

Bureau of Air Quality Title V Operating Permit

Haile Gold Mine Inc 6911 Snowy Owl Road Kershaw, South Carolina 29067 Lancaster County

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the operation of this facility and the equipment specified herein in accordance with valid construction permits, and the plans, specifications, and other information submitted in the Title V permit application received on November 19, 2018, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: TV-1460-0070

Issue Date: June 1, 2021 Effective Date: July 1, 2021

Expiration Date: June 30, 2026 Renewal Due Date: December 31, 2025

Steve McCaslin, P. E., Director Air Permitting Division Bureau of Air Quality

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	RECORD OF REVISIONS				
Date Type Description of Changes					

AA	Administrative Amendment
MM	Minor Modification
SM	Significant Modification

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A. EMISSION UNIT DESCRIPTION

Emission Unit ID	Emission Unit Description	
01	Primary Crushing and Coarse Ore Handling	
02	Refinery	
03	Reagent Storage	
04	Combustion Sources	
05	Tanks	

B.1 EQUIPMENT FOR EMISSION UNIT 01 – Primary Crushing and Coarse Ore Handling

Equipment ID	Equipment Description	Installation/ Modification Date	Control Device ID	Emission Point ID
PT-1	Primary Crusher including Load-In/Load-Out with 3-sided enclosure (100-CR-001)	2017	WS	PT-1
PT-2	Crusher Conveyor Transfer to Stockpile Feed Conveyor (150-CV-002)	2017	WS	PT-2
PT-2A	Crusher Conveyor to Transfer to Coarse Ore Bin (150-BN-001)	2017	PT-2A	PT-2A
PT-3	Stockpile Feed Conveyor Transfer to Coarse Ore Stockpile (150-CV-003)	2017	WS	PT-3
PT-3A	Emergency Hopper Load-In (200-HP-001)	2017	None	PT-3A
PT-4	Conveyor Transfer to SAG Mill (300-CV-002)	2017	WS	PT-4

B.2 CONTROL DEVICE FOR EMISSION UNIT 01 – Primary Crushing and Coarse Ore Handling

Control Device ID	Control Device Description	Installation/ Modification Date	Pollutants Controlled
WS	Wet Suppression	2017	PM, PM _{2,5} , PM ₁₀
PT-2A	Coarse Ore Bin Vent Filter	2017	PM, PM _{2,5} , PM ₁₀

B.3 EQUIPMENT FOR EMISSION UNIT 02 - Refinery

Equipment	Equipment Description	Installation/	Control	Emission
ID		Modification Date	Device ID	Point ID
	Carbon Regeneration Kiln		PT-5a	
PT-5a	Eight (8) - 275,000 Btu/hr Natural Gas Fired	2017	Hg	PT-5a
	Burners (2.2E+06 Btu/hr Total)		Abatement	
PT-5b	Electrowinning Cells, Pregnant and Barren Tanks	2017	PT-5b	PT-5b

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B.3 EQUIPMENT FOR EMISSION UNIT 02 - Refinery

Equipme	Equipment Description	Installation/	Control	Emission
ID		Modification Date	Device ID	Point ID
PT-6	0.25 tph Electric Melting Furnace with Product Recovery Baghouse	2017	None	PT-6

B.4 CONTROL DEVICES FOR EMISSION UNIT 02 - Refinery

Control Device ID	Control Device Description	Installation/ Modification Date	Pollutants Controlled
PT-5a	Wet Scrubber PT-5a and Mist Eliminator	2017	PM, PM _{2,5} , PM ₁₀
PT-5b	Wet Scrubber PT-5b	2017	NH ₃
Hg Abatement	669 scfm Mercury Abatement system consisting of six (6) Sulfur Impregnated Carbon (SIC) Storage Tanks	2019	Mercury

B.5 EQUIPMENT FOR EMISSION UNIT 03 - Reagent Storage

Equipment ID	Equipment Description	Installation/ Modification Date	Control Device ID	Emission Point ID
PT-7	75-ton Reagent Area Lime Silo (800-FL-001)	2017	PT-7	PT-7
PT-7a	Reagent Lime Paste Slaker (800-PK-010)	2017	PT-7a	PT-7a

B.6 CONTROL DEVICE FOR EMISSION UNIT 03 - Reagent Storage

Control Device ID	Control Device Description	Installation/ Modification Date	Pollutants Controlled
PT-7	Reagent Area Lime Silo Bin Vent Filter	2017	PM, PM _{2,5} , PM ₁₀
PT-7a	Reagent Lime Paste Slaker Bin Vent Filter	2017	PM, PM _{2,5} , PM ₁₀

B.7 **EQUIPMENT FOR EMISSION UNIT 04 – Combustion Sources**

Equipment ID	Equipment Description	Installation/ Modification Date	Control Device ID	Emission Point ID
PT-15	Five (5) - Diesel Powered Pit Sump Pump Engines 335 Hp (250 kW) Each	2017	None	PT-15
PT-16	12.50E+06 Btu/hr Natural Gas Fired Thermal Fluid Heater (500-HT-001)	2017	None	PT-16

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B.8 EQUIPMENT FOR EMISSION UNIT 05 - Tanks

Equipment ID	Equipment Description	Installation/ Modification Date	Control Device ID	Emission Point ID
T-1	Eight (8) - Carbon-in-Leach Tanks 1 -8 (450-TK-001 through 450-TK-008)	2017	None	T-1
	Cyanide Recovery Thickener Tank (600-TH-001)	2017	None	T-1

C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
	Emission Unit ID: All Equipment ID: All Control Device ID: All		
C.1	Equipment capacities provided under the Equipment Description column of the Equipment Tables above are not intended to be permit limits unless otherwise specified within the Table of Conditions for the particular equipment. However, this condition does not exempt the facility from the construction permitting process, from PSD review, nor from any other applicable requirements that must be addressed prior to increasing production rates.		
C.2	Emission Unit ID: All Equipment ID: All Control Device ID: All (S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least 5 years from the date the record was generated and shall be made available to a Department		
C.3	representative upon request. Emission Unit ID: 01, 02, 03 Equipment ID: PT-2A, PT-5a, PT-5b, PT-7 Control Device ID: PT-2A, PT-5a, PT-5b, Hg Abatement, PT-7, PT-7a The owner/operator shall inspect, calibrate, adjust, and maintain continuous monitoring systems, monitoring devices, and gauges in accordance with manufacturer's specifications or good engineering practices. The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
	monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.		
	(S.C. Regulation 61-62.1, Section II.J.1.d) Sources required to have continuous emission monitors shall submit reports as specified in applicable parts of the permit, law, regulations, or standards.		
	Emission Unit ID: 01, 02, 03 Equipment ID: PT-2A, PT-5a, PT-5b, PT-7 Control Device ID: PT-2A, PT-5a, PT-5b, Hg Abatement, PT-7, PT-7a		
C.4	All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall be submitted to indicate such.		
	Any alternative method for monitoring control device performance must be preapproved by the Bureau and shall be incorporated into the permit as set forth in SC Regulation 61-62.70.7. Emission Unit ID: 04 Equipment ID: PT-16		
C.5	(S. C. Regulation 61-62.5, Standard No. 5.2) Any existing source where a burner assembly is replaced with another burner assembly after June 25, 2004, regardless of size or age of the burner assembly to be replaced shall be replaced with a low NO_X burner assembly or equivalent technology, and shall achieve a 30 percent reduction from uncontrolled NO_X emission levels based upon manufacturer's specifications. An exemption from this requirement shall be granted when a single burner assembly is being replaced in an existing source with multiple burners due to non-routine maintenance. The replacement of individual components such as burner heads, nozzles, or windboxes does not trigger this requirement.		
	The owner or operator shall notify and register the burner assembly replacement with the Department, in writing, within 7 days of replacing the existing burner assembly. Notification will be provided on the Department's Low NO_X Burner Assembly Replacement Notification Form D-2935. Those affected sources that wish to receive an emission reduction credit for the control device will be required to submit a construction permit application. Those affected sources requesting an		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions			
7700000	alternative control methodology must receive written approval prior to burner replacement.			
	If the burner assembly is replaced as detailed above, the owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices. The first tune-up shall be conducted no more than twenty-four (24) months from replacement of a burner assembly for affected existing sources. Each subsequent tune-up shall be conducted no more than twenty-four (24) months after the previous tune-up.			
	All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.			
	The owner or operator shall develop and retain a tune-up plan on file.			
	Emission Unit ID: 01, 02 Equipment ID: PT-1, PT-2, PT-2A, PT-3A, PT-4, PT-5a, PT-5b, PT-6 Control Device ID: PT-2A, PT-5a, PT-5b, Hg Abatement			
C.6	For any source test required under an applicable standard or permit condition, the owner, operator, or representative shall comply with S.C. Regulation 61-62.1, Section IV - Source Tests.			
	Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Some sources may have to spike fuels or raw materials to avoid being subjected to a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary.			
	When conducting source tests subject to this section, the owner, operator, or representative shall provide the following:			
	 Department access to the facility to observe source tests; Sampling ports adequate for test methods; Safe sampling site(s); Safe access to sampling site(s); Utilities for sampling and testing equipment; and 			
	• Equipment and supplies necessary for safe testing of a source. The owner or operator shall comply with any limits that result from conducting a source test at less than rated capacity. A copy of the most recent Department issued source test summary letter, whether it imposes a limit or not, shall be maintained with the operating permit, for each source that is required to conduct a source test.			

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions			
	Site-specific test plans and amendments, notifications, and source test reports shall be submitted to the Manager of the Source Evaluation Section, Bureau of Air Quality.			
	Emission Unit ID: All Equipment ID: All Control Device ID: All			
C.7	The owner/operator shall perform a visual inspection on a semiannual basis during source operation. No periodic monitoring for opacity will be required during periods of burning natural gas or propane only. Logs shall be kept to record all visual inspections, noting color, duration, density (heavy or light), cause, and corrective action taken for any abnormal emissions. If a source did not operate during the required visual inspection time frame, the log shall indicate such. The owner/operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If only natural gas or propane was combusted or if the unit did not operate during the semiannual period, the report shall state so.			
	Visual inspection means a qualitative observation of opacity during daylight hours. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water.			
	Emission Unit ID: 02 Equipment ID: PT-6			
C.8	(S.C. Regulation 61-62.5, Standard No. 4, Section VII) The maximum allowable opacity from any furnace building and/or operations building (including but not limited to pollution control systems, louvers, doors, openings, etc.) shall be twenty (20) percent.			
C.9	Emission Unit ID: 01, 02, 03, Equipment ID: PT-1, PT-2, PT-2A, PT-3A, PT-4, PT-5a, PT-5b, PT-7, PT-7a Control Device ID: WS, PT-2A, PT-5a, PT-7, Hg Abatement			
C. 3	(S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.			
C.10	Emission Unit ID: 01, 02, 03 Equipment ID: PT-1, PT-2, PT-2A, PT-3A, PT-4, PT-5a, PT-5b, PT-6, PT-7, PT-7a Control Device ID: WS, PT-2A, PT-5a, PT-7, Hg Abatement			
	(S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations:			

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions			
	For process weight rates less than or equal to 30 tons per hour $E = (F) 4.10P^{0.67} \text{ and}$ For process weight rates greater than 30 tons per hour			
	For process weight rates greater than 30 tons per hour $E = (F) 55.0P^{0.11} - 40$ Where F = the allowable emission rate is pounds per hour			
	Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4			
	For the purpose	es of compliance with this condition, the pro	ocess boundaries are defined as follows:	
		Process/Equipment IDs	Max Process Weight Rate (ton/hr)	
	Pr	imary Crushing and Coarse Ore Handling (PT1, PT-2, PT-2a, PT-3, PT-3a)	1,000	
		Gold Extraction Process (PT-4, PT-5a, PT-5b, PT-6)	380	
		Lime Silo Loading No.1 (PT-7, PT-7a)	30	
C.11	The owner/ope Pressure drop data collection in Readings collection The owner/ope frequency/aver shall continue	PT-2a, PT-7, PT-7a PID: PT-7, PT-7a rator shall continue to operate and maintain readings shall be recorded daily during so may collect monitoring data on a more frequeted when the source is shutdown or not operator must get approval from the Technical aging plan prior to using averaging for parto record daily, the calculated monitoring raging plan unless prior approval is obtained	urce operation. Facilities with automated uent basis and calculate the daily average. Erating may not be used in the calculation. al Management Section for an increased ametric monitoring. The owner/operator averages using the approved increased	
for changing the plan. Operation and maintenance checks shall be associated equipment for proper operation documented and kept on-site. Each bin ventor controlled by it are running, except during permission Unit ID: 04 Equipment ID: PT-16		maintenance checks shall be made on at le uipment for proper operation. The checknd kept on-site. Each bin vent shall be in plare running, except during periods of multi	ks and any corrective actions shall be ace and operational whenever processes	
	(S.C. Regulation	n 61-62.5, Standard No. 5.2, Section III) The a	allowable discharge of NO _x resulting from	

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
	this source is 0.875 lb/hr.		
	S.C. Regulation 61-62.5, Standard No. 5.2, Section IV) The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices. The first tune-up shall be conducted no more than twenty-four (24) months from replacement of a burner assembly for affected existing sources. Each subsequent tune-up shall be conducted no more than twenty-four (24) months after the previous tune-up.		
	All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.		
	The owner or operator shall develop and retain a tune-up plan on file.		
	(S.C. Regulation 61-62.5, Standard No. 5.2, Section IV) The owner or operator shall record monthly the amounts and types of each fuel combusted by the affected sources and maintain these records on site.		
	The owner or operator shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.		
	Emission Unit ID: 04 Equipment ID: PT-16		
	(S.C. Regulation 61-62.5, Standard No. 1, Section I) The fuel burning source(s) shall not discharge into the ambient air smoke which exceeds opacity of 20%. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.		
C.13	This source is permitted to burn only natural gas as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Department.		
	(S.C. Regulation 61-62.5, Standard No. 1, Section II) The maximum allowable discharge of particulate matter resulting from this source is 0.6 pounds per million BTU input.		
	(S.C. Regulation 61-62.5, Standard No. 1, Section III) The maximum allowable discharge of sulfur dioxide (SO_2) resulting from this source is 2.3 pounds per million BTU input.		
C.14	Emission Unit ID: Facility Wide Equipment/Control Device ID: Non-Enclosed Operations and Fugitive Dust		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
	(S.C. Regulation 61-62.5, Standard No. 4, Section X) All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. The owner/operator of all such operations shall maintain dust control of the premises and any roadway owned or controlled by the owner/operator by paving or other suitable measures. Oil treatment is prohibited.		
	(SC Regulation 61-62.6 Section III.a) Emissions of fugitive particulate matter shall be controlled in such a manner and to the degree that it does not create an undesirable level of air pollution.		
	(SC Regulation 61-62.6 Section III.b) Restrictions and requirements may be contained in operating permits on a case-by-case basis that are deemed appropriate and necessary to control fugitive particulate matter in accordance with reasonably available control technology.		
	(SC Regulation 61-62.6 Section III.c) Any method of materials handling which will generate fugitive particulate matter that is not fully described in the permit application shall not be used.		
	Compliance with non-enclosed operations and fugitive dust requirements shall be demonstrated by developing a facility-wide fugitive dust control plan for controlling fugitive emissions from process operations, truck traffic, storage piles, and any other areas within the permitted facility where fugitive dust emissions can be generated. The plan shall be developed and submitted to the Director of Engineering Services for approval 180 days prior to the start of operation. The owner/operator shall implement the plan within 30 days of approval and create a schedule for its periodic review and update. The plan shall be kept and maintained on-site with a record of revisions. The plan shall address and/or contain at a minimum the following: 1. Water Trucks		
	 a. Weekly operation and maintenance checks of water trucks b. Operating scenarios for water truck failures or inadequacies c. Dates the water trucks did not operate and the alternative(s) dust control method used 		
	 Truck Traffic a. Road speed limits b. Vehicle loading, off-loading, transportation or dumping of material procedures c. Spillage and residual materials clean-up procedures d. Weekly operation and maintenance checks of sprinklers e. Signage with respect to SC Code of Laws Sections 56-5-4100 and 56-5-4110 (which requires haul trucks transporting aggregate from all quarries to prevent the escape of materials loaded onto the vehicles) 		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
Number	3. Storage Piles a. Material stock piling procedures 4. Process/Control Equipment a. Weekly operation and maintenance checks of all plant equipment and enclosures b. Spillage and residual materials clean-up procedures c. Written guidelines on how to handle opacity problems The owner/operator shall develop logs or use other approved methods to comply with the requirements of the plan. Emission Unit ID: 01 Equipment/Control Device ID: Wet Suppression Systems		
C.15	The owner/operator shall operate its wet suppression system except as necessary to accommodate weather conditions or elevated material moisture content (i.e. rainfall). In case the wet suppression system is not operating properly, then a portable water spray system is acceptable for use until the permanent water spray system is back in proper operation. If a portable water system is not available, then the process shall be shut down until the permanent water spray system is back in proper operation.		
	The owner/operator shall perform weekly inspections of all wet suppression related equipment including a check that water is flowing to discharge spray nozzles in the wet suppression system. The owner/operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner/operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner/operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken in the logbook. The weekly inspections required in this condition meets the requirements of monthly inspections in 40 CFR 60.674(b) where applicable.		
C.16	Emission Unit ID: 01 Equipment ID: All Control Device ID: All This facility is subject to the provisions of 40 CFR Part 60, New Source Performance Standards General Provisions, Subparts A and Standards of Performance for Metallic Mineral Processing Plants, Subpart LL. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.		
C.17	Emission Unit ID: 01 Equipment ID: All Control Device ID: All (40 CFR 60.380(a)) The provisions of this subpart are applicable to the following affected facilities in		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions		
IVUITIDET	metallic mineral processing plants: Each crusher and screen in open-pit mines; each crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, and railcar unloading station at the mill or concentrator with the following exceptions. All facilities located in underground mines are exempted from the provisions of this subpart. At uranium ore processing plants, all facilities subsequent to and including the beneficiation of uranium ore are exempted from the provisions of this subpart.		
	(b) An affected facility under paragraph (a) of this section that commences construction or modification after August 24, 1982, is subject to the requirements of this part.		
	(40 CFR 60.381)		
	(40 CFR 60.382(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 this subpart shall cause to be discharged into the atmosphere from an affected facility any stack emissions that:		
	(1) Contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.05 g/dscm).		
	(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing emission control device.		
	(40 CFR 60.382(b)) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an affected facility any process fugitive emissions that exhibit greater than 10 percent opacity.		
	(40 CFR 60.383)		
	(40 CFR 60.384)		
	(40 CFR 60.385(a)) The owner or operator subject to the provisions of this subpart shall conduct a performance test and submit to the Administrator a written report of the results of the test as specified in 40 CFR Section 60.8(a).		
	(40 CFR 60.385(b)) - (40 CFR 60.385(e))		
	(40 CFR 60.386(a)) In conducting the performance tests required in 40 CFR Section 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR Section		

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

(S.C. Regulation 61-62.1, Section II; S.C. Regulation 61-62.70.6.a.3.i.B)

Condition Number	Conditions		
	60.8(b).		
	(40 CFR 60.386(b)) The owner or operator shall determine compliance with the particulate matter standards 40 CFR Section 60.382 as follows:		
	(40 CFR 60.386(b)(1))		
	(2) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval. This option is subject to the following limitations:		
	(i) No more than three emission points are read concurrently;		
	(ii) All three emission points must be within a 70° viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points; and		
	(iii) If an opacity reading for any one of the three emission points is within 5 percent opacity of the application standard, then the observer must stop taking readings for the other two points and continue reading just that single point.		
	(40 CFR 60.386(c))		

D. NESHAP PERIODIC REPORTING SCHEDULE SUMMARY

NESHAP Part	NESHAP Subpart	Compliance Monitoring Report Submittal Frequency	Reporting Period	Report Due Date
63	ZZZZ (Emergency Engines see note 3 and 4)	N/A	N/A	N/A
63	EEEEEEE	Semi-Annual ⁵	January 1 through June 30 July 1 through December 31	January 31 July 31

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- 1. This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule.
- 2. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, and/or Title V. The MACT reporting schedule may be adjusted to coincide with the Title V reporting schedule with prior approval from the Department in accordance with 40 CFR 63.10(a)(5). This request may be made 1 year after the compliance date for the associated MACT standard.
- 3. Facilities with emergency engines are not required to submit reports. Only facilities with non-certified, non-emergency engines are required to submit semiannual reports.
- 4. Facilities with emergency engines shall comply with the operations limits specified in 40 CFR 63.6640(f).
- 5. Only when deviations occur during the reporting period.

E. NESHAP - CONDITIONS

Conditions			
All NESHAP notifications and reports shall be sent to the Manager of the Air Toxics Section, Sou Carolina Department of Health and Environmental Control - Bureau of Air Quality.			
All NESHAP notifications and the cover letter to periodic reports shall be sent to the United States Environmental Protection Agency (US EPA) at the following address or electronically as required by the specific subpart: US EPA, Region 4 Air, Pesticides and Toxics Management Division 61 Forsyth Street SW Atlanta, GA 30303			
NESHAP 40 CFR 63 Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines). This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63,			

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E. NESHAP - CONDITIONS

Condition Number	Conditions	
	National Emission Standards for Hazardous Air Pollutants, Subparts A and EEEEEEE, Gold Mine Ore Processing And Production Area. The owner or operator shall comply with all applicable requirements of these Subparts; which are incorporated by reference as if fully repeated herein. Existing affected sources shall be in compliance with the requirements of these Subparts by the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.	

F. COMPLIANCE SCHEDULE - RESERVED

G. PERMIT SHIELD

Condition Number	Conditions
G.1	The facility only requested a permit shield for regulations that cannot be shielded. Therefore, no permit shield is granted.

H. PERMIT FLEXIBILITY

Condition Number	Conditions	
H.1	The facility may install, remove, and modify insignificant activities as defined in S.C. Regulation 61-62.70.5.c and exempt sources as listed in S.C. Regulation 61-62.1, Section II.B, without revising or reopening the Title V Operating Permit. A list of insignificant activities/exempt sources must be maintained on site, along with any necessary documentation to support the determination that the activity is insignificant and/or exempt, and shall be made available to a Department representative upon request. The list shall be submitted with the next renewal application.	

I. AMBIENT AIR STANDARDS REQUIREMENTS

Condition Number	Conditions		
1.1	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in this demonstration may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease		

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I. AMBIENT AIR STANDARDS REQUIREMENTS

Condition Number	Conditions	
	in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment - Emission Rates for Ambient Air Standards of this permit. Higher emission rates may be administratively incorporated into Attachment - Emission Rates for Ambient Air Standards of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.	
	The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified above. This is a State Only enforceable requirement.	

J. PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
	January-June	July 30
Semiannual	April-September	October 30
Semiamuai	July-December	January 30
	October-March	April 30

Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.

K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Title V Compliance Certification Submittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
	January-December	February 14
Annual	April-March	May 15
Affilial	July-June	August 14
	October-September	November 14

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K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Title V Compliance Certification Submittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
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L. TITLE V RECORD KEEPING AND REPORTING REQUIREMENTS

Condition Number	Conditions		
L.1	Reporting required in this permit, shall be submitted in a timely manner as directed in the Title V Periodic Reporting Schedule and the Title V Compliance Certification Reporting Schedule of this permit. All required reports must be certified by a responsible official consistent with S.C. Regulation 61-62.70.5.d.		
L.2	All reports and notifications required under this permit shall be submitted to the person indicated in the specific condition at the following address: 2600 Bull Street Columbia, SC 29201 The contact information for the local Environmental Affairs Regional office can be found at: http://www.scdhec.gov		
L.3	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality.		
L.4	All Title V Annual Compliance Certifications shall be sent to the US EPA, Region 4, Air Enforcement Branch and to the Manager of the Technical Management Section, Bureau of Air Quality. US EPA, Region 4 Air Enforcement Branch 61 Forsyth Street SW Atlanta, GA 30303		
L.5	(S.C. Regulation 61-62.70.6.a.3.ii) The owner or operator shall comply, where applicable, with the following monitoring/support information collection and retention record keeping requirements: 1. Records of required monitoring information shall include the following: a. The date, place as defined in the permit, and time of sampling or measurements; b. The date(s) 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 as existing at the time of sampling or measurement; 2. Records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.		
L.6	(S.C. Regulation 61-62.1, Section II.J) For sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be		

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K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

	npliance Certification nittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
	reported to the Department's local Environmental Affairs Regional office within 24 hours after the beginning of the occurrence.		
	 The owner/operator shall also submit a written report within 30 days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality and shall include, at a minimum, the following: The identity of the stack and/or emission point where the excess emissions occurred; The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; The time and duration of excess emissions; The identity of the equipment causing the excess emissions; The nature and cause of such excess emissions; The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; The steps taken to limit the excess emissions; and, 		
	were at all time	that the air pollution control equipmers s maintained and operated, to the max good practice for minimizing emission:	kimum extent practicable, in a manner
L.7	(S.C. Regulation 61-62.7 conditions of this perm shall include the following of the identification of the compliance period. 3. The status of complete period. 3. The status of complete period. 4. Such other facts source.	70.6.c.5.iii) The responsible official shall it as required under S.C. Regulation 61-ing: on of each term or condition of the perron of the method(s) or means used by the status with each term and condition ompliance with the terms and condition including whether compliance one certification shall be based on the secondition. The certification shall is compliance certification.	I certify, annually, compliance with the 62.70.6.c. The compliance certification mit that is the basis of the certification. The owner or operator for determining of the permit during the certification as of the permit for the period covered during the period was continuous or method or means designated in S.C. dentify each deviation and take it into etermine the compliance status of the
L.8	facility, the current perr of Air Permitting a writt written request for tran pertaining to the facili number of the owner	nit holder and prospective new owner of ten request for transfer of the source of sfer of the source operating or constructy ty name and mailing address; the nation or operator for the facility; and any e. Transfer of the operating or construction	operating or construction permits. The action permit shall include any changes ame, mailing address, and telephone

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K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Title V Compliance Certification Submittal Frequency	Reporting Period (Begins on the effective date of the permit)	Report Due Date
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M. GENERAL FACILITY WIDE

Condition Number	Conditions		
M.1	The owner or operator shall comply with S.C. Regulation 61-62.2 "Prohibition of Open Burning."		
M.2	The owner or operator shall comply with S.C. Regulation 61-62.3 "Air Pollution Episodes."		
M.3	The owner or operator shall comply with S.C. Regulation 61-62.4 "Hazardous Air Pollution Conditions."		
M.4	The owner or operator shall comply with S.C. Regulation 61-62.6 "Control of Fugitive Particulate Matter", Section III "Control of Fugitive Particulate Matter Statewide."		
M.5	The owner or operator shall comply with the standards of performance for asbestos abatement operations pursuant to 40 CFR Part 61.145, including, but not limited to, requirements governing training, licensing, notification, work practice, cleanup, and disposal.		
M.6	The owner or operator shall comply with the standards of performance for asbestos abatement operations pursuant to S.C. Regulation 61-86.1, including, but not limited to, requirements governing training, licensing, notification, work practice, cleanup, and disposal.		
M.7	The owner or operator shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Protection of Stratospheric Ozone, Recycling and Emissions Reduction, except as provided for motor vehicle air conditioners (MVACs) in Subpart B. If the owner or operator performs a service on motor (fleet) vehicles that involves ozone-depleting substance refrigerant in MVACs, the owner or operator is subject to all applicable requirements of 40 CFR Part 82, Subpart B, Servicing of MVACs.		
M.8	(S.C. Regulation 61-62.70.6.a.5) The provisions of this permit are severable, and if any provision of this permit, or application of 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.		
M.9	(S.C. Regulation 61-62.70.6.a.6.i) The owner or operator must comply with all of the conditions of this permit. Any permit noncompliance constitutes a violation of the S.C. Pollution Control Act and/or the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of permit renewal application.		
M.10	(S.C. Regulation 61-62.70.6.a.6.ii) It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.		
M.11	(S.C. Regulation 61-62.70.6.a.6.iii) The permit may be modified, revoked, reopened and reissued, or terminated for cause by the Department. The filing of a request by the owner or operator for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.		
M.12	(S.C. Regulation 61-62.70.6.a.6.iv) The permit does not convey any property rights of any sort, or any exclusive privilege.		
M.13	(S.C. Regulation 61-62.70.6.a.6.v) The owner or operator shall furnish to the Department, within a		

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K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Title V Compliance Certification Submittal Frequency		Reporting Period (Begins on the effective date of the permit)	Report Due Date					
	reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the owner or operator shall also furnish to the Department copies of records required to be kept by the permit or, for information claimed to be confidential, the owner or operator may furnish such records directly to the Administrator along with a claim of confidentiality. The Department may also request that the owner or operator furnish such records directly to the Administrator along with a claim of confidentiality.							
M.14	(S.C. Regulation 61-62.7 incentives, marketable changes that are provided in the changes the changes that are provided in the change	70.6.a.8) No permit revision shall be red permits, emissions trading and othe ded for in this permit.	quired, under any approved economic er similar programs or processes for					
M.15	 (S.C. Regulation 61-62.70.6.c.2) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: Enter upon the owner or operator's premises where a Part 70 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. As authorized by the Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the 							
M.16	(S.C. Regulation 61-62 62.70.6.g.1, the owner properly signed, conter 1. An emergency; 2. The permitted f 3. During the perminimize levels in the permit; a 4. The owner or owithin twenty-for by written noting Regulation 61-6 steps taken to requirement. In any expression is in accrequirement.	of emissions that exceeded the emiss	mative defense of emergency through elevant evidence that: rator can identify the cause(s) of the operated; and operator took all reasonable steps to sion standards, or other requirements on of the emergency to the Department on limitations were exceeded, followed notice fulfills the requirement of S.C. in a description of the emergency, any ons taken.					

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K. TITLE V COMPLIANCE CERTIFICATION REPORTING SCHEDULE

Title V Compliance Certification Submittal Frequency		Reporting Period (Begins on the effective date of the permit)	Report Due Date				
M.17	(S.C. Regulation 61-62.70.6.a.1.ii) Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.						
M.18	prohibited from emissi the Act or the regulation in emissions that are au that such increases do shall be placed on the allowances as a defer allowances shall be promulgated under Tit		source lawfully holds under Title IV of revision shall be required for increases ant to the acid rain program, provided other applicable requirement. No limit ce. The source may not, however, use or applicable requirement. Any such occedures established in regulations				
M.19	timely and complete r 62.70.5.a.1.iii, 62.70.5.a permit has been issued	(S.C. Regulation 61-62.70.7.c.1.ii) Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with S.C. Regulation 61-62.70.5.a.1.iii, 62.70.5.a.2.iv, and 62.70.7.b. In this case, the permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the permit including any permit shield that may be granted pursuant to S.C. Regulation 61-62.70.6.f shall remain in effect until the renewal					
M.20	1 .	modification and amendments shall Title V Modification Form(s).	be submitted on the appropriate				
M.21	Department consisten	70.6.a.7) The owners or operators of twith the fee schedule approved pue fee can be considered grounds for pe	rsuant to S.C. Regulation 61-62.70.9.				
M.22	submit a new updated Regulation 61-62.1, Sec of the Emissions Invent This requirement notw	I, Section III) The owners or operators emissions inventory consistent with the tion III. These Emissions Inventory Reportory Section, Bureau of Air Quality. ithstanding, an emissions inventory manager status of any facility.	e schedule approved pursuant to S.C. orts shall be submitted to the Manager				
M.23	This permit expressly	incorporates insignificant activities. En ions inventory submittals as required					

ATTACHMENT - Emission Rates for Ambient Air Standards

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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see Ambient Air Standards Requirements).

AMBIENT AIR QUALITY STANDARDS - STANDARD NO. 2									
	Emission Rates (lbs/hr)								
Emission Point ID	PM ₁₀ Annual	PM ₁₀ 24Hour	PM _{2.5} Annual	PM _{2.5} 24 Hour	SO ₂	NO _x	со	Lead	
PT-1	0.975	2.565							
PT-2	0.144	0.380							
PT-2A	0.018	0.03							
PT-3	0.073	0.192							
PT-3A	0.025	0.19							
PT-4	0.144	0.144							
PT-15A	0.059	0.059				2.208			
PT-15B	0.059	0.059				2.208			
PT-15C	0.059	0.059				2.208			
PT-15D	0.059	0.059				2.208			
PT-15E	0.059	0.059			-1	2.208			
PT-16	0.095	0.095				1.250			

AMBIENT AIR QUALITY STANDARDS – STANDARD NO. 2								
Emission Reint ID	Emission Rates (lbs/hr)							
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	со	Lead		
PT-1		0.24						
PT-2		0.04						

ATTACHMENT - Emission Rates for Ambient Air Standards

Haile Gold Mine Inc TV-1460-0070 Page 2 of 3

AMBIENT AIR QUALITY STANDARDS – STANDARD NO. 2								
Emission Point ID	Emission Rates (lbs/hr)							
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	со	Lead		
PT-2A		0.004						
PT-3		0.02						
PT-3A		0.03						
PT-4		0.023						
PT-5A	0.06	0.06						
PT-6	0.86	0.86						
PT-7	0.13	0.13						
PT-7A	0.02	0.02						
PT-9	0.24	0.24	0.30	0.90	1.16			
PT-10	0.34	0.34						
PT-11	0.20	0.03						
PT-15A	0.059	0.059	0.771		0.266			
PT-15B	0.059	0.059	0.771		0.266			
PT-15C	0.059	0.059	0.771		0.266			
PT-15D	0.059	0.059	0.771		0.266			
PT-15E	0.059	0.059	0.771		0.266			
PT-16	0.10	0.10	0.0075		1.050			
PT-17	0.06	0.06						

ATTACHMENT - Emission Rates for Ambient Air Standards

Haile Gold Mine Inc TV-1460-0070 Page 3 of 3

TOXIC AIR POLLUTANTS – STANDARD NO. 8							
	Emission Rates (lbs/hr)						
Emission Point ID	Hydrogen Cyanide 74-90-8						
PT-5A	2.107						
PT-5B	2.107						
CIL Tank 1	0.346						
CIL Tank 2	0.259						
CIL Tank 3	0.169						
CIL Tank 4	0.110						
CIL Tank 5	0.069						
CIL Tank 6	0.049						
CIL Tank 7	0.037						
CIL Tank 8	0.030						
CN Recovery Thickener	0.100						

TOXIC AIR POLLUTANTS – STANDARD NO. 8						
POLLUTANT	CAS NUMBER	Facility Wide Emission Rates (lbs/day)				
Arsenic	7440-38-2	0.009				
Carbon Disulfide	75-15-0	0.170				
Hydrochloric Acid	7647-01-0	0.0001				
Mercury	7439-97-6	0.027				
Sodium Hydroxide	1310-73-2	0.001				
Sulfuric Acid	7664-93-9	0.001				

ATTACHMENT - Applicable and Non-Applicable Federal and State Regulations

Haile Gold Mine Inc TV-1460-0070 Page 1 of 1

The following contains the Federal and South Carolina air pollution regulations and their applicability, as specified in the Part 70 permit application.

APPLICABILITY DETERMINATION							
Dogulation Citation	Dogulation Title	Applicable					
Regulation Citation	Regulation Title	Yes	No				
40 CFR 63	National Emission Standards for Hazardous Air						
Subparts A and EEEEEEE	Pollutants: General Provisions and Gold Mine Ore	X					
Subparts A and EEEEEE	Processing and Production Area Source Category						
40 CFR 63	National Emission Standards for Hazardous Air						
Subparts A and EEEEEEE	Pollutants: General Provisions and Gold Mine Ore		X				
Subparts A and EEEEEE	Processing and Production Area Source Category						
40 CFR 70	State Operating Permit Programs	X	-				
40 CFR 70	State Operating Permit Programs		X				