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in 40 CFR 60.4233(a) through (c), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, the Permittee must meet one of the requirements specified in (a)(1) and (2) of 40 CFR 60.4243. (40 CFR 60.4243(a))
- (a) If the Permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the Permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if the Permittee is an owner or operator. The Permittee must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the Permittee. If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the Permittee's stationary SI internal combustion engine will not be considered out of compliance. (40 CFR 60.4243(a)(1))
- (b) If the Permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the Permittee's engine will be considered a non-certified engine, and the Permittee must demonstrate compliance according to 40 CFR 60.4243(a)(2)(ii). (40 CFR 60.4243(a)(2))
- (i) The Permittee of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must 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, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance. (40 CFR 60.4243(a)(2)(ii))
- (2) If the Permittee owns or operates an emergency stationary ICE, the Permittee must operate the emergency stationary ICE according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60 Subpart JJJJ, 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 paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. (40 CFR 60.4243(d))
- (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4243(d)(1))
- (b) The Permittee may operate their emergency stationary ICE for any combination of the purposes specified in paragraph 40 CFR 60.4243(d)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph 40 CFR 60.4243(d)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4243(d)(2). (40 CFR 60.4243(d)(2))
- (i) 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. (40 CFR 60.4243(d)(2)(i))



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
 - c. Compliance Requirements (40 CFR 60.4243) (continued)
 - (2) If the Permittee owns or operates an emergency stationary ICE, the Permittee must operate the emergency stationary ICE according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60 Subpart JJJJ, 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 paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs 40 CFR 60.4243(d)(1) through 40 CFR 60.4243(d)(3), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines. (40 CFR 60.4243(d)) (continued)
 - (c) 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 paragraph 40 CFR 60.4243(d)(2). (40 CFR 60.4243(d)(3))
 - d. Notification, Reports, and Records (40 CFR 60.4245)
 - (1) The Permittee of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements: (40 CFR 60.4245)
 - (a) The Permittee of all stationary SI ICE must keep records of the information in paragraphs 40 CFR 60.4245(a)(1) through 40 CFR 60.4245(a)(4). (40 CFR 60.4245(a))
 - (i) All notifications submitted to comply with this subpart and all documentation supporting any notification. (40 CFR 60.4245(a)(1))
 - (ii) Maintenance conducted on the engine. (40 CFR 60.4245(a)(2))
 - (iii) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable. (40 CFR 60.4245(a)(3))
 - (iv) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. (40 CFR 60.4245(a)(4))
 - (2) For all stationary SI emergency ICE greater than 130 HP and less than 500 HP manufactured on or after July 1, 2011, that do not meet the standards applicable to non-emergency engines, the Permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. (40 CFR 60.4245(b))
 - (3) The Permittee of an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section. (40 CFR 60.4245(e))
 - (a) The report must contain the following information: (40 CFR 60.4245(e)(1))
 - (i) Company name and address where the engine is located. (40 CFR 60.4245(e)(1)(ii))
 - (ii) Date of the report and beginning and ending dates of the reporting period. (40 CFR 60.4245(e)(1)(i))
 - (iii) Engine site rating and model year. (40 CFR 60.4245(e)(1)(iii))



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Section V. Specific Operating Conditions (continued)

Z. Emission Units S2.026 and S2.027 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (continued)
 - d. Notification, Reports, and Records (40 CFR 60.4245) (continued)
 - (3) The Permittee of an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section. (40 CFR 60.4245(e)) (continued)
 - (a) The report must contain the following information: (40 CFR 60.4245(e)(1))
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. (40 CFR 60.4245(e)(1)(iv))
 - (v) Hours operated for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii). (40 CFR 60.4245(e)(1)(v))
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4243(d)(2)(ii) and (iii). (40 CFR 60.4245(e)(1)(vi))
 - (vii) Hours spent for operation for the purposes specified in 40 CFR 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. (40 CFR 60.4245(e)(1)(vii))
 - (b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. (40 CFR 60.4245(e)(2))
 - (c) 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 60.4245(e)(3))
 - e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:
If the spark ignition engine meets the requirements of 40 CFR Part 60 Subpart JJJJ, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))



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Section V. Specific Operating Conditions (continued)

AA. Emission Unit S2.028

System 27 - Gasoline Tank		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.028	Gasoline Tank, 1,000 gallons	4,617,430	410,878

1. Air Pollution Control Equipment (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.028 shall be controlled by submerged fill.
 - b. Descriptive Tank Parameters
 Shell Diameter: 5.5 feet
 Shell Height: 6 feet
 Capacity: 1,000 gallons

2. Operating Parameters (NAC 445B.346(1)) (Federally Enforceable SIP Requirement)
 - a. S2.028 shall only be used to store gasoline.
 - b. The maximum allowable throughput rate for S2.028 shall not exceed 9,999 gallons per month, nor more than 103,000 gallons per year.
 - c. Hours
 S2.028 may operate a total of 24 hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.346(1), NAC 445B. 22017) (Federally Enforceable SIP Requirement)

The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.028 the following pollutants in excess of the following specified limits:

 - a. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 0.22 tons per year.
 - b. The opacity from S2.028 shall not equal or exceed 20 percent.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.346(2)) (Federally Enforceable SIP Requirement)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

 - a. Monitor and record the throughput of gasoline, in gallons, loaded into, or dispensed from, S2.028, on a monthly basis, as determined from vendor invoices for tank loading or fuel pump non-resettable meter for tank dispensing.
 - b. Monitor and record the total yearly throughput rate in gallons per year. The annual throughput shall be determined at the end of each month as the sum of the monthly throughput rates for the year for all previous months of that year.

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (Federally Enforceable SIP Requirement)

National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities

 - a. Permittee must, 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 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)



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Section V. Specific Operating Conditions (continued)

AA. Emission Unit S2.028 (continued)

5. Federal Requirements (NAC 445B.346(2), NAC 445B.252(1)) (*Federally Enforceable SIP Requirement*)
National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities (continued)
 - b. Permittee must 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:
 - (1) Minimize **gasoline** spills. (40 CFR 63.11116(a)(1))
 - (2) Clean up spills as expeditiously as practicable. (40 CFR 63.11116(a)(2))
 - (3) Cover all open **gasoline** containers and all **gasoline** storage tank fill-pipes with a gasketed seal when not in use. (40 CFR 63.11116(a)(3))
 - (4) Minimize **gasoline** sent to open waste collection systems that collect and transport **gasoline** to reclamation and recycling devices, such as oil/water separators. (40 CFR 63.11116(a)(4))
 - c. Permittee must have records available within 24 hours of a request by the Director to document your **gasoline** throughput. (40 CFR 63.11116(b))

****End of Specific Operating Conditions****



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Section VI. Continuous Emissions Monitoring System (CEMS) Conditions

A. Continuous Emissions Monitoring System (CEMS) Requirements for S2.023 (NAC 445B.3405)

1. On or before the date of start-up of S2.023, the Permittee shall install, calibrate, operate, and maintain an SO₂ CEMS in the exhaust stack of S2.023. The CEMS sampling probe must be installed at an appropriate location in the exhaust stacks to accurately and continuously measure the concentration of SO₂ (in input appropriate concentration unit) from S2.023, in accordance with the requirements prescribed in Nevada Administrative Code (NAC) 445B.256 to NAC 445B.267, applicable subparts 40 CFR Part 60 Appendix B and Appendix F. Verification of the operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices.
2. The Permittee shall install CEMS as specified under 40 CFR Part 60 Appendix B Performance Specification (PS) 2 Section 8.1. (40 CFR Part 60 Appendix B PS-2 Section 8.1)
3. The Permittee shall conduct Calibration Drift (CD) tests for 7 consecutive calendar days according to the procedure given in 40 CFR Part 60 Appendix B PS-2 Sections 8.3.2 through 8.3.4. Alternatively, the CD test may be conducted over 7 consecutive unit operating days. (40 CFR Part 60 Appendix B PS-2 Section 8.3.1)
4. The Permittee shall conduct a Relative Accuracy (RA) test according to the procedure given in 40 CFR Part 60 Appendix B PS-2 Sections 8.4.2 through 8.4.6. (40 CFR Part 60 Appendix B PS-2 Section 8.4.1)
5. At a minimum, the Permittee shall summarize in tabular form the results of the CD tests and the RA tests or alternative RA procedure, as appropriate. Include all data sheets, calculations, charts (records of CEMS responses), cylinder gas concentration certifications, and calibration cell response certifications (if applicable) necessary to confirm that the performance of the CEMS met the performance specifications. (40 CFR Part 60 Appendix B PS-2 Section 8.5)
6. The Permittee shall comply with the following method performance specifications (40 CFR Part 60 Appendix B PS-2 Section 13.0):
 - a. Calibration Drift
 - b. Relative Accuracy
7. The Permittee shall develop and implement a Quality Control (QC) program. As a minimum, each QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities (40 CFR Part 60 Appendix F Procedure 1 Section 3.0):
 - a. Calibration of CEMS
 - b. CD determination and adjustment of CEMS
 - c. Preventative maintenance of CEMS (including spare parts inventory)
 - d. Data recording, calculations, and reporting
 - e. Accuracy audit procedures including sampling and analysis methods
 - f. Program of corrective action for malfunctioning CEMS
8. The written procedures under A.7. of this section, must be kept on record and available for inspection by the Director. (40 CFR Part 60 Appendix F Procedure 1 Section 3.0)
9. The Permittee shall conduct a Calibration Drift Assessment according to 40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2. (40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2).
10. The Permittee shall record and report all CEMS data according to 40 CFR Part 60 Appendix F Procedure 1 Section 4.4. All measurements from the CEMS must be retained on file by the Permittee for at least 2 years. (40 CFR Part 60 Appendix F Procedure 1 Section 4.4)
11. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows (40 CFR Part 60 Appendix F Procedure 1 Section 5.1):
 - a. The Relative Accuracy Test (RATA) shall be conducted once every four calendar quarters. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.1)
 - b. The Cylinder Gas Audit (CGA) shall be conducted every quarter except when a RATA is conducted. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.2)



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Section VI. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. Continuous Emissions Monitoring System (CEMS) Requirements for S2.023 (NAC 445B.3405) (continued)

- 12. Unless specified otherwise in the applicable subpart, the Permittee shall comply with the relative accuracy criteria:
a. For RATA (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(1)):
(1) For SO2 emissions, RA shall be less than or equal to 20% (if the value determined by the Reference Method (RM) is greater than 50% of the emission limit) or RA shall be less than or equal to 10% (if the value determined by the RM is less than 50% of the emission limit). (40 CFR Part 60 Appendix B PS-2 Section 13.2)

13.2 Relative Accuracy Performance Specification.

Table with 3 columns: Condition, Calculate..., RA criteria (%). Rows describe RATA average emissions >=50% and <50% of emission standard.

- b. For CGA ±15 percent of the average audit value or ±5 ppm, whichever is greater. (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(2))
13. The Permittee shall conduct and report to the Director a quarterly audit as specified under 40 CFR Part 60 Appendix F Procedure 1 Section 7.0. (40 CFR Part 60 Appendix F Procedure 1 Section 7.0)

B. NAC 445B.265

Monitoring systems: Records; Reports

- 1. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.
2. The Permittee required to install a continuous monitoring system shall submit a written report of excess emissions to the Director for every calendar quarter. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter and must include the following information:
a. The magnitude of excess emissions computed in accordance with NAC 445B.256 to 445B.267, inclusive, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the affected facility.
c. The nature and cause of any malfunction, if known, the corrective action taken or preventative measures adopted.
d. Specific identification of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of any repairs or adjustments that were made.
(1) When no excess emissions have occurred and the continuous monitoring system has not been inoperative, repaired or adjusted, such information shall be included in the report.



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Section VI. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. NAC 445B.265 (continued)

3. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain a file of all measurements, including:
 - a. Continuous monitoring systems, monitoring devices and performance testing measurements;
 - b. All continuous monitoring system performance evaluations;
 - c. All continuous monitoring systems or monitoring device calibration checks;
 - d. Adjustments and maintenance performed on these systems or devices; and
 - e. All other information required by NAC 445B.256 to 445B.267, inclusive, recorded in a permanent form suitable for inspection.
 - (1) The file shall be retained for at least 2 years following the date of the measurements, maintenance, reports and records.

*****End of Continuous Emissions Monitoring System (CEMS) Conditions*****



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Section VII. Emission Caps

A. Not Applicable

******End of Emission Caps******



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Section VIII. Surface Area Disturbance Conditions

The surface area disturbance for the Thacker Pass Project is 5,545 acres.

A. Fugitive Dust (NAC 445B.22037) (*Federally Enforceable SIP Requirement*)

1. No person may cause or permit the handling, transporting or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.
2. Except as otherwise provided in subsection 4, no person may cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, “best practical methods” includes, but is not limited to, paving, chemical stabilization, watering, phased construction and revegetation.
3. Except as otherwise provided in subsection 4, no person may disturb or cover 5 acres or more of land or its topsoil until he has obtained an operating permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.
4. The provisions of subsections 2 and 3 do not apply to:
 - a. Agricultural activities occurring on agricultural land; or
 - b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

******End of Surface Area Disturbance Conditions******



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Section IX. Schedules of Compliance

A. Not Applicable

******End of Schedule of Compliance ******



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Section X. Amendments

This permit:

1. Is non-transferable. (NAC 445B.287.3) (Federally Enforceable SIP Requirement)
2. Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5) (Federally Enforceable SIP Requirement)
3. Will expire and be subject to renewal five (5) years from: February 25, 2022 .
(NAC 445B.315) (Federally Enforceable SIP Requirement)
4. A completed application for renewal of an operating permit must be submitted to the Director on the form provided by him with the appropriate fee at least 70 calendar days before the expiration date of this operating permit. (NAC 445B.3473.2) (Federally Enforceable SIP Requirement)
5. Any person aggrieved by a final decision of the Department may, not later than 10 days after notice of the action of the Department, appeal the decision by filing a request for a hearing before the Commission on a form 3* with the State Environmental Commission, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249. *(See adopting agency for form.) (NAC 445B.890) (State Only Requirement)

THIS PERMIT EXPIRES ON: February 25, 2027

Signature:

Issued by:

Ashley Taylor, P.E.
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone:

775-687-9330

Date:

February 25, 2022

Class II Insignificant Activities List

Appended to Permit #AP1479-4334

Emission Unit #	Emission Unit Description
IA1.001	Ammonium Nitrate Prill Silo - Loading
IA1.002	Ammonium Nitrate Prill Silo - Unloading
IA1.003	Sulfuric Acid Plant Cooling Tower
IA1.004	Lithium Carbonate Cooling Tower
IA1.005	Splitter 1
IA1.006	Splitter 2
IA1.007	Splitter 3
IA1.008	Splitter 4
IA1.009	Splitter 5
IA1.010	Splitter 6
IA1.011	Crusher 1
IA1.012	Crusher 2
IA1.013	Crusher 3
IA1.014	Screen 1
IA1.015	Screen 2
IA1.016	Screen 3
IA1.017	Pulverizer 1
IA1.018	Pulverizer 2
IA1.019	Pulverizer 3
IA1.020	Diesel Tank, Off Road (Mine), 25,000 gallons
IA1.021	Diesel Tank, Highway (Mine), 8,000 gallons
IA1.022	Bulk Oil Tank, 20,000 gallons
IA1.023	Bulk Coolant Tank, 3,000 gallons
IA1.024	Bulk Used Oil Tank, 3,000 gallons
IA1.025	Bulk Used Coolant Tank, 3,000 gallons