



# CONSTRUCTION PERMIT

Permit number: **98TE0545**

Issuance: **14**

Date issued: **March 14, 2023 467823**

Issued to: **Cripple Creek & Victor Gold Mining Company**

Facility Name: Cripple Creek & Victor Gold Mine  
Plant AIRS ID: 119-0011  
Physical Location: 1½ miles north of Victor, Colorado  
County: Teller County  
General Description: Mining and processing of gold ore

## Equipment or activity subject to this permit:

This is a facility-wide permit covering all the equipment/activities at the Cripple Creek & Victor Gold Mine Cresson Project, including mining and reclamation activities and ore processing. Details of the equipment/activities covered are listed in Attachment A. Specific provisions applicable to the equipment/activities are also included in this attachment.

**THIS PERMIT IS GRANTED SUBJECT TO ALL RULES AND REGULATIONS OF THE COLORADO AIR QUALITY CONTROL COMMISSION AND THE COLORADO AIR POLLUTION PREVENTION AND CONTROL ACT C.R.S. (25-7-101 et seq), TO THOSE GENERAL TERMS AND CONDITIONS INCLUDED IN THIS DOCUMENT AND THE FOLLOWING SPECIFIC TERMS AND CONDITIONS:**

## **REQUIREMENTS TO SELF-CERTIFY FOR FINAL APPROVAL**

1. This construction permit represents final permit approval to operate emissions points 005, 009, 011, 017, 022, 026, 027, and 029. Therefore, it is not necessary to self-certify for these points. (Regulation Number 3, Part B, III.G.5).



## **EMISSION LIMITATIONS AND RECORDS**

2. Emissions of air pollutants must not exceed the following limitations. Hourly, daily, and annual records of the actual emission rates must be maintained by the applicant and made available to the Division for inspection upon request. (Reference: Regulation Number 3, Part B, II.A.4.)

### **Hourly Limits:**

AIRS Point	Pounds per Hour							Emission Type
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>	VOC	CO	
005	-	-	-	114.0	-	-	1,311	Fugitive

### **Daily Limits:**

AIRS Point	Pounds per Day							Emission Type
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>	VOC	CO	
005	22,897.9	5,014.0	551.5	114.0	0.3	-	1,311.0	Fugitive*
009	16.8	13.5	13.5	4.6	17.7	0.3	1.2	Point
011	18.1	18.1	18.1	-	-	-	-	Point
017	704.7	277.5	97.2	-	-	-	-	Point*
022	58.8	47.2	47.2	16.0	61.8	0.9	4.2	Point
026	19.5	19.4	19.4	-	-	-	-	Point
027	12.3	6.9	4.3	-	-	11.9	-	Point
029	1.4	1.4	1.4	-	-	-	-	Point
040	4.7	3.0	0.5	-	-	-	-	Point
041	7.2	4.6	4.6	-	-	-	-	Point
Point	654.4	301.9	192.3	20.6	79.4	13.0	5.4	TOTAL*
Fugitive	23,086.7	5,103.3	565.1	114.0	0.3	-	1,311.0	

*\*AIRS Points 005 and 017 emit both point and fugitive particulate pollutants, but they predominately emit the emission type listed. As a result, the total for each emission type does not match the sum of each corresponding row.*

The hourly and daily limits included in this permit were developed and are included to prevent the operation from causing or contributing to an exceedance of the National Ambient Air Quality Standards (NAAQS) for the short term limits as applicable. These values are based on the hourly and daily production values provided in the application.

**Annual Limits:**

AIRS Point	Tons per Year							Emission Type
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>	VOC	CO	
005	2,056.0	657.7	73.8	5.1	0.1	-	58.1	Fugitive*
009	4.5	3.6	3.6	1.3	4.7	0.1	0.4	Point
011	0.6	0.6	0.6	-	-	-	-	Point
017	93.7	36.8	13.1	-	-	-	-	Point*
022	10.8	8.7	8.7	3.0	11.4	0.2	0.8	Point
026	3.6	3.6	3.6	-	-	-	-	Point
027	2.1	1.2	0.7	-	-	2.2	-	Point
029	0.3	0.3	0.3	-	-	-	-	Point
040	0.9	0.6	0.1	-	-	-	-	Point
041	0.8	0.5	0.5	-	-	-	-	Point
Point	92.2	43.6	29.3	4.2	16.1	2.4	1.1	TOTAL*
Fugitive	2,080.0	669.1	75.6	5.1	0.1	-	58.1	

*\*AIRS Points 005 and 017 emit both point and fugitive particulate pollutants, but they predominately emit the emission type listed. As a result, the total for each emission type does not match the sum of each corresponding row.*

The owner or operator must use the emission factors and control efficiencies found in Attachment A to calculate emissions and show compliance with the limits. The owner or operator must submit an Air Pollutant Emission Notice (APEN) and receive a modified permit prior to the use of any other method of calculating emissions.

**Note:** In the absence of credible evidence to the contrary, compliance with the fugitive emission limits is demonstrated by complying with the production limits listed below and by following the attached particulate emissions control plan.

Compliance with the annual limits must be determined on a rolling twelve (12)-month total. By the end of each month a new twelve month total is calculated based on the previous twelve months' data. The permit holder must calculate actual emissions each month and keep a compliance record on site or at a local field office with site responsibility for Division review.

3. The following control equipment must be maintained and operated to ensure satisfactory performance. The owner or operator must monitor compliance with this condition through the results of approved compliance tests (when required), compliance with the Operating and Maintenance Plan, compliance records, and other methods as approved by the Division. (Reference: Regulation Number 3, Part B, III.E.)

Facility Equipment ID	AIRS Point	Control Device	Controlled Pollutants
AGADR Carbon Kiln	011	Mercury Retort	Mercury
		Deep Bed Scrubber	Mercury
		Wet Scrubber	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
Crushing and screening operations	017	Water or foam spray	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
Tank and silo loading		Baghouse(s)	
Tank and silo discharge		Enclosure	
High Grade Mill	027	Baghouses, enclosure, water spray, wet processes.	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
SGADR Carbon Kiln	029	Mercury Retort	Mercury
		Deep Bed Scrubber	Mercury
		Carbon knock-out box	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
Silo loading	040	Baghouse(s)	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
Silo unloading		Enclosure	
Silo discharge			
Silo loading	041	Baghouse(s)	PM, PM <sub>10</sub> , PM <sub>2.5</sub>
Silo discharge		Enclosure	

## **PROCESS LIMITATIONS AND RECORDS**

4. This source must be limited to the following maximum consumption, processing and/or operational rates as listed below. Daily and annual records of the actual process rate must be maintained by the applicant and made available to the Division for inspection upon request. (Reference: Regulation Number 3, Part B, II.A.4)

### **Process/Consumption Limits**

Equipment and/or Activity	AIRS Point	Process Parameter	Daily Limit	Annual Limit
Top soil removal	005	Total removal	11,000 tons	800,000 tons
Topsoil stockpiles	005	Total size	213 acres	213 acres

**Process/Consumption Limits (continued)**

<b>Equipment and/or Activity</b>	<b>AIRS Point</b>	<b>Process Parameter</b>	<b>Daily Limit</b>	<b>Annual Limit</b>
Drilling of blast holes	005	Holes drilled	500 holes	182,500 holes
Explosives detonation	005	Tons of explosives detonated	285 tons in any one blast	25,250 tons
Mining of waste rock and mineral-bearing ores	005	Weight of mined material	270,000 tons*	75,000,000 tons
Stockpiles of waste rock	005	Stockpile size	641 acres	641 acres
Stockpiles of ore-bearing materials	005	Stockpile size	33.2 acres	33.2 acres
VLF ore cells created	005	Cells created	1 cell	365 cells
Warehouse used oil heaters	009	Oil burned	240 gallons	128,000 gallons
AGADR carbon regeneration kiln	011	Tons of carbon regenerated	18 tons	6,570 tons
Primary crushing	017	Tons of ore crushed	120,000 tons	25,000,000 tons
Secondary crushing	017	Tons of ore crushed	90,000 tons	25,000,000 tons
Screening	017	Tons of ore screened	90,000 tons	25,000,000 tons
HGM Jaw Crusher	017	Tons of ore crushed	7,200 tons	2,400,000 tons
HGM Screen	017	Tons of ore screened	7,200 tons	2,400,000 tons
HGM Cone Crusher	017	Tons of ore crushed	7,200 tons	2,400,000 tons
Used oil heaters	022	Oil burned	840 gallons	308,000 gallons
Prill Silos	026	Tons of prill transferred	41 tons	15,000 tons
High grade mill	027	Tons of ore ground	7,200 tons	2,400,000 tons
High grade mill reagent	027	Tons of reagent used	-	1,544 tons
SGADR carbon regeneration kiln	029	Tons of carbon regenerated	18 tons	6,570 tons
SGOSA ROM Lime/Cement Silo	040	Tons of lime/cement consumed	480 tons	175,000 tons
Post-Crushing Silo	041	Tons of lime/cement consumed	840 tons	175,000 tons

\*See list below for production limits on mining of various areas within the mine. See Attachment C for map of these areas. These limits include removal of previously-mined waste rock from storage areas.

At any time:

- a. Production of gold ore and waste rock at CC&V must not exceed 270,000 tons per day.
- b. Production of gold ore and waste rock from the north area pits (Globe Hill, Schist Island and Wild Horse Extension) must not exceed 230,000 tons per day.
- c. Production of gold ore and waste rock from the Schist Island Pit must not exceed 130,000 tons per day.
- d. Production of gold ore and waste rock from the Wild Horse Extension Pit must not exceed 175,000 tons per day.
- e. Production of gold ore and waste rock from the Main Cresson Pit must not exceed 90,000 tons per day.
- f. Production of gold ore and waste rock from the South Cresson Pit must not exceed 88,000 tons per day.

The process daily limits included in this permit were developed and are included to prevent the operation from causing or contributing to an exceedance of the National Ambient Air Quality Standards (NAAQS) for the short term limits as applicable. These values are based on the hourly and daily production values provided in the application.

Compliance with the yearly process limits must be determined on a rolling twelve (12)-month total. By the end of each month a new twelve-month total is calculated based on the previous twelve months' data. The permit holder must calculate monthly process rates for all of the parameters listed above, for both total facility mining and separate totals for each of the mining areas, and keep a compliance record on site or at a local field office with site responsibility for Division review.

## **STATE AND FEDERAL REGULATORY REQUIREMENTS**

5. Visible emissions must not exceed twenty percent (20%) opacity during normal operation of the source. During periods of startup, process modification, or adjustment of control equipment visible emissions must not exceed thirty percent (30%) opacity for more than six minutes in any sixty consecutive minutes. Opacity must be determined using EPA Method 9. (Reference: Regulation Number 1, II.A.1. & 4.)
6. This source is subject to the odor requirements of Regulation Number 2. (State only enforceable)
7. Crushers must be equipped with spray bars or a foam dust suppressant system, which must be used continuously when the crusher is operated unless moisture content of ore is sufficient to control particulate emissions. The spray bars must include a chemical surfactant. Spray bars, chemical surfactant, and foam suppressant system must be used and maintained according to manufacturer's specifications.

8. Any crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, or railcar loading station located at this source is subject to the New Source Performance Standards requirements of Regulation Number 6, Part A, Subpart LL, Standards of Performance for Metallic Mineral Processing Plants including, but not limited to, the following:

- a. Visible emissions must not exceed ten percent (10%) opacity.

In addition, the following requirements of Regulation Number 6, Part A, Subpart A, General Provisions, apply.

- b. At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (Reference: Regulation Number 6, Part A. General Provisions from 40 CFR 60.11)
- c. No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§ 60.12)
- d. Written notification of construction and initial startup dates shall be submitted to the Division as required under § 60.7.
- e. Records of startups, shutdowns, and malfunctions shall be maintained, as required under § 60.7.
9. AIRS ID Points 011 and 029 are subject to the National Emissions Standards for Hazardous Air Pollutants requirements of Colorado Regulation Number 8, Part E, Subpart EEEEEEE (40 CFR Part 63, Subpart EEEEEEE), for Gold Mine Ore Processing and Production Area Source Category, including, but not limited to, the following:

[The requirements below reflect the current rule language of 40 CFR Part 63, Subpart EEEEEEE published in the Federal Register on 2/17/2011. However, if revisions to this Subpart are published at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 63, Subpart EEEEEEE.]

- a. On and after February 17, 2014, no owner or operator subject to the provisions of this subpart must cause to be discharged into the atmosphere from an affected facility any stack emissions that:
- i. For new carbon processes with mercury retorts, emit more than 0.8 pounds of mercury per ton of concentrate processed.

**§63.11645(f) through §63.11646(b) - Standards and Compliance Requirements**

- b. The standards set forth in these sections apply at all times.

**§63.11647 Monitoring of operations.**

- c. The standards set forth in these sections apply at all times.

**§63.11648 Recordkeeping and reporting requirements.**

- d. The standards set forth in these sections apply at all times.

**§ 60.386 Test methods and procedures.**

- e. In conducting the performance tests required in § 60.8, the owner or operator must 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 § 60.8(b)

In addition, the following requirements of Regulation Number 6, Part A, Subpart A, General Provisions, apply (40CFR part 60, Subpart A):

- f. No article, machine, equipment or process must be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§ 60.12)
- g. Written notification of construction and initial startup dates must be submitted to the Division as required under § 60.7.
- h. Records of startups, shutdowns, and malfunctions must be maintained, as required under § 60.7.
- i. Compliance with opacity standards must be demonstrated according to § 60.11.
- j. At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment must, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (Reference: Regulation Number 6, Part A. General Provisions from 40 CFR 60.11).



## **OPERATING & MAINTENANCE REQUIREMENTS**

10. The owner or operator must modify their existing operating and maintenance (O&M) plan, along with a recordkeeping format, that outlines how the applicant will incorporate AIRS ID points 027 and 029 into the O&M plan while maintaining compliance on an ongoing basis with the requirements of this permit. The modified O&M plan must include the proposed change to the ambient air boundary as shown in Attachment B. **Compliance with the O&M plan must commence at startup.** Within one hundred and eighty days (180) after issuance of this permit, the owner or operator must submit the modified O&M plan to the Division. Failure to submit an acceptable operating and maintenance plan could result in revocation of the permit. Note that the Division may modify the monitoring requirements as part of the Title V Operating Permit if this facility is subject to Title V permitting (Reference: Regulation Number 3, Part B, III.G.7.).

## **COMPLIANCE TESTING AND SAMPLING**

### **Periodic Testing Requirements**

11. The mercury retort control devices under AIRS ID points 011 and 029 are subject to the periodic testing requirements of 40 CFR Part 63, Subpart EEEEEEE, as referenced in Condition 9.

## **ADDITIONAL REQUIREMENTS**

12. All previous versions of this permit are cancelled upon issuance of this permit.
13. The permit number must be marked on the subject equipment for ease of identification. (Reference: Regulation Number 3, Part B, III.E.) (State only enforceable)
14. The terms, conditions and information contained in Attachment A are hereby incorporated into this permit, and are enforceable as if fully set forth herein including, but not limited to, emission point description, emission factor summary, emission limits or other limitations, controls, and specific requirements. (Reference: Regulation Number 3, Part B III.E.)
15. A Revised Air Pollutant Emission Notice (APEN) must be filed: (Reference: Regulation Number 3, Part A, II.C.)
  - a. By April 30 of the year following a significant increase in emissions. A significant increase in emissions is defined as follows:

### **For any criteria pollutant:**

For sources emitting **less than 100 tons per year**, a change in actual emissions of five tons per year or more, above the level reported on the last APEN submitted; or

For sources emitting **100 tons per year or more of a criteria pollutant**, a change in actual emissions of five percent or 50 tons per year or more, whichever is less, above the level reported on the last APEN submitted; or

For sources emitting **any amount of lead**, a change in actual emissions, above the level reported on the last APEN submitted, of fifty (50) pounds of lead

**For any non-criteria reportable pollutant:**

If the emissions increase by 50% or five (5) tons per year, whichever is less, above the level reported on the last APEN submitted to the Division.

- b. Whenever there is a change in the owner or operator of any facility, process, or activity; or
  - c. Whenever new control equipment is installed, or whenever a different type of control equipment replaces an existing type of control equipment; or
  - d. Whenever a permit limitation must be modified; or
  - e. No later than 30 days before the existing APEN expires.
16. Applicant must maintain and operate per the division approved monitoring plan the "Rigi" site PM<sub>10</sub> monitor as presently located, or as relocated based on approval of the APCD Technical Services Unit.
17. All monitoring data must be submitted to the Division on a quarterly basis or other time period approved by the Division. All monitoring must be done according to the approved Quality Assurance Project Plan for air quality monitoring. The PM<sub>10</sub> monitors must be operated continuously, except for downtime for calibration and maintenance as defined by the most recently Division approved monitoring plan. The source may petition the Division to discontinue PM<sub>10</sub> monitoring. Petition must include technical justification based on monitoring and production data.
18. Public access must be precluded in all areas within the Controlled Boundary, as shown on Attachment B, except on public roadways, the Vindicator Valley Trail, the Battle Mountain Trail, the Poverty Gulch/Hoosier Trail, Little Grouse Mountain Trail, and the American Eagle Overlook. No trespassing signs must be posted along the Controlled Boundary at reasonable points of public access and along all public roadways within the Controlled Boundary. Mine personnel must frequently monitor property to prevent trespassing during normal operations. The public must be prohibited from the American Eagle Overlook and the access road to the American Eagle Overlook from dusk to dawn. All fencing, locked gates and access controls referenced in the document "Cresson Project; Ambient Air Quality Boundary Patrol Proposal" (submitted to the Air Pollution Control Division December 26, 2017) must be applied at all times
19. The public must be excluded from the American Eagle Overlook and along the access road to the American Eagle Overlook for at least 15 minutes prior, during, and at least 15 minutes after each blast.

20. Blasting must occur only during the hours of 11:00 am to 4:00 pm local time, with the following exceptions:
- Blasting at the Globe Hill and Schist Island Pits may also occur during the hours of 7:00 am to 9:00 am local time between April 1<sup>st</sup> and October 31<sup>st</sup>.
  - During the month of January, blasting at the South Cresson Pit must occur only during the hours of 11:00 am to 3:00 pm local time.
  - In the event of adverse weather conditions and/or equipment breakdowns if necessary for employee or public safety, blasting may occur after 4:00 pm local time provided:
    - Date, time, and circumstances are documented.
    - These documents are maintained and made available to the Division for inspection upon request.
21. Blasting operations must be limited by the following restrictions:
- At the South Cresson Pit, blasting is limited to 850 holes per day.
  - At all other pits, blasting is limited to 950 holes per day.
  - Blasting may occur in only one mining area at a time.
  - During blasting, activity in the blasting area is suspended.
  - Activity may continue in the other mining areas.
  - Mining activity may be continuous in all areas when no blasting occurs.
22. The requirements of Colorado Regulation Number 3, Part D apply at such time that any stationary source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980, on the capacity of the source or modification to otherwise emit a pollutant such as a restriction on hours of operation (Colorado Regulation Number 3, Part D, VI.B.4).

With respect to this Condition, Part D requirements may apply to future modifications if emission limits are modified to equal or exceed the following threshold levels:

AIRS Point	Equipment Description	Pollutant	Emissions - tons per year	
			Threshold	Current permit limit
017	Crushing and screening operations	PM <sub>10</sub>	250	36.8

### **GENERAL TERMS AND CONDITIONS:**

23. This permit and any attachments must be retained and made available for inspection upon request. The permit may be reissued to a new owner by the Division as provided in Regulation Number 3, Part B, II.B upon a request for transfer of ownership and the submittal of a revised APEN and the required fee.

24. If this permit specifically states that final approval has been granted, then the remainder of this condition is not applicable. Otherwise, the issuance of this construction permit is considered initial approval and does not provide "final" approval for this activity or operation of this source. Final approval of the permit must be secured from the APCD in writing in accordance with the provisions of 25-7-114.5(12)(a) C.R.S. and AQCC Regulation Number 3, Part B, III.G. Final approval cannot be granted until the operation or activity commences and has been verified by the APCD as conforming in all respects with the conditions of the permit. Once self-certification of all points has been reviewed and approved by the Division, it will provide written documentation of such final approval. **Details for obtaining final approval to operate are located in the Requirements to Self-Certify for Final Approval section of this permit.** The operator must retain the permit final approval letter issued by the Division after completion of self-certification with the most current construction permit.
25. This permit is issued in reliance upon the accuracy and completeness of information supplied by the applicant and is conditioned upon conduct of the activity, or construction, installation and operation of the source, in accordance with this information and with representations made by the applicant or applicant's agents. It is valid only for the equipment and operations or activity(ies) specifically identified in this permit. If subsequent operations or testing at the source indicate the information supplied to obtain this permit and relied upon in the creation and issuance of this permit is inaccurate, the source must submit an application to modify the permit to address the inaccuracy(ies). (Reference: Regulation Number 3, Part B III.E.)

#### Permit History

Issuance	Date	Description
Initial Approval	November 18, 1998	To Cripple Creek & Victor Gold Mining Co.
Initial Approval Modification	September 7, 2000	Increasing production rates/throughputs and adding equipment.
Initial Approval Modification #2	September 26, 2002	Replacing carbon regeneration kilns with one larger unit.
Initial Approval Modification #3	May 28, 2003	Increasing lime throughput limits from 425 tons per day and 100,000 tons per year.
Initial Approval Modification #4	March 12, 2004	Increasing gold ore throughput limit from 20,000,000 tons per year, decreasing waste rock throughput from 45,000,000 tons per year, adding fugitive ammonia emissions.
Initial Approval Modification #5	June 2, 2004	Adding non-particulate fugitive emissions from blasting.

## Permit History (continued)

Initial approval Modification #6	April 5, 2005	Increasing gold ore production limit from 21,000,000 tons per year, Increasing waste rock production limit from 43,500,000 tons per year, Decreasing stockpile size from 5,000,000 tons per year, Increasing ANFO consumption limit from 22,500 tons per year, change blasting limit from 3 blasts per day and 520 blasts per year, Adding 7 used oil fired space heaters - 0.7 MMBTU/hr each, Putting 4 used oil fired space heaters previously under APEN 98TE0781 on this permit - 0.5 MMBTU/hr each, Removing Caterpillar 3512 DITA generator, Adding Caterpillar 3512 STD generator, Changing emergency generators to peaking units, Removing one strip solution heater.
Final Approval Modification #6	December 6, 2006	Issued Final Approval to Cripple Creek & Victor Gold Mining Company.
Final Approval Modification #7	April 12, 2007	Tonnage Limits on Gold Ore, Waste Rock and Run of Mine ore are replaced with an equation intended to limit total fugitive emission to 1,270 tons per year ( $1.146 \times \text{Ore to crusher} + 1.508 \times \text{Run of Mine Ore} + \text{Waste Rock} = 89,138,000$ tons per year).
Modification #8	September 22, 2011	Increase in total ore production from 25 MMtpy to 27 MMtpy. Increases in Criteria Pollutants: Fugitive PM from 1,270 tpy to 1,928 tpy; Fugitive PM10 from 442 tpy to 559 tpy; Process PM (including fuel combustion sources) from 76.9 tpy to 87.9 tpy; Process PM10 (including fuel combustion sources) from 38.7 tpy to 43.9 tpy; Process NOx from 49.4 tpy to 68.3 tpy; Process emissions for SOx and VOCs included in permit.
Issuance 12	November 17, 2020	Decrease in permitted production and removal of equation for determining production limit. Adjustments to individual activity limits and corresponding adjustments to permitted emissions. Decrease in blasting amount and limit blasting medium to emulsion with subsequent reduction in gaseous fugitive emissions. Integration of permits 16TE0011, 12TE1852, and 19TE0420.
Issuance 13	February 28, 2022	Removal of O&M plan revision requirement from final approval section, as the O&M plan has been revised and approved by the Division. Revision to emission factor calculation methodology for VLF fugitive dust emissions. Replacement of VLF area limit in Condition 4 with cell creation limit, as total VLF area is no longer used in fugitive dust emission calculations, and daily extraction limit of 270,000 tons is sufficient to limit cell size. Decrease emission limits for AIRS point 005 in Condition 2.
Issuance 14	This Issuance	Throughput, emission factors, and emission limits for AIRS point 040 increased to match limits found in Issuance 2 of now-cancelled permit 19TE0420.

Notes to Permit Holder (as of date of permit issuance):

- 1) The production or raw material processing limits and emission limits contained in this permit are based on the production/processing rates requested in the permit application. These limits may be revised upon request of the permittee providing there is no exceedence of any specific emission control regulation or any ambient air quality standard. A revised air pollutant emission notice (APEN) and application form must be submitted with a request for a permit revision. (Reference: Regulation Number 3, Part B II.A.4.)
- 2) This source is subject to the Common Provisions Regulation Part II, Subpart E, Affirmative Defense Provision for Excess Emissions During Malfunctions. The permittee must notify the Division of any malfunction condition which causes a violation of any emission limit or limits stated in this permit as soon as possible, but no later than noon of the next working day, followed by written notice to the Division addressing all of the criteria set forth in Part II.E.1. of the Common Provisions Regulation. See: <https://www.colorado.gov/pacific/cdphe/aqcc-regs>.
- 3) The following emissions of non-criteria reportable air pollutants are estimated based upon the process limits as indicated in this permit. This information is listed to inform the operator of the Division's analysis of the specific compounds emitted if the source(s) operate at the permitted limitations.

AIRS Point	Pollutant	CAS #	Uncontrolled Emission Rate (lb/yr)	Are the emissions reportable?
005	Ammonia	7664-41-7	2,694	YES
	Hydrogen Cyanide	74-90-8	18,747	YES

- 4) See Attachment A for emission factors and control efficiencies.

- 5) The following equipment is currently exempt from construction permitting requirements and/or APEN reporting requirements based on information provided by the operator for the Division's analysis:

The following are diesel-fueled generator engines:

AIRS ID Point	Exemption Number	Make	Model	Serial Number	Site-Rating (hp)	Notes
010	19TE0113.XP	Caterpillar	3516B	6HN00421	2,278	These units are exempt from construction permitting requirements because they are engines powering emergency generators operating 250 hours per year or fewer, per Regulation Number 3, Part B, II.D.1.c.(ii). These units are subject to APEN reporting requirements.
016	19TE0115.XP	Caterpillar	3512	24Z05785	1,242	
018	19TE0116.XP	Caterpillar	3516B	6HN00689	2,278	
019	19TE0117.XP	Caterpillar	3516B	1HZ02154	2,278	
020	19TE0018.XP	Caterpillar	3516C	SB00986	2,400	
021	19TE0019.XP	Caterpillar	3516C	SBJ1336	2,400	
030	19TE0120.XP	Caterpillar	3516C	TBD	2,400	
031	19TE0121.XP	Caterpillar	3516C	TBD	2,400	
032	19TE0122.XP	Caterpillar	3516C	TBD	2,400	
033	19TE0123.XP	Caterpillar	3516C	TBD	2,400	
034	19TE0124.XP	Caterpillar	3516C	TBD	2,400	

AIRS ID Point	Exemption Number	Make	Model	Serial Number	Site-Rating (hp)	Notes
043	22TE0014.XA	Caterpillar	C175-16	TB800214	5,029	This unit is exempt from APEN reporting requirements because emission of each criteria pollutant does not exceed two (2) tons per year, per Regulation Number 3, Part A, Section II.D.1.a., and is therefore also exempt from construction permitting requirements per Regulation Number 3, Part B, II.D.1.a.

The following are natural gas-fueled strip solution heaters:

AIRS ID Point	Exemption Number	Description	Notes
012	19TE0114.XP	One (1) Cleaver Brooks CB700-250 natural gas-fueled strip solution heater (serial number L92960-55-SS), rated at 9.9 MMBtu/hour.	This unit is exempt from construction permitting requirements because it has a design rate below 10 MMBtu/hour, per Regulation Number 3, Part B, II.D.1.e. This unit is subject to APEN reporting requirements.
037	-	One (1) Parker Boiler Co. T4600L strip solution heater (serial number TBD), design-rated at 4.6 MMBtu/hour.	This unit is exempt from APEN reporting requirements because the design rate is less than 5 MMBtu/hour, per Regulation Number 3, Part A, II.D.1.k. Therefore, it is also exempt from construction permitting requirements per Regulation Number 3, Part B, II.D.1.a.

- 6) In accordance with C.R.S. 25-7-114.1, each Air Pollutant Emission Notice (APEN) associated with this permit is valid for a term of five years from the date it was received by the Division. A revised APEN must be submitted no later than 30 days before the five-year term expires. Please refer to the most recent annual fee invoice to determine the APEN expiration date for each emissions point associated with this permit. For any questions regarding a specific expiration date call the Division at (303)-692-3150.

- 7) This facility is classified as follows:

Applicable Requirement	Status
Operating Permit	Major for Mercury
PSD	Synthetic Minor Source for PM <sub>10</sub> , PM <sub>2.5</sub>

- 8) Full text of the Title 40, Protection of Environment Electronic Code of Federal Regulations can be found at the website listed below:

[http://www.ecfr.gov/cgi-bin/text-idx?gp=&SID=2a3f8e8e8f5c2f47006ad49ae4b4c080&mc=true&tpl=/ecfrbrowse/Title40/40tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?gp=&SID=2a3f8e8e8f5c2f47006ad49ae4b4c080&mc=true&tpl=/ecfrbrowse/Title40/40tab_02.tpl)

Part 60: Standards of Performance for New Stationary Sources		
NSPS	60.380 - 60.386	Subpart LL
Part 63: National Emission Standards for Hazardous Air Pollutants for Source Categories		
MACT	63.11640 - 63.141652	Subpart EEEEEEE

- 9) The permit holder is required to pay fees for the processing time for this permit. An invoice for these fees will be issued after the permit is issued. Failure to pay the invoice will result in revocation of this permit. The permit holder must pay the invoice within 30 days of receipt of the invoice (Reference: Regulation Number 3, Part A, VI.B.).



- 10) Unless specifically stated otherwise, the general and specific conditions contained in this permit have been determined by the Division to be necessary to assure compliance with the provisions of Section 25-7-114.5(7)(a), C.R.S.
- 11) Each and every condition of this permit is a material part hereof and is not severable. Any challenge to or appeal of a condition hereof must constitute a rejection of the entire permit and upon such occurrence, this permit must be deemed denied *ab initio*. This permit may be revoked at any time prior to self-certification and final authorization by the Division on grounds set forth in the Colorado Air Pollution Prevention and Control Act and regulations of the AQCC including failure to meet any express term or condition of the permit. If the Division denies a permit, conditions imposed upon a permit are contested by the applicant, or the Division revokes a permit, the applicant or owner or operator of a source may request a hearing before the AQCC for review of the Division's action. (Reference: Regulation Number 3, Part B III.F.)
- 12) Section 25-7-114.7(2)(a), C.R.S. requires that all sources required to file an Air Pollutant Emission Notice (APEN) must **pay an annual emission fee**. If a source or activity is to be discontinued, the owner must notify the Division in writing requesting a cancellation of the permit. Upon notification, annual fee billing will terminate.
- 13) Violation of the terms of a permit or of the provisions of the Colorado Air Pollution Prevention and Control Act or the regulations of the AQCC may result in administrative, civil or criminal enforcement actions under Sections 25-7-115 (enforcement), -121 (injunctions), -122 (civil penalties), -122.1 (criminal penalties), C.R.S.

## PARTICULATE EMISSIONS CONTROL PLAN FOR MINING ACTIVITIES

THE FOLLOWING PARTICULATE EMISSIONS CONTROL MEASURES MUST BE USED FOR COMPLIANCE PURPOSES ON THE ACTIVITIES COVERED BY THIS PERMIT, AS REQUIRED BY THE AIR QUALITY CONTROL COMMISSION REGULATION NUMBER 1, SECTION III.D.1.b. THIS SOURCE IS SUBJECT TO THE FOLLOWING EMISSION GUIDELINES:

- A. **Mining Activities** - Visible emissions not to exceed 20%, no off-property transport of visible emissions.
- B. **Haul Roads** - No off-property transport of visible emissions must apply to on-site haul roads, the nuisance guidelines must apply to off-site haul roads.
- C. **Haul Trucks** - There must be no off-property transport of visible emissions from haul trucks when operating on the property of the owner or operator. There must be no off-vehicle transport of visible emissions from the material in the haul trucks when operating off of the property of the owner or operator.

### Control Measures

- 1. Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal. Watering must be implemented if necessary.
- 2. Topsoil and overburden stockpile areas no longer being disturbed must be revegetated within one year of the last disturbance.
- 3. Drilling emissions must be controlled by cyclone or watering.
- 4. Emissions from material handling (i.e. removal, loading, and hauling) must be controlled by watering at all times unless natural moisture is sufficient to control emissions.
- 5. A solution of magnesium chloride or a combination of magnesium chloride and lignin sulfonate must be applied to all unpaved active production haul roads at a rate of at least 0.25 gallon of solution per square yard (0.79 l/m<sup>2</sup>) of road surface. The solution must be applied at this approximate rate at least 6 times per year. Due to dust control performance and/or vendor considerations, the owner/operator may test different dust suppression agents. The owner/operator must notify the Department at least one (1) week prior to changing to different dust suppression agents, mixtures, application rates, or frequency. The notification will include a demonstration of equivalent control to the agents, mixture, application rate, and frequency identified in this Control Measure. (Control demonstration must be based on standards testing as described in EPA's AP-42, Chapter 13.2.2, Unpaved Roads.)
- 6. All unpaved active production haul roads must be graveled.
- 7. Unpaved haul roads must be watered as often as needed to control fugitive particulate emissions.
- 8. Reclamation works and sequential extraction of material must be initiated to keep the total disturbed areas at any one time to a minimum.
- 9. All exposed areas at ancillary facilities must be watered as necessary to control fugitive emissions.

(continued)

#### **PARTICULATE EMISSIONS CONTROL PLAN FOR MINING ACTIVITIES (continued)**

10. Emissions from dumping of ore to crusher must be controlled at all times by water spray with chemical surfactant or foam dust suppressant system unless natural moisture is sufficient to control emissions.
11. Areas where ore is transferred into the loadout bin must be enclosed.



**ATTACHMENT A**

**Daily Emissions**

Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Daily Throughput (units/day)		Inventory Emissions (lbs/day)	Fugitive Reportable? (Y/N)
005	Mining of gold ore, including: drilling, blasting, loading, haulage, backfill, and services related to mining activities. Included are 3,000,000 cubic yards of topsoil stockpile (213 acres), 518 acres of overburden stockpiles, 6,000,000 cubic yards of raw material (ore) stockpile, 1,300 acres of finished product stored on site (Valley Leach Field).	PM	0.3605	lbs/ton	Water spray, chemical stabilizer(s) for the purposes of dust suppression on unpaved roads.	75.71%	270,000	tons mined	23,642	Y
		PM <sub>10</sub>	0.0896	lbs/ton		77.82%	270,000	tons mined	5,362	Y
		PM <sub>2.5</sub>	0.0096	lbs/ton		76.50%	270,000	tons mined	604	Y
	Explosive blasting	NOx	0.4	lb/ton emulsion	No Control	0.00%	285	tons emulsion	114	Y
		CO	4.6	lb/ton emulsion	No Control	0.00%	285	tons emulsion	1,311	Y
009	Four (4) Clean Burn CB 5000 used oil-fueled heaters used for warehouse space heating. Each heater has a heating capacity of 0.5 MMBtu/hour. Daily throughput of fuel is the total for all four heaters.  Serial numbers: AN43302 AM572163 AM572075 AN269034	PM	70	lbs/Mgal	No Control	0.00%	0.24	Mgal	17	N
		PM <sub>10</sub>	56.1	lbs/Mgal	No Control	0.00%	0.24	Mgal	14	N
		PM <sub>2.5</sub>	56.1	lbs/Mgal	No Control	0.00%	0.24	Mgal	14	N
		CO	5	lbs/Mgal	No Control	0.00%	0.24	Mgal	2	N
		SOx	73.5	lbs/Mgal	No Control	0.00%	0.24	Mgal	18	N
		NOx	19	lbs/Mgal	No Control	0.00%	0.24	Mgal	5	N



Daily Emissions										
Point #	Process description (as on permit)	Pollutant or CAS #	Emission factor		Control type	Control %	Daily Throughput (units/day)		Inventory Emissions (lbs/day)	Fugitive Reportable? (Y/N)
011	One (1) Lockheed Haggerty carbon kiln located at Arequa Gulch ADR, serial number 172-147. Fueled by natural gas, with a heating capacity of 2.77 MMBtu/hour. 40" in diameter, 24" in length.	PM	0.753	lbs/hour	Emissions of PM are controlled by a wet scrubber.	N/A (emission factor is from controlled testing)	24	hours	19	N
		PM <sub>10</sub>	0.753	lbs/hour			24	hours	19	N
		PM <sub>2.5</sub>	0.753	lbs/hour			24	hours	19	N
017	Combined primary and secondary crushing and screening operations with associated transfers.	PM	0.0321	lbs/ton	Water, foam and enclosure	90.48%	210,000	tons processed	643	N
		PM <sub>10</sub>	0.0104	lbs/ton		88.44%	210,000	tons processed	253	N
		PM <sub>2.5</sub>	0.0048	lbs/ton		90.83%	210,000	tons processed	93	N
	High grade mill mechanical ore processing operations, including crushing, screening, and transfers.	PM	0.0401	lbs/ton	Water or foam spray	92.96%	21,600	tons processed	61	N
		PM <sub>10</sub>	0.0153	lbs/ton		92.66%	21,600	tons processed	25	N
		PM <sub>2.5</sub>	0.0023	lbs/ton		92.66%	21,600	tons processed	4	N
	High grade mill cement day tank operations	PM	1.4654	lbs/ton	Enclosure and baghouse	98.91%	75	tons	2	N
		PM <sub>10</sub>	0.9427	lbs/ton		98.87%	75	tons	1	N
		PM <sub>2.5</sub>	0.9427	lbs/ton		98.87%	75	tons	1	N

Daily Emissions										
Point #	Process description (as on permit)	Pollutant or CAS #	Emission factor		Control type	Control %	Daily Throughput (units/day)		Inventory Emissions (lbs/day)	Fugitive Reportable? (Y/N)
022	Fourteen (14) Clean Burn CB 350 CTB used oil-fueled heaters used for space heating. Each heater has a heating capacity of 0.35 MMBtu/hour. Daily throughput of fuel is the total for all fourteen heaters.  Serial numbers: AN851145, AP119170 AP119168, AP119169 AP119165, AN851009 AN851143, AP119082 AP119163, AP119164 AP119167, AP119166 AP119081, AP119083 (heaters on same line share a stack)	PM	70	lbs/Mgal	No Control	0.00%	0.84	Mgal	59	N
		PM <sub>10</sub>	56.1	lbs/Mgal	No Control	0.00%	0.84	Mgal	48	N
		PM <sub>2.5</sub>	56.1	lbs/Mgal	No Control	0.00%	0.84	Mgal	48	N
		CO	5	lbs/Mgal	No Control	0.00%	0.84	Mgal	5	N
		SO <sub>x</sub>	73.5	lbs/Mgal	No Control	0.00%	0.84	Mgal	62	N
		NO <sub>x</sub>	19	lbs/Mgal	No Control	0.00%	0.84	Mgal	16	N
026	Two (2) Bradley Metals prill silos, serial numbers 110894 & 1121995	PM	0.4748	lbs/ton	No Control	0.00%	41	tons	20	N
		PM <sub>10</sub>	0.4728	lbs/ton	No Control	0.00%	41	tons	20	N
		PM <sub>2.5</sub>	0.4728	lbs/ton	No Control	0.00%	41	tons	20	N
027	Grinding, froth floatation and gold leaching facility to improve gold recovery, including processing tanks for leaching and floatation. The grinding circuit consists of one (1) rod mill and one (1) ball mill, both of which are enclosed, fully wet processes. The mill has a design capacity of 300 tons per hour	PM	0.02000	lbs/ton	Baghouse/enclosure, water spray	91.5%	7,200	tons ore processed	13	N
		PM <sub>10</sub>	0.01125	lbs/ton		91.5%	7,200	tons ore processed	7	N
		PM <sub>2.5</sub>	0.00690	lbs/ton		91.5%	7,200	tons ore processed	5	N
		VOC	0.00140	lb/lb reagent	No Control	0.00%	8,460	lbs reagent	12	Y

Daily Emissions										
Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Daily Throughput (units/day)		Inventory Emissions (lbs/day)	Fugitive Reportable? (Y/N)
029	One (1) FLSmidth 8MT4238G1B carbon kiln located at Squaw Gulch ADR, serial number USP110CR001. Fueled by natural gas, with a heating capacity of 2.275 MMBtu/hour.	PM	0.057	lbs/hour	Emissions of PM are controlled by a carbon knock-out box.	N/A (emission factor is from controlled testing)	24	hours	2	N
		PM <sub>10</sub>	0.057	lbs/hour			24	hours	2	N
		PM <sub>2.5</sub>	0.057	lbs/hour			24	hours	2	N
040	One (1) 330 ton Tank Connection cement/lime silo (serial number: 120-647-002) located at SGOSA.	PM	0.7396	lbs/ton	Enclosure and baghouse	98.69%	480	tons	5	N
		PM <sub>10</sub>	0.4756	lbs/ton		98.72%	480	tons	3	N
		PM <sub>2.5</sub>	0.0720	lbs/ton		98.72%	480	tons	1	N
041	One (1) 600 ton Camtec 21'x84' cement/lime silo (serial number: 5421) located at the crushing area.	PM	0.7348	lbs/ton	Enclosure and baghouse	98.85%	840	tons	8	N
		PM <sub>10</sub>	0.4728	lbs/ton		98.86%	840	tons	5	N
		PM <sub>2.5</sub>	0.4728	lbs/ton		98.86%	840	tons	5	N

ATTACHMENT A										
Annual Emissions										
Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Annual Throughput (units/year)		Inventory Emissions (tons/year)	Fugitive Reportable? (Y/N)
005	Mining of gold ore, including: drilling, blasting, loading, haulage, backfill, and services related to mining activities. Included are 3,000,000 cubic yards of topsoil stockpile (213 acres), 518 acres of overburden stockpiles, 6,000,000 cubic yards of raw material (ore) stockpile, 1,300 acres of finished product stored on site (Valley Leach Field).	PM	0.3605	lbs/ton	Water spray, chemical stabilizer(s) for the purposes of dust suppression on unpaved roads.	83.81%	75,000,000	tons mined	2,191.7	Y
		PM <sub>10</sub>	0.0896	lbs/ton		78.91%	75,000,000	tons mined	721.1	Y
		PM <sub>2.5</sub>	0.0096	lbs/ton		77.59%	75,000,000	tons mined	83.4	Y
	Explosive blasting	NOx	0.4	lb/ton emulsion	No Control	0.00%	25,250	tons emulsion	5.1	Y
		CO	4.6	lb/ton emulsion	No Control	0.00%	25,250	tons emulsion	58.1	Y
009	Four (4) Clean Burn CB 5000 used oil-fueled heaters used for warehouse space heating. Each heater has a heating capacity of 0.5 MMBtu/hour. Daily throughput of fuel is the total for all four heaters.  Serial numbers: AN43302 AM572163 AM572075 AN269034	PM	70	lbs/Mgal	No Control	0.00%	128	Mgal	4.5	N
		PM <sub>10</sub>	56.1	lbs/Mgal	No Control	0.00%	128	Mgal	3.6	N
		PM <sub>2.5</sub>	56.1	lbs/Mgal	No Control	0.00%	128	Mgal	3.6	N
		CO	5	lbs/Mgal	No Control	0.00%	128	Mgal	0.3	N
		SOx	73.5	lbs/Mgal	No Control	0.00%	128	Mgal	4.7	N
		NOx	19	lbs/Mgal	No Control	0.00%	128	Mgal	1.2	N



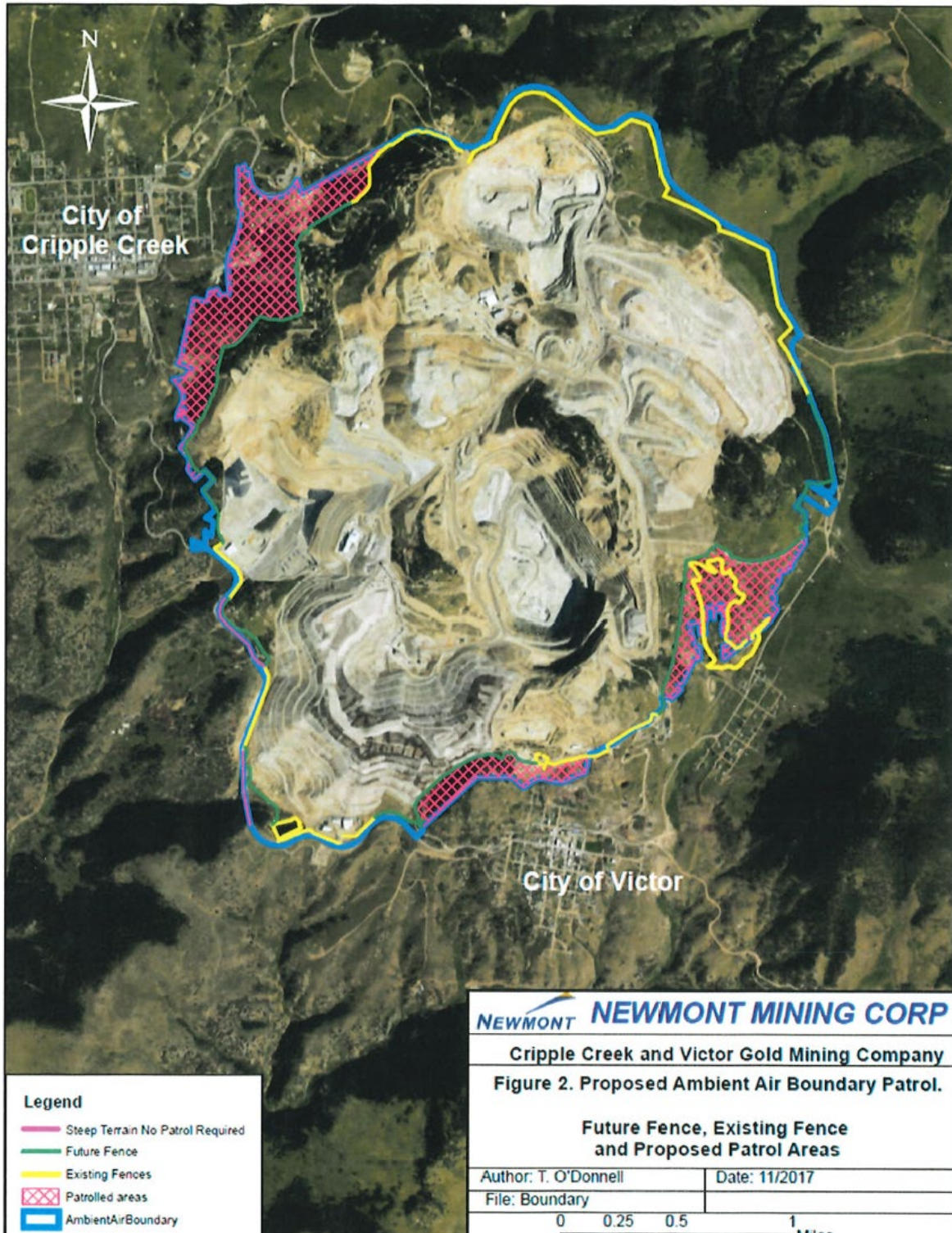
Annual Emissions										
Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Annual Throughput (units/year)		Inventory Emissions (tons/year)	Fugitive Reportable? (Y/N)
011	One (1) Lockheed Haggerty carbon kiln located at Arequa Gulch ADR, serial number 172-147. Fueled by natural gas, with a heating capacity of 2.77 MMBtu/hour. 40" in diameter, 24" in length.	PM	0.753	lbs/hour	Emissions of PM are controlled by a wet scrubber.	N/A (emission factor is from controlled testing)	8,760	hours	0.6	N
		PM <sub>10</sub>	0.753	lbs/hour			8,760	hours	0.6	N
		PM <sub>2.5</sub>	0.753	lbs/hour			8,760	hours	0.6	N
017	Combined primary and secondary crushing and screening operations with associated transfers.	PM	0.0226	lbs/ton	Water, foam and enclosure	90.25%	75,000,000	tons processed	82.6	N
		PM <sub>10</sub>	0.0074	lbs/ton		88.38%	75,000,000	tons processed	32.0	N
		PM <sub>2.5</sub>	0.0037	lbs/ton		90.90%	75,000,000	tons processed	12.4	N
	High grade mill mechanical ore processing operations, including crushing, screening, and transfers.	PM	0.0401	lbs/ton	Water or foam spray	92.93%	7,200,000	tons processed	10.2	N
		PM <sub>10</sub>	0.0153	lbs/ton		92.60%	7,200,000	tons processed	4.1	N
		PM <sub>2.5</sub>	0.0023	lbs/ton		92.77%	7,200,000	tons processed	0.6	N
	High grade mill cement day tank operations	PM	1.4612	lbs/ton	Enclosure and baghouse	98.92%	27,375	tons	0.3	N
		PM <sub>10</sub>	0.9425	lbs/ton		98.92%	27,375	tons	0.2	N
		PM <sub>2.5</sub>	0.9425	lbs/ton		98.92%	27,375	tons	0.2	N

Annual Emissions										
Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Annual Throughput (units/year)		Inventory Emissions (tons/year)	Fugitive Reportable? (Y/N)
022	Fourteen (14) Clean Burn CB 350 CTB used oil-fueled heaters used for space heating. Each heater has a heating capacity of 0.35 MMBtu/hour. Daily throughput of fuel is the total for all fourteen heaters.  Serial numbers: AN851145, AP119170 AP119168, AP119169 AP119165, AN851009 AN851143, AP119082 AP119163, AP119164 AP119167, AP119166 AP119081, AP119083 (heaters on same line share a stack)	PM	70	lbs/Mgal	No Control	0.00%	308	Mgal	10.8	N
		PM <sub>10</sub>	56.1	lbs/Mgal	No Control	0.00%	308	Mgal	8.7	N
		PM <sub>2.5</sub>	56.1	lbs/Mgal	No Control	0.00%	308	Mgal	8.7	N
		CO	5	lbs/Mgal	No Control	0.00%	308	Mgal	0.8	N
		SO <sub>x</sub>	73.5	lbs/Mgal	No Control	0.00%	308	Mgal	11.4	N
		NO <sub>x</sub>	19	lbs/Mgal	No Control	0.00%	308	Mgal	3.0	N
026	Two (2) Bradley Metals prill silos, serial numbers 110894 & 1121995	PM	0.4748	lbs/ton	No Control	0.00%	15,000	tons	3.6	N
		PM <sub>10</sub>	0.4728	lbs/ton	No Control	0.00%	15,000	tons	3.6	N
		PM <sub>2.5</sub>	0.4728	lbs/ton	No Control	0.00%	15,000	tons	3.6	N

Annual Emissions										
Point #	Process description (as on permit)	Pollutant	Emission factor		Control type	Control %	Annual Throughput (units/year)		Inventory Emissions (tons/year)	Fugitive Reportable? (Y/N)
027	Grinding, froth floatation and gold leaching facility to improve gold recovery, including processing tanks for leaching and floatation. The grinding circuit consists of one (1) rod mill and one (1) ball mill, both of which are enclosed, fully wet processes. The mill has a design capacity of 300 tons per hour	PM	0.02000	lbs/ton	Baghouse/enclosure, water spray	91.50%	2,400,000	tons ore processed	2.1	N
		PM <sub>10</sub>	0.01125	lbs/ton		91.50%	2,400,000	tons ore processed	1.2	N
		PM <sub>2.5</sub>	0.00690	lbs/ton		91.50%	2,400,000	tons ore processed	0.7	N
		VOC	0.00140	lb/lb reagent	No Control	0.00%	3,088,000	lbs reagent	2.2	Y
029	One (1) FLSmidth 8MT4238G1B carbon kiln located at Squaw Gulch ADR, serial number USP110CR001. Fueled by natural gas, with a heating capacity of 2.275 MMBtu/hour.	PM	0.057	lbs/hour	Emissions of PM are controlled by a carbon knock-out box.	N/A (emission factor is from controlled testing)	8,760	hours	0.3	N
		PM <sub>10</sub>	0.057	lbs/hour			8,760	hours	0.3	N
		PM <sub>2.5</sub>	0.057	lbs/hour			8,760	hours	0.3	N
040	One (1) 330 ton Tank Connection cement/lime silo (serial number: 120-647-002) located at SGOSA.	PM	0.7396	lbs/ton	Enclosure and baghouse	98.69%	175,000	tons	0.9	N
		PM <sub>10</sub>	0.4756	lbs/ton		98.72%	175,000	tons	0.6	N
		PM <sub>2.5</sub>	0.0720	lbs/ton		98.72%	175,000	tons	0.1	N
041	One (1) 600 ton Camtec 21'x84' cement/lime silo (serial number: 5421) located at the crushing area.	PM	0.7348	lbs/ton	Enclosure and baghouse	98.84%	175,000	tons	0.8	N
		PM <sub>10</sub>	0.4728	lbs/ton		98.86%	175,000	tons	0.5	N
		PM <sub>2.5</sub>	0.4728	lbs/ton		98.86%	175,000	tons	0.5	N



**CONTROLLED BOUNDARY MAP  
ATTACHMENT B**





**PIT LAYOUT MAP  
ATTACHMENT C**

