Air Quality

PERMIT TO CONSTRUCT

Permittee	Perpetua Resources Idaho, Inc.
Permit Number	P-2019.0047
Project ID	62288
Facility ID	085-00011
Facility Location	Forest Service Roads NF-374 and NF-412 Stibnite, Idaho 83611

Permit Authority

This permit (a) is issued according to the "Rules for the Control of Air Pollution in Idaho" (Rules), IDAPA 58.01.01.200–228; (b) pertains only to emissions of air contaminants regulated by the State of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with the application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; and (g) in no manner implies or suggests that the Idaho Department of Environmental Quality (DEQ) or its officers, agents, or employees assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment, or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200–228.

Date Issued DRAFT XX, 2022

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Contents

1 Permit Scope

Purpose

1.1 This is an initial permit to construct (PTC) for ore processing, ore concentration and refining, and ancillary equipment at the Stibnite Gold Project (SGP).

Regulated Sources

1.2 Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 Regulated Sources

Source ID No.	Source	Control Equipment	Maximum Process Rate
Mining			
	Drilling activities	Reasonable control and Fugitive Dust Control Plan (FDCP) Dust collection systems on drilling rigs Control efficiency: 90%	1,200 holes/day
	Blasting activities	Reasonable control & FDCP	2 blasts/day
	Excavating and hauling activities	Reasonable control & FDCP – Chemical suppression and water sprays Control efficiency: 93.3% for PM/PM_{10} (haul roads) Haul road capping with low-arsenic (90 ppm or less) quartzite	180,000 T/day 135,000 T/day 5-year rolling average 788.4 MT of ore and rock from all deposits 394.2MT of ore and rock from the West End deposit
	Rock dumps and storage piles	Reasonable control & FDCP	n/a
PS1–2-L/U	(2) Prill Silos #1-2 Maximum capacity: 100 T (each)	Loading – None Unloading – None	200 T/day and 9,000 T/yr (combined)
Ore Processing			
OC1	Loader Transfer of Ore to Grizzly	Reasonable control & FDCP – Water sprays and moisture carryover	25,000 T/day
OC2	Grizzly to Apron Feeder		
OC3	Conveyor – Apron Feeder to Dribble		
OC4	Conveyor – Apron Feeder to Grizzly		
OC5	Conveyor – Dribble to Grizzly		
OC6	Grizzly to Primary Crusher or Coarse Ore Stockpile Feed		
OC7	Primary Crusher	Reasonable control & FDCP – Water sprays and moisture carryover	
OC8	Conveyor – Coarse Ore Stockpile Feed Transfer to Stockpile		
OC9	Stockpile Transfer to Reclaim Conveyors	Reasonable control & FDCP – Below-grade of storage piles Control efficiency: 80% for PM/PM_{10}	27,600 T/day
OC10	Conveyor – Reclaim Conveyors to SAG Mill Feed Conveyor		
OC11	Conveyor – SAG Mill Feed Transfer to SAG Mill	Reasonable control & FDCP – Enclosure Control efficiency: 80% for PM/PM_{10}	
OC12	Pebble Crusher	Reasonable control & FDCP – Water sprays and moisture carryover	
OC13	Pebble Discharge to SAG Mill Feed		

Table 1.1 Regulated Sources

Source ID No.	Source	Control Equipment	Maximum Process Rate
Ore Concentration and Refining			
CN Tanks	Cyanide Leach Tanks and Cyanide Detox Tanks	Chemical treatment (lime, caustic soda, hydrogen peroxide, copper sulfate, etc.)	1.99 T/yr of CN (facility-wide)
Float Tanks	Floatation Tanks	None	1,700 T/yr PAX
AC	Autoclave (AC)	Venturi Scrubber (VS1) Vent Gas Cleaning Tower (ST1) Vent Gas Steam Condensation Tower (CT1) Carbon Filter (CA5) Type: sulfur-impregnated activated carbon Form: granulated	6,960 T/day
EW	Electrowinning Cells and Pregnant Solution Tank	Shared Carbon Filter (CA2) Type: sulfur-impregnated activated carbon Form: granulated	100 gpm
MR	Mercury Retort	Condenser Carbon Filter (CA3) Type: sulfur-impregnated activated carbon Form: granulated	1,000 lb/batch and 21 T/yr
MF	Induction Melting Furnace	Baghouse (BH2) Carbon Filter (CA4) Type: sulfur-impregnated activated carbon Form: granulated	
CKD	Carbon Regeneration Kiln (Drum)	Wet Scrubber (WS2) Carbon Filter (CA1) Type: sulfur-impregnated activated carbon Form: granulated	7.2 T/day
Tailings and Maintenance Pond activities		Chemical treatment, reasonable control & FDCP	1.99 T/yr of CN (facility-wide)
Process Heating			
ACB	POX Boiler (for AC) Maximum capacity: 17 MMBtu/hr Fuel: propane	None	operation is limited to AC startup only
HS	Strip Circuit Solution Heater Maximum capacity: 5 MMBtu/hr Fuel: propane	None	n/a
CKB	Carbon Regeneration Kiln Burners Maximum capacity: 2.255 MMBtu/hr Fuel: propane	None	n/a
PV	Propane Vaporizer Maximum capacity: 0.1 MMBtu/hr Fuel: propane	None	n/a
LKC	PFR Shaft Lime Kiln Combustion Maximum capacity: 22.0 MMBtu/hr Fuel: propane	None	n/a

Table 1.1 Regulated Sources

Source ID No.	Source	Control Equipment	Maximum Process Rate
Lime Production			
LS1	Limestone transfer to Primary Crusher Hopper	None	1,130 T/day
LS2	Primary Crusher Maximum capacity: 1,130 T/day	None	
LS3	Primary Screen	None	
LS4	Secondary Crusher	None	
LS5	Secondary Screen	None	
LS6	Conveyor – Limestone to Ball Mill Feed Bin	None	
LS7	Conveyor – Limestone to Ball Mill Feed	None	
LS8	Conveyor – Ball Mill Feed to Ball Mill	None	
LSBM	Limestone Ball Mill	Baghouse (BH3)	
LS9	Conveyor – Limestone to Kiln Feed Bin	None	267 T/day
LS10	Conveyor – Limestone to Lime Kiln Feed	None	
LS11	Fines Screen	None	
LS12	Conveyor – Kiln Feed to PFR Shaft Lime Kiln	None	
LK	Parallel Flow Regenerative (PFR) Shaft Kiln	Baghouse (BH4)	169 T/day and 52,377 T/yr
LCR	Lime Mill Crusher	Baghouse (BH5)	
LS-L/U	Bucket Elevator – Pebble Lime Silo Loading	Loading – Bin Vent Filter	
	Pebble Lime Silo discharge to Lime Slaker	Unloading – Wet Scrubber (WS3)	
LS1-L/U	SAG Mill Lime Silo #1 Maximum capacity: 250 T/day	Loading – Bin Vent Filter Unloading – None	4,000 T/day and 70,000 T/yr (combined)
MillS2-L/U	SAG Mill Lime Silo #2 Maximum capacity: 250 T/day	Loading – Bin Vent Filter Unloading – None	
ACS1	AC Lime Silo #1 Maximum capacity: 1,000 T/day	Loading – Bin Vent Filter Unloading – None	
ACS2	AC Lime Silo #2 Maximum capacity: 1,000 T/day	Loading – Bin Vent Filter Unloading – None	
ACS3	AC Lime Silo #3 Maximum capacity: 1,000 T/day	Loading – Bin Vent Filter Unloading – None	
ACS4	AC Lime Silo #4 Maximum capacity: 500 T/day	Loading – Bin Vent Filter Unloading – None	
Aggregate Production			
PCSP1	Portable Crushing and Screening Plant 1 Crushers, screens, and conveyors	Reasonable control & FDCP – water sprays and moisture carryover	2,000 T/day (aggregate)
PCSP2	Portable Crushing and Screening Plant 2 Crushers, screens, and conveyors	Reasonable control & FDCP – water sprays and moisture carryover	2,000 T/day (aggregate)
Concrete Production			
CM	Central Mixer Loading Maximum capacity: 120 T/hr	Reasonable control & FDCP – Controls may include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, and central duct collection systems.	2,480 T/day and 560,000 T/yr (cement + aggregate)
CS1-L/U	Cement/Shotcrete Silo #1 Maximum capacity: 80 T	Loading – Bin Vent Filter Unloading – None	
CS2-L/U	Cement/Shotcrete Silo #2 Maximum capacity: 80 T	Loading – Bin Vent Filter Unloading – None	
CA-L/U	Aggregate Bin Maximum capacity: 2,400 T	Loading – None Unloading – None	

Table 1.1 Regulated Sources

Source ID No.	Source	Control Equipment	Maximum Process Rate
Heating, Ventilation, and Air Conditioning (HVAC)			
H1M	Mine Air Heater #1 Maximum capacity: 4 MMBtu/hr Fuel: propane	None	n/a
H2M	Mine Air Heater #2 Maximum capacity: 4 MMBtu/hr Fuel: propane	None	n/a
HM	(4) Mill HVAC Heaters #1-4 Maximum capacity: 1.0 MMBtu/hr (each) Fuel: propane	None	n/a
HAC	Autoclave HVAC Heater Maximum capacity: 0.25 MMBtu/hr Fuel: propane	None	n/a
HR	Refinery HVAC Heater Maximum capacity: 0.25 MMBtu/hr Fuel: propane	None	n/a
HA	Admin HVAC Heater Maximum capacity: 0.25 MMBtu/hr Fuel: propane	None	n/a
HMO	(2) Mine Ops. HVAC Heaters Maximum capacity: 0.25 MMBtu/hr (each) Fuel: propane	None	n/a
HTS	(2) Truck Shop HVAC Heaters Maximum capacity: 1.0 MMBtu/hr (each) Fuel: propane	None	n/a
HW	(3) Warehouse HVAC Heaters Maximum capacity: 1.0 MMBtu/hr (each) Fuel: propane	None	n/a

Table 1.1 Regulated Sources

Source ID No.	Source	Control Equipment	Maximum Process Rate
Emergency Power Generation and Fire Suppression			
EDG1	Camp Emergency Generator Date of construction: 2007 or later Maximum capacity: 1,000 bkW Maximum operation: 100 hr/yr (non-emergency) Fuel: ultra-low sulfur diesel (ULSD) Displacement: <10 L/cyl	EPA Tier 2 technologies	1 hr/day and 100 hr/yr
EDG2	Plant Emergency Generator #1 Date of construction: 2007 or later Maximum capacity: 1,000 bkW Maximum operation: 100 hr/yr (non-emergency) Fuel: ULSD Displacement: <10 L/cyl	EPA Tier 2 technologies	1 hr/day and 100 hr/yr
EDG3	Plant Emergency Generator #2 Date of construction: 2007 or later Maximum capacity: 1,000 bkW Maximum operation: 100 hr/yr (non-emergency) Fuel: ULSD Displacement: <10 L/cyl	EPA Tier 2 technologies	1 hr/day and 100 hr/yr
EDFP	Mill Fire Pump Date of construction: 2009 or later Maximum capacity: 200 bkW Maximum operation: 100 hr/yr (non-emergency) Fuel: ULSD Displacement: <10 L/cyl	None	1 hr/day and 100 hr/yr
Fuel Storage			
TG1–TG2	Mine Site Gasoline Tanks (#1 through #2) Maximum capacity: 5,000 gal each	Lids or other appropriate closure with gasketed seal and submerged filling	<100,000 gal/mo
TD3–TD10	Mine Site Diesel Tanks (#3 through #10)	Lids or other appropriate closure	n/a

2 Facility-Wide

Fugitive Dust

2.1 All reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650-651. In determining what is reasonable, consideration will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions which might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- Application, where practical, of asphalt, oil, water, or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans, and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, when practical, open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.

2.2 At least once every 12 hours, the permittee shall monitor and maintain records of the frequency and the methods used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.

2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

2.4 At least once every 12 hours, the permittee shall conduct a facility-wide inspection of potential sources of fugitive emissions (e.g., stockpiles, transfer points, haul roads, etc.) identified in the Fugitive Dust Control Plan to ensure that the methods used to reasonably control fugitive dust emissions are effective. At least one of the inspections each day shall be conducted during daylight hours. If emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.

2.5 Fugitive dust control measures shall be applied to haul roads on a frequency such that visible emissions from vehicle traffic on a haul road do not exceed 10% opacity. When emissions are observed at any time to exceed this control trigger level, an appropriate control measure such as those defined in the FDCP shall be used to reasonably control the emissions of fugitive dust. If the control measure chosen does not adequately control fugitive dust emissions, the permittee shall employ additional control measures until fugitive dust control is achieved.

2.6 The permittee shall develop and maintain a Fugitive Dust Control Plan (FDCP) to ensure compliance with fugitive dust requirements (Permit Conditions 2.1–2.5) and also fugitive dust best management practices at the lime production and aggregate production plants in accordance with IDAPA 58.01.01.799. The permittee shall comply with the FDCP at all times. The requirements specified in the FDCP shall be incorporated by reference to this permit and shall be enforceable permit conditions. At a minimum, the FDCP shall contain a list of all potential sources of fugitive dust emissions and the following reasonable precautions to minimize fugitive dust emissions (Permit Condition 2.1):

- Post and limit the maximum speed of haul trucks in accordance with the FDCP. Signs shall be posted along the haul route and placed so they are visible to vehicles entering and leaving the site of operations.
- Apply water or suitable dust suppressant chemicals (e.g., magnesium chloride, calcium chloride) to disturbed areas, haul roads, equipment staging areas, parking areas, and storage piles during the dry season and at other times as necessary to control fugitive dust. Prior to onset of winter conditions each year, the condition of haul and access roads should be assessed before freeze-up and required maintenance needed to maintain the roads through the winter months should be performed, and any preventative dust suppression activities should be completed before the roads are frozen and liquid application of suppressants or water are unrealistic.
- Apply water or suitable dust suppressant chemicals to transfer points, screening operations, and crushing operations identified in the FDCP as necessary to control fugitive dust. Transfer points include points where material (e.g., ore and rock, lime, aggregate, cement, etc.) is transferred to or from a belt conveyor, conveying system, bucket elevator, screening operation, or stockpile. Controls shall include manual water spray capability or installing, operating, and maintaining water spray bars at transfer points to wet the material and to provide moisture carryover for downstream control. Controls shall also include limiting drop heights in truck loading, front-end loader dumping, and conveying operations to ensure a homogeneous flow of material.
- Apply water or suitable dust suppressant chemicals to storage piles as necessary to control fugitive dust. Water may need to be applied to storage piles before and during truck loading, and when stockpiled ore and waste rock is not processed promptly in order to avoid drying and becoming airborne. Stockpile height should be limited to limit disturbance.
- Apply appropriate dust control at the initial point of material handling to suppress dust throughout the material handling process.
- Apply crushed gravel to haul roads, equipment staging areas, and other areas as necessary to limit migration of fine sediment.
- Install wind fences or barriers around, place below grade, or enclose all storage piles, parking areas, and equipment staging areas as necessary to control fugitive dust. This is required for the Stockpile Transfer to Reclaim Conveyors (OC9), Reclaim Conveyors to SAG Mill Feed Conveyor (OC10), and SAG Mill Feed Transfer to SAG Mill conveyor (OC11).
- Develop specific criteria to determine what frequency and type (water and/or chemical) of dust suppressant must be applied, and appropriate suppressant application rates. Chemical dust suppressants shall be applied consistent with manufacturer's instructions and recommendations.
- Develop and implement precautionary measures to address high-wind events, such as when average (sustained) wind speed is forecast to exceed 25 miles per hour.

- Provide training/orientation to all relevant employees regarding FDCP requirements, including the necessity of restricting public access as specified in the Access Management Plan. Visible emissions evaluations shall be conducted by the permittee's employees who are certified visible emission observers.
- At least once each year, evaluate FDCP requirements to identify additional requirements and evaluate effectiveness of practices, including dust suppressant application rates, as appropriate.

2.7 The permittee shall develop and maintain an Access Management Plan (AMP) that identifies the facility boundary and all primary and secondary access points, and clearly specifies measures used to discourage public access to the facility. The permittee shall comply with the measures identified in the AMP at all times. The measures specified in the AMP shall be incorporated by reference to this permit and shall be enforceable permit conditions. At a minimum, the AMP shall include requirements to:

- Observe all primary access points to the facility in an effort to discourage public access. Onsite personnel shall be available for this purpose during active mining and mineral processing operations. Public access to the facility may be monitored by the use of security escort vehicles or manned guardhouses, or sufficiently precluded by the use of locked gates, barriers, or equivalent measures. Primary access points include the North and South Security Gates.
- Post warning signs and periodically patrol secondary access points to the facility in an effort to discourage public access. Onsite personnel shall be available for this purpose. Plans shall be described in the AMP, including identifying the access points monitored, the frequency of patrol, and measures employed to discourage access (e.g., locked gates, barriers, natural features, etc.). Secondary access points include secondary roadways and trails traversing the facility.

2.8 Copies of the FDCP and AMP shall be submitted to DEQ for approval within 60 days of permit issuance at the address provided (Permit Condition 2.26), and shall remain onsite at all times. Any changes to the FDCP or the AMP shall be submitted to DEQ for review and comment within 15 days of the change.

Visible Emissions

2.9 The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by the test methods and procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with this permit condition.

2.10 Each day during daylight hours and under normal operating conditions, the permittee shall conduct a facility-wide inspection of potential point sources of visible emissions including stacks, vents, and functionally equivalent openings. Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either:

- Take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with the following; or

- Perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in the annual compliance certification and in accordance with IDAPA 58.01.01.130-136.

2.11 The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

2.12 The permittee shall have a certified opacity reader onsite at all times during operation of any regulated sources (in Table 1.1). The reader shall be certified in using the test methods and procedures of EPA Reference Methods 9 and knowledgeable of Method 22 procedures.

Process Weight

2.13 The permittee shall not emit PM to the atmosphere from any process or process equipment in excess of the amount shown by the equations in IDAPA 58.01.01.700-703.

- The ore processing; ore concentration and refining; lime production; aggregate production; concrete production; and process heating equipment (identified in Table 1.1) are process equipment as defined in IDAPA 58.01.01.006.

Odor

2.14 The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere in such quantities as to cause air pollution in accordance with IDAPA 58.01.01.776.01.

2.15 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Fuels

2.16 The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur, in accordance with IDAPA 58.01.01.725:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

2.17 The permittee shall maintain documentation of supplier verification of fuel oil sulfur content on an as-received basis to ensure compliance with fuel specifications (Permit Condition 2.16).

2.18 The maximum throughput of gasoline to the Gasoline Tanks (TG1, TG2) shall not exceed 100,000 gallons per month (gal/mo).

2.19 After startup, each month the permittee shall maintain records demonstrating compliance with gasoline throughput limits, by tracking either amounts loaded or amounts dispensed from each Gasoline Tank.

O&M Manual

2.20 Within 60 days after startup of any process equipment (Permit Condition 2.13), the permittee shall develop and maintain an Operation and Maintenance (O&M) manual to ensure compliance with emission limits (Permit Conditions 2.9, 2.13, 4.3, and 5.3) and the control equipment maintenance and operation general provision (Permit Condition 7.2). The O&M manual shall be a permittee-developed document based upon, but independent from, manufacturer-supplied operating manuals. The permittee shall operate control equipment in accordance with the O&M manual at all times. The requirements in the O&M manual shall be incorporated by reference to this permit and shall be enforceable permit conditions. At a minimum, the O&M manual shall include the following for all (Table 1.1):

- Identify the manufacturer, model, date of manufacture, and maximum capacity (as-built) for each regulated emission source assigned a source ID, and for each control device in the service of ore concentration and refining, lime production, and concrete production (in Table 1.1). For each wet scrubber, vent gas cleaning tower, venturi scrubber, carbon filter, baghouse and bin vent filter cartridge control device, a copy of the vendor-supplied performance guarantee shall be included. For each engine, a copy of the EPA tier certification shall be included. For each cyanide leach tank and for each cyanide detox tank, the tank dimensions (e.g., diameter) shall be included.
- Establish operating ranges for control equipment, based on manufacturer specifications and conditions measured during performance testing.
    - Minimum pressure drop across each wet scrubber, vent gas cleaning tower, and venturi scrubber;
    - Minimum circulation flow rate for each wet scrubber, vent gas cleaning tower, venturi scrubber;
    - Maximum inlet gas stream temperature to each carbon filter;
    - Maximum pressure drop across each carbon filter;
    - Minimum pressure drop across each baghouse; and
    - Minimum coolant flow rate in the mercury retort condenser and vent gas steam condensation tower;
- Describe the procedures for proper operation, startup, and shutdown of control equipment, based on manufacturer specifications.
- Describe the schedule and procedures for routine inspection (Permit Condition 2.10), maintenance, repair, and replacement of control equipment.
    - See-no-see visible emissions inspection of each wet scrubber, carbon filter, baghouse, and bin vent shall be conducted at least once per month.
    - At least once every six months, the drum lining of the carbon regeneration kiln shall be visually inspected for structural damage and cracks.
    - The dates, times, and results from each inspection (as required by Permit Condition 2.11), corrective action, maintenance, repair, and replacement of control equipment shall be recorded at least once per month.
    - The replacement dates for each baghouse and bin vent filter cartridge and for each activated carbon filter medium shall be recorded at the time of each replacement. For cartridges, records shall include the manufacturer and model. For carbon filters, records

shall include the manufacturer, type, and form of medium added. Records shall also include any changes in supplier and other relevant information.

- All carbon filter beds shall be disposed of in an acceptable manner in compliance with all applicable state rules and federal regulations.

- Describe the schedule and procedures for corrective action that will be taken if visible emissions are present from wet scrubber (WS2, WS3), carbon filter (CA1, CA2, CA3, CA4, CA5), baghouse (BH2, BH3, BH4, BH5), or bin vent filter (LS, LS1, MillS2, ACS1, ACS2, ACS3, ACS4, CS1, CS2) control equipment at any time. Procedures should include how to determine whether filter cartridges are ruptured or are not appropriately secured in place, and how to determine whether the wet scrubber, condenser, and carbon filters are operating properly.
- Describe each monitoring device and methodology used to measure weight rates of materials to demonstrate compliance with each material throughput limit (Permit Conditions 3.5–3.9, 4.8–4.11, and 5.4–5.8). Procedures for proper installation, calibration, and maintenance shall be included.
- Describe each monitoring device and methodology used to measure the volumetric rates of materials to demonstrate compliance with the electrowinning cells and pregnant solution tank throughput limit (Permit Condition 4.12). Procedures for proper installation, calibration, and maintenance shall be included.
- Describe each monitoring device and methodology used to monitor pH, temperature, and free cyanide in each cyanide leach tank, each cyanide detox tank, and each tailings reclaim stream to comply with Cyanide Emissions Limit Compliance Monitoring (Permit Condition 4.18). Procedures for proper installation, calibration, and maintenance shall be included.
- Describe the methodology and sample calculations used to estimate monthly and rolling 12-month facility-wide cyanide emissions to assess compliance with the Cyanide Emissions Limit (Permit Condition 4.4). Calculations shall be based on the pH, temperature, and free cyanide concentrations that are measured each day, and the methodology used shall be consistent with the permittee's application as addended December 18, 2020 and shall be based on the following equation:

  $r_v = k_g \alpha_0 C_l H A F_a F_w$

  where,

  r_v = hydrogen cyanide emissions from surface (g/s)

  k_g = gas phase mass transfer coefficient (m/s)

  α_0 = non-ionized cyanide fraction determined from pH and pK_a (ionization coefficient)

  C_l = total liquid phase free cyanide concentration (g/m^3)

  H = Henrys Law Coefficient (g/m^3 per g/m^3)

  A = process surface area (m^2)

  F_a = area factor

  F_w = wind factor
- Describe the monitoring methodology used to monitor xanthates usage (Permit Condition 4.19).

2.21 The O&M manual shall be submitted to DEQ within 60 days after initial startup of any ore processing, ore concentration and refining, lime production, or aggregate production emission source regulated by this permit (as identified in Table 1.1) at the address provided (Permit Condition 2.26), and shall remain onsite at all times. Any changes to the O&M manual shall be submitted to DEQ for review and comment within 15 days of the change.

Incorporation of Federal Requirements

2.22 Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein. Documents include, but are not limited to:

- Standards of Performance for New Stationary Sources (NSPS) 40 CFR 60, Subpart A – General Provisions.
- NSPS 40 CFR 60, Subpart LL – Standards of Performance for Metallic Mineral Processing Plants. Each crusher (OC7, OC12), conveyor belt transfer point (OC2–OC6, OC9–OC11, OC13), and truck unloading station (OC1) is an affected facility.
- NSPS 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. Each crusher (LS2, LS4), grinding mill (LSBM), screening operation (LS3, LS5, LS11), belt conveyor (LS6–LS10, LS12), and storage bin (LS1) is an affected facility.
- NSPS 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Each emergency generator engine and fire pump (EDG1, EDG2, EDG3, and EDFP) is an affected facility.
- National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) 40 CFR 63, Subpart A – General Provisions.
- NESHAP 40 CFR 63, Subpart EEEEEEE – National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category. The collection of ore pretreatment processes including the autoclave (AC) and the carbon process including the carbon regeneration kiln (CKD), the electrowinning cells and pregnant solution tank (EW), the mercury retort (MR), and the induction melting furnace (MF) are affected facilities.
- NESHAP 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). Each emergency generator engine and fire pump (EDG1, EDG2, EDG3, and EDFP) is an affected facility.
- NESHAP 40 CFR 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. Each gasoline fuel storage tank (TG1, TG2) is an affected facility.

The permittee shall comply with all applicable NSPS and NESHAP requirements. For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS or NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.

2.23 In accordance with IDAPA 58.01.01.314.06, the permittee shall notify DEQ in writing the date upon which the Tier I source (e.g., gold ore concentration and refining process equipment) commences operation. The notification shall be titled, "TIER I SOURCE NOTIFICATION OF COMMENCING OPERATION," and shall include the name of the permittee, the permit and project numbers, the date the permit was issued, and the date the Tier I source commences operation. The notification shall be submitted to DEQ within five (5) days of commencing operation and shall be sent to:

Air Quality Permitting
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255

2.24 In accordance with IDAPA 58.01.01.313.01.b., the permittee shall submit a complete application to DEQ at the address provided (Permit Condition 2.26) for an initial Tier I operating permit within 12 months of becoming a Tier I source or commencing operation.

Test Methods

2.25 Except as otherwise specified in this permit and in IDAPA 58.01.01.157.02, when testing is required the following test methods shall be used to measure pollutant emissions.

Table 2.1 Test Methods

Pollutant		Test Method	Additional Requirements
H_2SO_4		EPA Method 8	
$PM_{2.5}$ or PM_{10}		EPA Methods 5 and 202, or 201A and 202	Particulate matter (PM), including condensable PM as defined in IDAPA 58.01.01.006 with an aerodynamic diameter less than or equal to a nominal 10 micrometers for PM_{10}, and less than or equal to a nominal 2.5 micrometers for $PM_{2.5}$.
Opacity	point	EPA Method 9	For NSPS and NESHAP sources, use IDAPA 58.01.01.625 and Method 9. For other sources, use IDAPA 58.01.01.625 only.
	fugitive	EPA Method 22	Visible fugitive PM.

Notifications

2.26 All requests, reports, applications, submittals, certifications, and other communications required by this permit shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 N. Orchard St.
Boise, Idaho 83706

phone: (208) 373-0550
fax: (208) 373-0287

3 Mining and Ore Processing

3.1 Process Description

Conventional open-pit mining methods including drilling, blasting, excavating, and hauling will be used to extract ore and waste rock, termed development rock (DR). Hydraulic shovels and front-end loaders will be used to load ore and DR into haul trucks. DR will be used for construction, restoration, and backfilling, or hauled to dedicated development rock storage facilities (DRSF). Approximately 340 million tons of DR will be handled over the life of the mine.

The SGP will include three years of pre-mining development and construction activities, followed by an operating mine life of approximately 12 years. Mining will occur in three open pits: Yellow Pine Pit (YPP), Hangar Flats pit (HFP), and West End pit (WEP). Legacy tailings from the Meadow Creek valley (Bradley Tailings [BT]) will also be reclaimed and reprocessed. Surface exploration drilling will occur within the pits and underground within the Scout Prospect decline.

Ore will be hauled to the primary crusher area, where it will be fed directly into the crusher dump pocket or stockpiled. The ore crushing plant will be designed to operate at a maximum rate of 25,000 tons per calendar day (T/day). Approximately 100 million tons of ore will be mined from the three pits over the life of the project.

The metal-recovery process from ore will include conventional crushing and grinding, followed by froth-flotation circuits that will generate separate gold-silver and antimony-silver concentrates. The antimony-silver concentrate will be shipped offsite for refining, whereas additional onsite processing of the gold-silver concentrate will include pressure oxidation, carbon-in-leach circuits, and refining processes to recover gold and minor amounts of silver. The finely ground leftover ore material from the mineral-recovery process, termed tailings, will be neutralized, thickened, and transported via a pipeline to the tailings storage facility.

3.2 Control Device Descriptions

Table 3.1 contains a description of control equipment used to control emissions from mining and ore processing activities.

Table 3.1 Mining and Ore Processing Control Device Descriptions

Emission Sources	Control Devices
Drilling activities	Reasonable control and Fugitive Dust Control Plan (FDCP) Dust collection systems on drilling rigs Control efficiency: 90%
Blasting activities	Reasonable control & FDCP
Excavating and hauling activities	Chemical suppression and water sprays Control efficiency: 93.3% for PM/PM_{10} (haul roads) Haul road capping with low-arsenic quartzite
Loader Transfer of Ore to Grizzly	Water sprays and moisture carryover
Grizzly to Apron Feeder	
Apron Feeder to Dribble	
Apron Feeder to Grizzly	
Dribble to Grizzly	
Grizzly to Primary Crusher or Coarse Ore Stockpile Feed	
Primary Crusher	Water sprays and moisture carryover
Coarse Ore Stockpile Feed Transfer to Stockpile	
Stockpile Transfer to Reclaim Conveyors	Below-grade of storage piles Control efficiency: 80% for PM/PM_{10}
Reclaim Conveyors to SAG Mill Feed Conveyor	
SAG Mill Feed Transfer to SAG Mill	Enclosure Control efficiency: 80% for PM/PM_{10}
Pebble Crusher	Water sprays and moisture carryover
Pebble Discharge to SAG Mill Feed	
(2) Prill Silos #1-2 Maximum capacity: 100 T (each)	None

Operating Limits

3.3 Drilling Limits

The permittee shall drill no more than 1,200 blast holes per day.

3.4 Blasting Limits

The permittee shall complete no more than 2 blasting operations per day.

3.5 Daily Hauling and Excavating Limits

The permittee shall haul no more than 180,000 tons per day (T/day) of ore and rock.

The permittee shall haul no more than 135,000 T/day of ore and rock, based on a 5-year rolling average.

3.6 Life of Mine Hauling and Excavating Limits

The permittee shall haul no more than 788.4 million tons (MT) of ore and rock from all deposits over the life of the mine and no more than 394.2 MT of ore and rock from the West End deposit over the life of the mine.

3.7 Primary Crusher Limit

The permittee shall process ore as the raw material in the primary crusher, and the maximum input to the primary crusher shall not exceed 25,000 T/day.

3.8 Pebble Crusher Limit

The permittee shall process ore as the raw material, and the maximum input to the pebble crusher shall not exceed 27,600 T/day.

3.9 Prill Loading Limit

The permittee shall not load in excess of 200 T/day nor and
9,000 T/yr of prill (ammonium nitrate) to the prill silos.

3.10 Mining and Ore Processing Dust Control

The permittee shall control emissions from mining and ore processing emission sources (Table 3.1) in accordance with the Fugitive Dust Control Plan.

3.11 Drilling Rigs Dust Control System

The permittee shall install and operate dust collection systems with a minimum control efficiency of 90% on all drilling rigs in accordance with the O&M manual (Permit Condition 2.20). The dust collection systems shall be in operation at all times when the drilling rigs are operated.

3.12 Ore Processing Equipment Water Sprays

The permittee shall install, operate, and maintain water sprays in accordance with the O&M manual (Permit Condition 2.20) to control PM emissions from each ore processing crusher and conveyor. Water sprays shall operate at all times when this equipment is operated to ensure compliance with Fugitive Dust requirements (Permit Conditions 2.1–2.6).

3.13 Haul Road Capping

The permittee shall cap haul roads that are outside of the Yellow Pine Pit (YPP), Hangar Flats Pit (HFP), and West End Pit (WEP) and development rock storage facilities (DRSF) including the Yellow Pine DRSF, Fiddle DRSF, and Hangar Flats DRSF with low-arsenic material.

The permittee shall use low-arsenic quartzite rock deposits from the WEP, or other material with equal or lower arsenic concentration, as capping material. Low-arsenic quartzite rock is defined as material with a median arsenic concentration of 90 parts per million (ppm) or less.

The permittee shall develop and maintain a Haul Road Capping Plan (HRCP) that identifies the low-arsenic quartzite rock deposits in the West End pit based on core sample analyses. The permittee shall comply with the measures identified in the HRCP at all times. The measures specified in the HRCP shall be incorporated by reference to this permit and shall be enforceable permit conditions. At a minimum, the HRCP shall include:

- The low-arsenic quartzite rock sampling plan including standard operational procedure for sampling, frequency of sampling, and ASTM (or equivalent) method of analysis.
- The frequency of inspection of the haul roads and maintenance procedures.

A copy of the HRCP shall be submitted to DEQ for approval within 60 days of permit issuance at the address provided (Permit Condition 2.26), and shall remain onsite at all times. Any changes to the HRCP shall be submitted to DEQ for review and comment within 15 days of the change.

Monitoring and Recordkeeping Requirements

3.14 Drilling Limits Monitoring

Each day, the permittee shall monitor and record the number of blast holes drilled.

3.15 Blasting Limits Monitoring

Each day, the permittee shall monitor and record the number of blasting operations completed.

3.16 Daily Hauling and Excavating Monitoring

Each day, the permittee shall monitor and record the amount of ore and rock transported on haul trucks (T/day). The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each calendar month, the permittee shall monitor and record the amount of ore and rock transported on haul trucks in tons per month (T/mo) and in tons per year (T/yr). Annual amounts of ore and rock transported shall be determined by summing the monthly amount over the previous consecutive 12-month period. The annual amounts of ore and rock transported shall be used to calculate the 5-year rolling average in T/day.

3.17 Life of Mine Hauling and Excavating Limit Monitoring

Each day, the permittee shall monitor and record the amount of ore and rock transported on haul trucks from all deposits (T/day) and the amount of ore and rock transported on haul trucks (T/day) from the West End deposit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each calendar month, the permittee shall monitor and record the amount of ore and rock transported on haul trucks in tons per month (T/mo) and in tons per year (T/yr) from all deposits and the West End deposit. Annual amounts of ore and rock transported shall be determined by summing the monthly amount over the previous consecutive 12-month period. The annual amounts of ore and rock transported shall be used to calculate the life of mine total (MT) for all deposits and the West End deposit.

3.18 Primary Crusher Limit Monitoring

Each day, the permittee shall monitor and record the tons of ore input to the crusher (T/day). The devices and methodologies used to measure weights shall be identified in the O&M Manual.

3.19 Pebble Crusher Limit Monitoring

Each day, the permittee shall monitor and record the tons of ore input to the pebble crusher (T/day). The devices and methodologies used to measure weights shall be identified in the O&M Manual.

3.20 Prill Loading Limit Monitoring

Each day, the permittee shall monitor and record the amount of prill loaded to all of the prill silos combined in tons (T/day). The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each month, the permittee shall monitor and record the amount of prill loaded to all of the prill silos combined in tons per month (T/mo) and in tons per year (T/yr) to demonstrate compliance with the annual prill silos limit. Annual prill loaded shall be determined by summing the monthly input over the previous consecutive 12-month period.

4 Ore Concentration and Refining

4.1 Process Description

The autoclave is a pressure oxidation (POX) vessel used to oxidize gold gold-silver concentrate at elevated temperature and pressure in the presence of oxygen. Upon exiting the autoclave, the slurry is cooled in flash vessels and neutralized using lime and caustic soda prior to being sent to the vat leaching circuit for gold and silver recovery. A dilute sodium cyanide solution is added to the leach tanks to dissolve the gold and silver from the ore. Leached “pulp” is sent to multistage carbon-in-pulp (CIP) and/or carbon-in-leach (CIL) tanks, where gold is recovered onto activated carbon. The autoclave is located in the POX Building and the exhaust from the autoclave passes through a venturi scrubber, vent gas cleaning tower, vent gas steam condensation tower, and carbon filter.

Carbon loaded with gold is removed and washed with acid, then stripped with a caustic solution. This mineral-bearing solution is sent to the electrowinning cells and pregnant solution tank (EW). The EW cells remove the gold from the solution by plating it onto cathodes consisting of stainless-steel plates with steel wool. The EW cell exhaust passes through a carbon adsorption column (CA2), where remaining mercury vapor is adsorbed onto sulfur-impregnated activated carbon (SIAC). The stripped carbon must be periodically regenerated in the carbon regeneration kiln. Exhaust from the carbon regeneration kiln passes through a carbon adsorption bed (CA1), where mercury is adsorbed onto SIAC.

Gold concentrate is loaded into the mercury retort, where it is heated under vacuum to drive off mercury. The mercury retort exhaust passes through a shell-and-tube condenser to cool the exhaust and condense the mercury vapor into a liquid, which is collected by the mercury trap. The exhaust passes through a carbon adsorption column (CA3), where remaining vapor mercury is adsorbed onto SIAC.

After retorting, the gold concentrate is transferred to the electric induction melting furnace. Only retorted concentrate is melted in the furnace. The exhaust passes through a carbon adsorption column (CA4), where remaining mercury vapor is adsorbed onto SIAC. The electrowinning cells and pregnant solution tank, carbon regeneration kiln, mercury retort, and induction melting furnace are located in the Refinery Building.

4.2 Control Device Descriptions

Table 4.1 Ore Concentration and Refining Control Device Descriptions

Emissions Unit / Processes	Control Devices	Emission Points
Cyanide Leach Tanks and Cyanide Detox Tanks	Chemical treatment (lime, caustic soda, hydrogen peroxide, copper sulfate, etc.)	Various
Flotation Tanks	None	
Autoclave	Venturi Scrubber (VS1) Minimum pressure drop and Minimum circulation flow rate in O&M	Autoclave Carbon Filter Stack
	Vent Gas Cleaning Tower (ST1) Minimum pressure drop and Minimum circulation flow rate in O&M	
	Vent Gas Steam Condensation Tower (CT1) Minimum coolant flow rate in O&M	
	Carbon Filter (CA5) Maximum pressure drop established in O&M Maximum inlet gas stream temperature established in O&M and by Subpart EEEEEEE	
POX Boiler	None	POX Boiler Stack
Electrowinning Cells and Pregnant Solution Tank	Shared Carbon Filter (CA2) Maximum pressure drop established in O&M Maximum inlet gas stream temperature established in O&M and by Subpart EEEEEEE in O&M	Electrowinning Cells and Pregnant Solution Tank Shared Carbon Filter Stack
Strip Circuit Solution Heater	None	Strip Circuit Solution Heater Stack
Mercury Retort	Condenser Minimum coolant flow rate established in O&M	Mercury Retort Carbon Filter Stack
	Carbon Filter (CA3) Maximum pressure drop established in O&M Maximum inlet gas stream temperature established in O&M and by Subpart EEEEEEE	
Induction Melting Furnace	Baghouse (BH2) Minimum pressure drop established in O&M	Induction Melting Furnace Carbon Filter Stack
	Carbon Filter (CA4) Maximum pressure drop established in O&M Maximum inlet gas stream temperature established in O&M and by Subpart EEEEEEE	
Carbon Regeneration Kiln	Wet Scrubber (WS2) Minimum pressure drop and Minimum circulation flow rate established in O&M	Carbon Regeneration Kiln Carbon Filter Stack
	Carbon Filter (CA1) Maximum pressure drop established in O&M Maximum inlet gas stream temperature established in O&M and by Subpart EEEEEEE	
Carbon Regeneration Kiln Burners	None	Carbon Regeneration Kiln Burners Stack
Propane Vaporizer	None	Propane Vaporizer Stack
Tailings and Maintenance Pond	None	Various

Emission Limits

4.3 Ore Concentration and Refining Equipment Emissions Limits

Emissions from ore concentration and refining equipment stacks shall not exceed any corresponding emission rate limits (Table 4.2).

Table 4.2 Ore Concentration and Refining Emissions Limits [a]

Source Description	PM / PM_{10} / $PM_{2.5}$ [b]	NO_x	CO	VOC	SO_2	H_2SO_4
	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]
Autoclave (AC)	5.08				0.65	2.03
Carbon regeneration kiln (CKD)	0.42	0.01	0.12	0.11		
Electrowinning cells and pregnant solution tank (EW)	0.07					
Mercury retort (MR)	0.01 [d]					
Induction melting furnace (MF)	2.84					

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and recordkeeping requirements.
b) Particulate matter (PM) including condensable PM as defined in IDAPA 58.01.01.006, with an aerodynamic diameter less than or equal to a nominal 10 micrometers for PM_{10}, and less than or equal to a nominal 2.5 micrometers for $PM_{2.5}$.
c) Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.
d) For this emission limit, compliance may be demonstrated as measurement below detection limits, when addressed as part of a performance test protocol that is approved by DEQ.

4.4 Cyanide Emissions Limit

Facility-wide emissions shall not exceed 1.99 tons per year of cyanide compounds.

4.5 Carbon Disulfide Emissions Limit

Facility-wide emissions shall not exceed 0.063 tons per year of carbon disulfide.

Operating Limits

4.6 Xanthates Usage

The permittee shall use potassium amyl xanthate (PAX) for flotation treatment. Total xanthate usage shall not exceed 1,700 tons per year (T/yr).

4.7 POX Boiler Operation

Operation of the POX Boiler shall be limited to the autoclave start-up operation only.

4.8 Autoclave Input

The permittee shall process ore concentrate as the raw material in the autoclave, and the maximum input to the autoclave shall not exceed 6,960 T/day.

4.9 Mercury Retort Input

The permittee shall process precious metal concentrate as the raw material in the mercury retort, and the maximum input to the mercury retort shall not exceed 1,000 pounds per batch (lb/batch) and 21 T/yr.

Precious metal concentrate includes material loaded with precious metals produced by electrowinning, flotation and gravity separation, and other gold concentration or precipitation processes; and material collected from the wash-down of equipment and surfaces contacted with precious metals that have been concentrated through these concentration methods.

4.10 Induction Melting Furnace Input

The permittee shall process retorted concentrate as the raw material in the induction melting furnace, and the input to the induction melting furnace shall not exceed 1,000 lb/batch, and 21 T/yr. Retorted concentrate includes precious metal concentrate that has been retorted and dust collected from the baghouse and fume hood of the induction melting furnace.

4.11 Carbon Regeneration Kiln Input

The permittee shall process carbon filters as the raw material in the carbon regeneration kiln, and the maximum input to the carbon regeneration kiln shall not exceed 7.2 T/day.

4.12 Electrowinning Cells and Pregnant Solution Tank Throughput

The permittee shall process mineral-bearing solution as the raw materials in the electrowinning cells and pregnant solution tank, and the maximum throughput for the electrowinning cells and pregnant solution tank shall not exceed 100 gallons per minute (gpm).

4.13 Autoclave Venturi Scrubber, Vent Gas Cleaning Tower, Vent Gas Steam Condensation Tower, and Carbon Filter

The permittee shall install, operate, and maintain venturi scrubber (VS1), vent gas cleaning tower (ST1), vent gas steam condensation tower (CT1), and carbon filter (CA5) systems in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions from the autoclave shall be ducted to these control devices at all times to ensure compliance with autoclave emission limits (Table 4.2).

4.14 Electrowinning Cells and Pregnant Solution Tank Shared Carbon Filter

The permittee shall install, operate, and maintain a carbon filter (CA2) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions from the electrowinning cells and pregnant solution tank shall be ducted to a carbon filter at all times to ensure compliance with electrowinning cells and pregnant solution tank emission limits (Table 4.2).

4.15 Mercury Retort Condenser and Carbon Filter

The permittee shall install, operate, and maintain a condenser and carbon filter (CA3) in series in accordance with the O&M manual (Permit Condition 2.20) and manufacturer's recommendations. All emissions from the mercury retort (MR) shall be ducted to the condenser and activated carbon filter at all times to ensure compliance with mercury retort emission limits (Table 4.2).

- The MR shall be fully enclosed in the refinery building.
- The air pressure within the MR shall be maintained lower than the room air pressure such that air flows into the MR at all times when the MR is operating. The MR door shall be kept closed at all times during operation.
- The permittee shall not operate the MR unless the chilled water condenser is operating, carbon filter in place, and the condenser coolant flow rate is maintained within the range specified in the O&M manual.
- The condenser and carbon filter shall be maintained and operated in accordance with the O&M manual.
- All liquid mercury captured from the MR shall be stored in closed containers.

4.16 Induction Melting Furnace Baghouse and Carbon Filter

The permittee shall install, operate, and maintain a baghouse (BH2) and carbon filter (CA4) in series in accordance with the O&M manual (Permit Condition 2.20) and manufacturer's recommendations. All emissions from the induction melting furnace shall be ducted to the baghouse and carbon filter at all times during operation to ensure compliance with induction melting furnace emission limits (Table 4.2).

4.17 Carbon Regeneration Kiln Wet Scrubber and Carbon Filter

The permittee shall install, operate, and maintain a wet scrubber (WS2) and carbon filter (CA1) in series in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions from the carbon regeneration kiln shall be ducted to the wet scrubber and a carbon filter at all times to ensure compliance with carbon regeneration kiln drum emission limits (Table 4.2).

Monitoring and Recordkeeping

4.18 Cyanide Emissions Limit Compliance Monitoring

On at least a daily basis, the permittee shall monitor and record the pH, temperature, and free cyanide concentration levels in grams per cubic meter (g/m^3) of each cyanide leach tank, detox tank, and tailings reclaim stream, and use this information to estimate monthly facility-wide cyanide emissions using the equation and calculation methodology in the O&M Manual (Permit Condition 2.20).

Each month, the permittee shall estimate the monthly and rolling 12-month facility-wide cyanide emissions. Monthly facility-wide cyanide emissions shall be estimated from all emission sources including cyanide leach tanks, detox tanks, electrowinning cells and pregnant solution tank, and barren tanks. Rolling 12-month facility-wide cyanide emissions shall be estimated by summing the monthly emissions from all sources over the previous consecutive 12-month period. The rolling 12-month facility-wide cyanide emissions shall be used to assess compliance with the Cyanide Emissions Limit (Permit Condition 4.4).

4.19 Xanthates Usage Monitoring

Each month, the permittee shall monitor and record the xanthates delivered to the facility and the xanthates used by the facility in tons per month (T/mo) and in tons per 12-month period to demonstrate compliance with the xanthates usage limit. Annual delivery and usage shall be determined by summing the respective monthly amounts over the previous consecutive 12-month period. The methodologies used to measure xanthates usage shall be identified in the O&M Manual.

4.20 POX Boiler Operation Monitoring

Each month, the permittee shall monitor and record the operating hours of the POX Boiler, in hours (hr/mo) and in hours per 12-month period (hr/yr). Annual hours shall be determined by summing the monthly hours over the previous consecutive 12-month period.

4.21 Autoclave Input Monitoring

Each day, the permittee shall monitor and record the material input to the autoclave in tons (T/day) to demonstrate compliance with the autoclave input limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual, and the devices shall be installed in accordance with the requirements of NESHAP Subpart EEEEEEE.

4.22 Mercury Retort Input Monitoring

Each day, the permittee shall monitor and record the material input to the mercury retort in pounds (lb/day) to demonstrate compliance with the daily mercury retort input limit. The devices and methodologies used to measure weights shall be in accordance with the requirements of NESHAP Subpart EEEEEEE.

Each month, the permittee shall monitor and record the material input to the mercury retort in T/mo and T/yr to demonstrate compliance with the annual mercury retort input limit. Annual

material input shall be determined by summing the monthly input over the previous consecutive 12-month period.

4.23 Induction Melting Furnace Input Monitoring

Each day, the permittee shall monitor and record the material input to the induction melting furnace in pounds (lb/day) to demonstrate compliance with the daily induction melting furnace input limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each month, the permittee shall monitor and record the material input to the induction melting furnace in T/mo and in T/yr to demonstrate compliance with the annual induction melting furnace input limit. Annual material input shall be determined by summing the monthly input over the previous consecutive 12-month period.

4.24 Carbon Regeneration Kiln Input Monitoring

Each day, the permittee shall monitor and record the material input to the carbon regeneration kiln in tons (T/day) to demonstrate compliance with the carbon regeneration kiln input limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

4.25 Electrowinning Cells and Pregnant Solution Tank Throughput Monitoring

Each day, the permittee shall monitor and record the material throughput in the electrowinning cells and pregnant solution tank in gallons per minute (gpm) to demonstrate compliance with the Electrowinning Cells and Pregnant Solution Tank Throughput limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

4.26 Autoclave Venturi Scrubber and Vent Gas Cleaning Tower Monitoring

The permittee shall install, calibrate, operate, and maintain devices for monitoring the circulation flow rate in the venturi scrubber, the circulation flow rate in the vent gas cleaning tower, the pressure drop across the venturi scrubber, and the pressure drop across the vent gas cleaning tower for the autoclave.

At least once per shift, the permittee shall monitor and record the circulation flow rate in the venturi scrubber, the circulation flow rate in the vent gas cleaning tower, the pressure drop across the venturi scrubber, and the pressure drop across the vent gas cleaning tower to ensure compliance with O&M specifications.

4.27 Autoclave Vent Gas Steam Condensation Tower Monitoring

The permittee shall install, calibrate, operate, and maintain devices for monitoring the coolant flow rate to the vent gas steam condensation tower for the autoclave.

At least once per shift, the permittee shall monitor and record the coolant flow rate to the vent gas steam condensation tower to ensure compliance with O&M specifications.

4.28 Autoclave Carbon Filter Monitoring

The permittee shall install, calibrate, operate, and maintain devices for monitoring the inlet gas stream temperature to the carbon filter, and the pressure drop across the carbon filter for the autoclave.

At least once per shift, the permittee shall monitor and record the inlet gas stream temperature and pressure drop across the carbon filter to ensure compliance with O&M specifications.

4.29 Electrowinning Cells and Pregnant Solution Tank Shared Carbon Filter Monitoring

The permittee install, calibrate, operate, and maintain devices for monitoring the inlet gas stream temperature to the carbon filter, and the pressure drop across the carbon filter for the electrowinning cells and pregnant solution tank.

At least once per shift, the permittee shall monitor and record the inlet gas stream temperature and pressure drop across the carbon filter to ensure compliance with O&M specifications.

4.30 Mercury Retort Condenser and Carbon Filter Monitoring

The permittee shall install, calibrate, operate, and maintain devices for monitoring the coolant flow rate in the condenser, the inlet gas temperature to the carbon filter, the pressure drop across the carbon filter, and the difference between the pressure inside the MR and the air pressure in the room.

At least once per shift, the permittee shall monitor and record the coolant flow rate to the condenser, the inlet gas stream temperature, the pressure drop across the carbon filter, and the difference between the pressure inside the MR and the air pressure in the room to ensure compliance with O&M specifications.

4.31 Induction Melting Furnace Baghouse and Carbon Filter Monitoring

The permittee shall install, calibrate, operate, and maintain devices for monitoring the pressure drop across the baghouse, the inlet gas stream temperature to the carbon filter, and the pressure drop across the carbon filter for the induction melting furnace.

At least once per shift, the permittee shall monitor and record the pressure drop across the induction melting furnace baghouse, the inlet gas stream temperature to the carbon filter, and pressure drop across the carbon filter to ensure compliance with O&M specifications.

4.32 Carbon Regeneration Kiln Wet Scrubber and Carbon Filter Monitoring

The permittee shall install, calibrate, operate, and maintain a device for monitoring the circulation flow rate in the wet scrubber, the pressure drop across the wet scrubber, the inlet gas stream temperature to the carbon filter, and the pressure drop across the carbon filter for the carbon regeneration kiln.

At least once per shift, the permittee shall monitor and record the circulation flow rate, the pressure drop across the carbon regeneration kiln wet scrubber, the inlet gas stream temperature to the carbon filter, and the pressure drop across the carbon filter to ensure compliance with O&M specifications.

Testing

4.33 Ore Concentration and Refining Equipment Performance Tests

Within 180 days after initial startup, performance testing shall be conducted to demonstrate compliance with the following Ore Concentration and Refining Equipment Emissions Limits. The permittee shall conduct three separate test runs for each performance test using the appropriate test method (Permit Condition 2.25). The source test shall be conducted under "worst-case normal" conditions as required by IDAPA 58.01.01.157 and the General Provisions of this permit, and the source test report shall contain documentation that the test was conducted under these conditions.

- $PM_{10}/PM_{2.5}$ and H_2SO_4 in lb/hr from the Autoclave Wet Scrubber Stack
- $PM_{10}/PM_{2.5}$ in lb/hr from the Carbon Regeneration Kiln Carbon Filter Stack

- $PM_{10}/PM_{2.5}$ in lb/hr from the Electrowinning Cells and Pregnant Solution Tank Shared Carbon Filter Stack
- $PM_{10}/PM_{2.5}$ in lb/hr from the Mercury Retort Carbon Filter Stack
- $PM_{10}/PM_{2.5}$ in lb/hr from the Induction Melting Furnace Carbon Filter Stack

4.34 Ore Concentration and Refining Equipment Performance Tests Monitoring

The permittee shall monitor and record the following during each performance test:

- Material input rates for all ore concentration and refining process equipment (Permit Conditions 4.21 through 4.25) during each test run.
- Control equipment monitoring relevant to the stack tested (Permit Condition 4.26 through 4.32), measured at least once during each test run.
- The visible emissions observed for the stack tested during each test, using the methods specified in IDAPA 58.01.01.625 (Permit Condition 2.9).

5 Lime, Aggregate, and Concrete Production

5.1 Process Description

The lime, aggregate, and cement batch plants produce raw materials necessary for mining and ore concentration and refining operations. Lime is used in ore processing for pH control. Aggregate and cement are used in concrete production, with aggregate also used in road construction.

Lime production consists of a limestone crushing, screening, and grinding plant and lime storage silos. The limestone grinding process utilizes a baghouse to reduce emissions during processing. Each storage silo has a bin vent filter used to reduce PM emissions during silo loading.

Aggregate production consists of two portable crushing and screening plants and aggregate and cement storage silos. Each portable crushing and screening plant utilizes water sprays and moisture carryover to reduce emissions during processing. Each storage silo has a bin vent filter used to reduce PM emissions during silo loading.

Concrete production consists of a central mix batch plant and cement storage silos. The central mix batch plant utilizes controls that may include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, and central duct collection systems to reduce PM emissions during processing. Each storage silo has a bin vent filter used to reduce PM emissions during silo loading.

5.2 Control Device Descriptions

Table 5.1 Lime, Aggregate, and Concrete Production Control Device Descriptions

Lime Production Plant Emissions Unit / Processes	Control Devices	Emission Points
Limestone transfer to Primary Crusher Hopper	None	Various
Primary Crusher	None	
Primary Screen	None	
Secondary Crusher	None	
Secondary Screen	None	
Limestone to Ball Mill Feed Bin	None	
Limestone to Ball Mill Feed	None	
Ball Mill Feed to Ball Mill	None	
Limestone to Kiln Feed Bin	None	
Limestone to Lime Kiln Feed	None	
Fines Screen	None	
Kiln Feed to PFR Shaft Lime Kiln	None	
Limestone Ball Mill	Baghouse (BH3) Minimum pressure drop established in O&M	Limestone Ball Mill Baghouse Stack
Pebble Lime Silo loading	Bin vent filter	Pebble Lime Silo Stack
unloading	Wet Scrubber (WS3) Minimum pressure drop established in O&M	Pebble Lime Silo Wet Scrubber Stack
Parallel Flow Regenerative Shaft Kiln	Baghouse (BH4) Minimum pressure drop established in O&M	PFR Shaft Kiln Carbon Filter Stack
Lime Mill Crusher	Baghouse (BH5) Minimum pressure drop established in O&M	Lime Mill Crusher Baghouse Stack
SAG Mill Lime Silo #1, and SAG Mill Lime Silo #2 loading	Bin vent filters	SAG Mill Lime Silo #1 Stack and SAG Mill Lime Silo #2 Stack
unloading	None	Fugitive
AC Lime Silo #1, AC Lime Silo #2, AC Lime Silo #3, and AC Lime Silo #4 loading	Bin vent filters	AC Lime Silo #1 Stack, AC Lime Silo #2 Stack, AC Lime Silo #3 Stack, and AC Lime Silo #4 Stack
unloading	None	Fugitive
Aggregate Production Plant Emissions Unit / Processes	**Control Devices**	**Emission Points**
Portable Crushing and Screening Plant 1 Crushers, screens, and conveyors	Water sprays and moisture carryover	Various
Portable Crushing and Screening Plant 2 Crushers, screens, and conveyors	Water sprays and moisture carryover	Various
Concrete Production Plant Emissions Unit / Processes	**Control Devices**	
Central Mix Plant	Controls may include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, and central duct collection systems.	Various
Aggregate bin loading/unloading	None	Fugitive
Cement/Shotcrete Silo #1 and Cement/Shotcrete Silo #2 loading	Bin vent filters	Cement/Shotcrete Silo #1 Stack and Cement/Shotcrete Silo #2 Stack
unloading	None	Fugitive

Emission Limits

5.3 Lime, Aggregate, and Concrete Production Emission Limits

Emissions from the lime production plant stacks shall not exceed any emission rate limit in the following table.

Table 5.2 Lime, Aggregate, and Concrete Production Plant Emission Limits [a]

Source Description	PM [b]	PM_{10} [b]	$PM_{2.5}$ [b]	NO_x	CO	VOC	SO_2
	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]	lb/hr [c]
Lime Production							
Parallel Flow Regenerative Shaft Kiln (LK, LKC)	1.08	1.08	1.08	4.82	4.98	0.19	0.39
Limestone Ball Mill (LSBM)	1.90	1.60	0.57				
Lime Mill Crusher (LCR)	0.28	0.24	0.09				
Lime Mill screens and conveyors (LS2, LS4, LS3, LS5, LS11, LS1, LS6–LS10, LS12)	3.66	1.34	0.20				
Mill Lime Silo loading (each) (LS1L, MillS2L)	0.06	0.02	0.01				
Mill Lime Silo unloading (each) (LS1U, MillS2U)	0.10	0.06	0.01				
AC Lime Silo loading (each) (ACS1L, ACS2L, ACS3L, ACS4L)	0.12	0.04	0.01				
AC Lime Silo loading (each) (ACS1U, ACS2U, ACS3U, ACS4U)	0.10	0.06	0.01				
Pebble Lime Silo loading (LS-L)	0.01	0.01	0.01				
Pebble Lime Silo unloading (LS-U)	0.001	0.001	0.001				
Crushers, screens, conveyors, silo unloading (LSBM, LCR, LS1– LS12)	6.00	3.22	0.87				
Aggregate Production							
Portable Crushing and Screening Plant 1	0.63	0.23	0.03				
Portable Crushing and Screening Plant 2	0.63	0.23	0.03				
Concrete Production							
Central Mix Plant (CM, CS1, CS2, CA)	2.10	0.94	0.14				

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and recordkeeping requirements.

b) Particulate matter (PM) including condensable PM as defined in IDAPA 58.01.01.006 , with an aerodynamic diameter less than or equal to a nominal 10 micrometers for PM_{10}, and less than or equal to a nominal 2.5 micrometers for $PM_{2.5}$.

c) Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.

Operating Requirements

5.4 Primary Crusher Limit

The permittee shall process limestone as the raw material, and the maximum input to the primary crusher shall not exceed 1,130 T/day.

5.5 Parallel Flow Regenerative Kiln Limit

The permittee shall process lime as the raw material in the Parallel Flow Regenerative Kiln. The maximum output from the kiln shall not exceed 169 T/day and 52,377 T/yr.

5.6 Portable Crushing and Screening Plant 1 Input Limit

The permittee shall process aggregate as the raw material, and the maximum input to the Portable Crushing and Screening Plant 1 shall not exceed 2,000 T/day.

5.7 Portable Crushing and Screening Plant 2 Input Limit

The permittee shall process aggregate as the raw material, and the maximum input to the Portable Crushing and Screening Plant 2 shall not exceed 2,000 T/day.

5.8 Central Mix Input Limit

The permittee shall process cement and aggregate as the raw materials, and the maximum input to the central mix plant shall not exceed 2,480 T/day and 560,000 T/yr.

5.9 Lime, Aggregate, and Concrete Production Dust Control

The permittee shall control emissions from lime production, aggregate production, and concrete production emission sources (Table 5.1) in accordance with the Fugitive Dust Control Plan.

5.10 Portable Crushing and Screening Plant Water Sprays

The permittee shall install, operate, and maintain water sprays in accordance with the O&M manual (Permit Condition 2.20) to control PM emissions from each portable crushing and screening plant. Water sprays shall operate at all times when this equipment is operated to ensure compliance with Fugitive Dust requirements (Permit Conditions 2.1–2.6)

5.11 Parallel Flow Regenerative Kiln Baghouse

The permittee shall install, operate, and maintain a baghouse system (BH4) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions from the parallel flow regenerative kiln shall be ducted to the baghouse at all times to ensure compliance with parallel flow regenerative emission limits.

5.12 Limestone Ball Mill Baghouse

The permittee shall install, operate, and maintain a baghouse system (BH3) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions from the limestone ball mill shall be ducted to the baghouse at all times to ensure compliance with limestone ball mill emission limits.

5.13 Lime Mill Crusher Baghouse

The permittee shall install, operate, and maintain a baghouse (BH5) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations.
All emissions from the lime mill crusher shall be ducted to the baghouse at all times to ensure compliance with limestone ball mill emission limits.

5.14 Pebble Lime Silo Wet Scrubber

The permittee shall install, operate, and maintain a wet scrubber on the Pebble Lime Silo discharge (LS) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions during discharge from the Pebble Lime Silo shall be ducted to the wet scrubber to ensure compliance with pebble lime silo emission limits (Table 5.2).

5.15 Silo Bin Vent Filters

The permittee shall install, operate, and maintain a bin vent filter on each silo (LS1, MillS2, ACS1, ACS2, ACS3, ACS4, LS, CS1, CS2) in accordance with the O&M manual (Permit Condition 2.20) and consistent with manufacturer's recommendations. All emissions during loading of each silo shall be ducted to the corresponding bin vent filter to ensure compliance with corresponding silo emission limits (Table 5.2).

Monitoring and Recordkeeping Requirements

5.16 Primary Crusher Monitoring

Each day, the permittee shall monitor and record the material input to the Primary Crusher in tons (T/day) to demonstrate compliance with the daily Primary Crusher Limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

5.17 Parallel Flow Regenerative Kiln Limit Monitoring

Each day, the permittee shall monitor and record the material output from the Parallel Flow Regenerative Kiln in tons (T/day) to demonstrate compliance with the daily Parallel Flow Regenerative Kiln Limits. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each month, the permittee shall calculate and record the material output from the Parallel Flow Regenerative Kiln in T/mo and in T/yr to demonstrate compliance with the annual Parallel Flow Regenerative Kiln Limit. Annual material output shall be determined by summing the monthly output over the previous consecutive 12-month period.

5.18 Portable Crushing and Screening Plant 1 Input Limit Monitoring

Each day, the permittee shall monitor and record the material input to the Portable Crushing and Screening Plant 1 plant in tons (T/day) to demonstrate compliance with the daily Portable Crushing and Screening Plant 1 Input Limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

5.19 Portable Crushing and Screening Plant 2 Input Limit Monitoring

Each day, the permittee shall monitor and record the material input to the Portable Crushing and Screening Plant 2 plant in tons (T/day) to demonstrate compliance with the daily Portable Crushing and Screening Plant 2 Input Limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

5.20 Central Mix Input Limit Monitoring

Each day, the permittee shall monitor and record the material input to the Central Mix Plant in tons (T/day) to demonstrate compliance with the daily Central Mix Input Limit. The devices and methodologies used to measure weights shall be identified in the O&M Manual.

Each month, the permittee shall calculate and record the material input to the central mix plant in T/mo and in T/yr to demonstrate compliance with the annual Central Mix Input Limit. Annual material input shall be determined by summing the monthly input over the previous consecutive 12-month period.

5.21 Parallel Flow Regenerative Kiln Baghouse Monitoring

The permittee shall install, calibrate, operate, and maintain a device for monitoring the pressure drop across the parallel flow regenerative kiln baghouse. At least once per shift, the permittee shall monitor and record the pressure drop across the parallel flow regenerative kiln baghouse to demonstrate compliance with O&M specifications.

5.22 Limestone Ball Mill Baghouse Monitoring

The permittee shall install, calibrate, operate, and maintain a device for monitoring the pressure drop across the limestone ball mill baghouse. At least once per shift, the permittee shall monitor and record the pressure drop across the limestone ball mill kiln baghouse to demonstrate compliance with O&M specifications.

5.23 Lime Mill Crusher Baghouse Monitoring

The permittee shall install, calibrate, operate, and maintain a device for monitoring the pressure drop across the lime mill crusher baghouse. At least once per shift, the permittee shall monitor and record the pressure drop across the lime mill crusher kiln baghouse to demonstrate compliance with O&M specifications.

5.24 Pebble Lime Silo Wet Scrubber Monitoring

The permittee shall install, calibrate, operate, and maintain a device for monitoring the circulation flow rate in the pebble lime silo wet scrubber, and the pressure drop across the pebble lime silo wet scrubber. At least once per shift, the permittee shall monitor and record the circulation flow rate and the pressure drop across the pebble lime silo wet scrubber to demonstrate compliance with O&M specifications.

6 Engines

6.1 Process Description

Stationary internal combustion engines (ICE) for emergency power generation and fire suppression are essential to ensure safety and uninterrupted essential operations in case of unforeseen power failures or emergency situations. Portable diesel-fired light plant engines provide supplemental lighting as needed; these are not regulated by this permit and will be operated as nonroad engines defined in 40 CFR 1068.30.

6.2 Emergency Generator and Fire Pump Engine Operation

Operation of each emergency generator engine (EDG1, EDG2, EDG3) and each fire pump engine (EDFP) shall not exceed 1 hour per day (hr/day) and 100 hr/yr for non-emergency purposes.

6.3 Emergency Generator and Fire Pump Engine Operation Monitoring

Each month, the permittee shall monitor and record the non-emergency operating hours of each emergency generator and fire pump engine, in hr/mo and in hr/yr to demonstrate compliance with the emergency generator and fire pump engine operation limit. Annual operation shall be determined by summing the monthly hours over the previous consecutive 12-month period.

6.4 Engines Subject to Regulation Notification

With the exception of the emergency generator and fire pump engines (identified in Table 1.1) and engines used to propel vehicles, notification shall be provided to DEQ if an engine (including any previously operated as a nonroad engine) will be operated onsite at a specific location beyond 12 months, and no longer meets criteria for regulation as a nonroad engine. Notification shall be provided as soon as practicable in advance of exceeding 12 months of operation at a single location and within 30 days after the engine ceases to meet the definition of nonroad engine in 40 CFR 1068.30.

- A nonroad engine may include engines that are portable or transportable, meaning designed to be and capable of being carried or moved from one location to another (e.g., portable light plant engines). Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.
- A portable or transportable internal combustion engine is not a nonroad engine if it remains or will remain at a location for more than 12 consecutive months, or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engines (or engine) that replace(s) an engine at a location and is intended to perform the same or similar function as the engine(s) replaced are included in calculating the consecutive time period. Permitting requirements and emission standards may become applicable when an engine becomes a stationary source.

7 General Provisions

General Compliance

7.1 The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the "Rules for the Control of Air Pollution in Idaho." The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit, the "Rules for the Control of Air Pollution in Idaho," and the Environmental Protection and Health Act (Idaho Code §39-101, et seq).

[Idaho Code §39-101, et seq.]

7.2 The permittee shall at all times (except as provided in the "Rules for the Control of Air Pollution in Idaho") maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/1994]

7.3 Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules, and regulations.

[IDAPA 58.01.01.212.01, 5/1/1994]

Inspection and Entry

7.4 Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where an emissions source is located, emissions-related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

7.5 This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.

[IDAPA 58.01.01.211.02, 5/1/1994]

7.6 The permittee shall furnish DEQ written notifications as follows:

- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
- A notification of the date of any suspension of construction, if such suspension lasts for one year or more; and

- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.01, 5/1/1994]

- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date.

[IDAPA 58.01.01.211.03, 5/1/1994]

Performance Testing

7.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

7.8 All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

7.9 Within 60 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/2000 and 4/11/2015]

Monitoring and Recordkeeping

7.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Monitoring records shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/1994]

Excess Emissions

7.11 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130–136 for excess emissions due to start-up, shut-down, scheduled maintenance, safety measures, upsets, and breakdowns.

[IDAPA 58.01.01.130–136, 4/5/2000]

Certification

7.12 All documents submitted to DEQ—including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification—shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/1994]

False Statements

7.13 No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/1998]

Tampering

7.14 No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/1998]

Transferability

7.15 This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/2006]

Severability

7.16 The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.211, 5/1/1994]