



BARRICK GOLDSTRIKE MINES INC. Tel: (702) 738-8043  
P.O. Box 29  
Elko, Nevada 89803

September 2, 2009

Certified Mail #: 7008 1830 0001 3448 5415

Mr. Matthew DeBurle (mdeburle@ndep.nv.gov)  
Supervisor Permitting Branch  
Bureau of Air Pollution Control  
901 South Stewart Street Suite 4001  
Carson City, NV 89701-5249  
Fax # (775) 687- 6396

sent via e-mail

**RE: Minor Revision Application; Systems 17 and 71 Air Quality Operating Permit No. AP1041-0739.02 (FIN: A0005)**

Dear Mr. DeBurle,

Barrick Goldstrike Mines Inc. (Goldstrike) is submitting the enclosed revised minor modification application, "*Class I-B Operating Permit Application for Minor Modification: System 17, Roaster Circuit: Roaster #1 and #2 Feed Process and System 71, Metallurgical Laboratory Sample Preparation*" in response to your letter, "Minor Revision Application; Systems 17 and 71; Air Quality Operating Permit No. AP1041-0739 (FIN: A005) (10AP0047)", received August 24<sup>th</sup>, 2009.

The following issues identified by the NDEP-BAPC have been addressed in the attached revised Class I-B Operating Permit Minor Modification Application.

- Goldstrike believes that the Standards of Performance for Coal Preparation Plants (40 CFR Part 60 Subpart Y) are not applicable to the proposed inline coal size reduction equipment because System 17 will not process more than 200 tons per day of coal. 40 CFR 60.250(a) states, "The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which **process** more than 181 Mg (200 tons) per day." The proposed coal process limit for System 17 is 6.8 tons per hour or 163.2 tons per day. (Note that this is different than some NSPS provisions that base applicability on "design capacity" (for example, subpart Db)). In order to make the throughput rate enforceable, we have proposed adding a permit condition (VI.Q.3.b).
- Goldstrike is proposing to add inline coal size reduction equipment to System 17 to maintain roaster operations and maximize gold recovery. Currently, Goldstrike adds coal to the roasters as a fuel supplement to control bed temperatures. The amount of coal added to the roasters depends on the inherent fuel characteristics of the ore being

processed. Originally, the roaster circuit was designed to receive coal with a particle size of 3/8 inch. However, due to cost, supply, and safety issues, the particle size of coal currently delivered to the roaster coal system has increased to 3/4" - 1/2".

Although the addition of coal helps regulate roaster bed temperatures, any carbon not combusted in the roaster causes "preg-robbing" in the carbon-in-leach (CIL) circuit. Uncombusted carbon has an affinity for gold which reduces gold recovery. Carbon with a larger particle size is more likely to not fully combust in the roaster. The addition of inline coal size reduction equipment will reduce the particle size of the coal, maximizing the combustion of carbon and minimizing preg-robbing. This change is not designed to increase the amount of ore processed in the roaster, but rather to minimize gold losses at any given production rate.

- The previously approved notifications of change—which we are requesting to be incorporated into the Operating Permit—are unrelated to the modifications proposed in the revised minor modification application. (As discussed in the previously submitted cover letter, dated August 5<sup>th</sup>, 2009, this minor modification application is likewise unrelated to other recent modifications.) Therefore, their emissions should not be included as part of the current proposed modification. Nonetheless, actual-to-potential PSD analyses have been added to the application for the approved notifications of change for systems 75, 100, and 102. As a worst-case analysis, baseline actual emissions are assumed to be zero and potential emissions are used in lieu of projected actual emissions per 40 CFR 52.21(b)(41)(ii)(d). This demonstrates that even if these emissions were summed with those from this proposed modification, the sum would be less than the PSD significant thresholds.
- Permit language addressing the retesting of the baghouses for Systems 17 and 71 after the installation of the new units has been added.
- Permit language addressing the coal throughput limit for System 17 has been added.
- The streamlining analysis has been removed from the permit language for Systems 17 and 71.
- As discussed with NDEP in the meeting held on August 25<sup>th</sup>, 2009, the two baghouses for System 17 are ducted to one stack.
- As discussed with NDEP in the meeting held on August 25<sup>th</sup>, 2009, although not directly related to this minor modification application, in response to the issue as to whether the roasters should be permitted as separate systems, the roasters share a common control system and are ducted to a single stack.

Mr. Mathew DeBurle  
September 2, 2009  
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For additional information please contact Carly Keeney at (775) 778-8157.

Respectfully,



Andy Cole

Enclosure: Class I-B Operating Permit Application for Minor Modification: System 17, Roaster Circuit: Roaster #1 and Roaster #2 Feed Process and System 71, Metallurgical Laboratory Sample Preparation.

***Class I-B Operating Permit  
Application for Minor Modification:***

**System 17, Roaster Circuit: Roaster #1 and #2 Feed  
Process  
And  
System 71, Metallurgical Laboratory Sample  
Preparation**

BARRICK GOLDSTRIKE MINES INC.

*September 2009*

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*State of Nevada*  
*Division of Environmental Protection*  
*Bureau of Air Pollution Control*

**APPLICATION FOR  
MINOR REVISION OF A  
CLASS I OPERATING PERMIT**

Please return to: Nevada Division of Environmental Protection  
Bureau of Air Pollution Control, Class I Permitting Branch  
901 South Stewart Street Suite 4001  
Carson City, Nevada 89701-5249  
(775) 687-4670 FAX (775) 687-6396

**General Information**

- This application is available from the Bureau of Air Pollution Control in a Microsoft Word file, or on the internet at <http://www.ndep.nv.gov/bapc>. All information required in the application may be computer generated and submitted to the Bureau on 3-1/2" disk(s) or CD(s). In addition, one printed copy must be submitted.
- All information required by the "General Company Information" and by the relevant forms in Appendices 1 through 10 must be completed.
- The application filing fee required by NAC 445B.327 must be submitted with the completed application. The fee for a minor revision is \$5,000. Checks must be made payable to: Nevada State Treasurer, Environmental Protection.
- This application packet shall be used for minor revisions which become subject to Class I requirements after the effective date (January 11, 1997).
- Separate application forms for specific types of emission units are provided in Appendix 1. They include application forms for: (1) industrial processes, (2) combustion equipment, (3) storage silos, (4) liquid storage tanks and (5) surface area disturbances.
- An application for a Class I operating permit must be signed by a responsible official, as defined in NAC 445B.156. The certification/signature page is contained in Appendix 10.
- All items in the application must be addressed. If an item does not apply "N/A" or similar notation must be entered in the appropriate blank. All other information must be provided. Incomplete applications will be returned to the responsible official within 45 working days of receipt of the application packet.

**Application  
for  
Minor Revision of a  
Class I Air Quality  
Operating Permit**



GENERAL COMPANY INFORMATION (CONTINUED)

6. Plant Manager or Other Appropriate Contact [NAC 445B.295.1]:

Carly Keeney Environmental Engineer  
(Name) (Title)

Same as #1  
(Address)

(City) (State) (Zip Code)

(775)-778-8157 (775)-778-8262 ckeeneey@barrick.com  
(Telephone #) (FAX #) (E-mail address)

7. Responsible Official Name, Title and Address [NAC 445B.295.1]:

Andy Cole Environmental Manager  
(Name) (Title)

Same as #1  
(Address)

(City) (State) (Zip Code)

(775)-778-8502 (775)-778-8262 acole@barrick.com  
(Telephone #) (FAX #) (E-mail address)

8. If records required under the operating permit will be kept at a location other than the source, specify that location [NAC 445B.295.7].

N/A. Records will be kept on site.  
(Name)

(Address)

(City) (State) (Zip Code)

9. This application is submitted for (please check appropriate boxes below):

- This application is for a source subject to PSD requirements (40 CFR § 52.21).
- This application is for a source subject to the following NSPS requirements (40 CFR § 60):
  - Not subject to PSD.
  - Subject to 40 CFR Subpart LL.

- This application is for a source subject to the following NESHAP requirements (40 CFR § 63):
  - N/A. Not subject to NESHAP requirements.

10. The application must contain, if applicable:

- a. For a proposed minor revision for which there is an increase of greater than 10 tons per year of a regulated air pollutant, include an environmental evaluation as required by NAC 445B.308 to 445B.313, inclusive [NAC 445B.295.8].

**N/A. Emission increases of all regulated air pollutants from the proposed revisions are less than 10 tons per year per pollutant.**

GENERAL COMPANY INFORMATION (CONTINUED)

- b. For stationary sources subject to the provisions regarding new source review set forth in 42 USC §§7501 - 7515, inclusive (nonattainment areas), all information required by 42 USC §7503 [NAC 445B.3363.2(b)(3)].

**N/A. The Barrick Goldstrike Mine is located in an attainment area for all pollutants.**

11. Will the construction occur in more than one phase?  Yes  No
12. If the construction will occur in more than one phase, please provide the projected date of the commencement for each phase of construction:
- |          |            |
|----------|------------|
| Phase 1: | <u>N/A</u> |
| Phase 2: | <u>N/A</u> |
| Phase 3: | <u>N/A</u> |

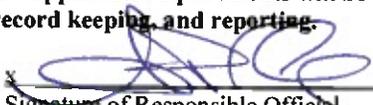
13. Compliance Plan/Certification

- a. Attach a compliance plan, signed by the responsible official, that contains the following with respect to all applicable requirements:
- (1) A narrative description of the compliance status of the stationary source with respect to all applicable requirements. [NAC 445B.3368.2(h)(1)]

**Based on the compliance monitoring requirements of Paragraphs 4 under Section VI of Operating Permit No. AP1041-0739.02, existing operations at Barrick Goldstrike are currently in compliance with all applicable requirements. Additionally, there are no outstanding or unresolved Compliance Orders or Compliance Schedules for the existing sources, and past permit deviations and excess emissions have been reported to NDEP as required by Conditions V.C. and III.B. of Operating Permit No. AP1041-0739.02. Finally, Barrick Goldstrike submitted its annual compliance certification for the existing stationary sources in February 2009.**

- (2) A compliance certification by a responsible official stating that the stationary source will comply in a timely manner with any new applicable requirements that become effective during the operating permit term. Include a description of the test methods and the requirements for monitoring, enhanced monitoring, recordkeeping and reporting that will be used to comply with the new applicable requirements, fuel use, the rate of production, raw materials, and operating schedules which are used to determine the compliance status of the stationary source. [NAC 445B.3368.2(h)(2)]

**I certify that the stationary source will comply, in a timely manner, with any new applicable requirements that become effective during the operating permit term. Compliance demonstration with such new applicable requirements will be based on appropriate test methods, monitoring, record keeping, and reporting.**

  
\_\_\_\_\_  
Signature of Responsible Official

**Andy Cole, Environmental Manager**  
\_\_\_\_\_  
Print or Type Name and Title

Sept 02, 2009  
\_\_\_\_\_  
Date

GENERAL COMPANY INFORMATION (CONTINUED)

- (3) If the stationary source is not in compliance with any applicable requirements at the time the operating permit is issued, include a narrative description and a proposed schedule for achieving compliance which includes remedial measures, an enforceable sequence of actions with milestones, and a schedule to submit certified progress reports every six months. This schedule must be at least as stringent as that contained in any consent decree rendered by a federal court, a court of this state, or an administrative order which applies to the stationary source. [NAC 445B.3368.2(h)(3)III]

**N/A. The Roaster Circuit: Roaster #1 and Roaster #2 Feed Process system and the Metallurgical Laboratory Sample Preparation system are currently in compliance.**

- b. A schedule for submission of compliance certifications during the term of the operating permit, to be submitted annually or more frequently to the Bureau of Air Pollution Control. [NAC 445B.3368.2(i)(3)]

**Submission of compliance certifications will be pursuant to the schedule currently specified in Operating Permit No. AP1041-0739.02, Condition V.E. (that is, on or before March 1 for the preceding calendar year).**

14. A minor revision may be made to a Class I operating permit if the revision:  
a. Does not violate any applicable requirement;

**The permit revisions proposed herein comply with all NAC and SIP requirements as demonstrated herein and, therefore, will not violate any applicable requirements.**

- b. Does not involve significant changes to the existing requirements for monitoring, reporting or recordkeeping;

**There are no significant changes proposed herein to the existing monitoring, record keeping, and reporting procedures.**

- c. Does not require or change:

- (1) A determination of an emission limitation or other standard on a case-by-case basis;

**The permit revisions proposed herein do not require or change a MACT, RACT, BACT, BART, or other similar limitation.**

- (2) A determination of the ambient impact for any temporary source; or

**The permit revisions proposed herein do not include temporary sources.**

- (3) A visibility or increment analysis;

**The permit revisions proposed herein do not subject the source to any PSD requirements including visibility or increment analyses.**

- d. Does not establish or change a condition of the operating permit for which there is no corresponding underlying applicable requirement and which was requested in order to avoid an applicable requirement, including:

- (1) A federally enforceable emissions cap; or  
(2) An alternative emission limitation pursuant to 42 U.S.C. §7412(i)(5);

**The permit revisions proposed herein are not intended to and will not establish or change a condition, which was established in order to avoid an applicable requirement.**

- e. Is not a modification pursuant to any provision of 42 U.S.C. §§7401 to 7515, inclusive; and

**The proposed permit revisions do not constitute a modification subject to Title I provisions. See response to Part 15.**

**GENERAL COMPANY INFORMATION (CONTINUED)**

- f. Does not result in an increase in allowable emissions that exceeds any of the thresholds specified in NAC 445B.3425.1(f).

**The emission thresholds specified under NAC 445B.3425.1(f) (formerly NAC 445B.321.1.(f)) will not be exceeded. See Appendix 6, Table 1 for emission calculations.**

15. **PROCEDURES FOR DEMONSTRATION OF MINOR REVISION AT A MAJOR PSD STATIONARY SOURCE.** Respond to the following criteria [NAC 445B.295.8]:

- a. Is the existing facility categorized as a PSD major stationary source (see 40 CFR Part 52.21(b)(1) for definition)? This determination must be based on the potential to emit as determined by the conditions contained in current permit(s). If the existing facility is not a PSD major stationary source, b and c are not required to be completed.

**The existing facility is characterized as a major stationary source for PSD purposes. The supporting calculations are provided in Appendix 6, Tables 1 and 2.**

- b. Describe whether a physical change or change in the method of operation is occurring as a result of the proposed revision(s). If a physical change or change in the method of operation is not occurring, c is not required to be completed.

**Goldstrike is proposing to add inline coal size reduction equipment to the existing Roaster Circuit: Roaster #1 and Roaster #2 Feed Process (System 17). Emissions from the inline coal size reduction equipment would be ducted to the existing baghouse system (DC-208 and DC-209). No change is proposed for the grain loading or baghouse flow rate and therefore no change to the existing permitted emission limits is requested.**

**Goldstrike is also proposing to add two new crushers to the existing Metallurgical Laboratory Sample Preparation system (S2.067). The crushers include one jaw crusher and one roll crusher. Emissions from the new crushers would be ducted to the existing baghouse. No change is proposed for the grain loading or baghouse flow rate and therefore no change to the existing permitted emission limits is requested.**

**Additionally, Goldstrike proposes to update the current operating permit (AP1041-0739.02) to include the approved notifications of change for systems 75, 100, and 102.**

**See response to 15 c.**

- c. Describe and provide detailed calculations that demonstrate that a major modification as defined in 40 CFR Part 52.21(b)(2) is not occurring. The demonstration must include, at a minimum:
- (1) A summary of actual emissions for the entire stationary source;
  - (2) The proposed new potential to emit for the entire stationary source;
  - (3) A summary of any other contemporaneous emission increases and decreases; and
  - (4) The net emission increase or decrease. This must be less than the PSD significant emission rates defined in 40 CFR Part 52.21(b)(23).

**Goldstrike is not proposing any changes to the permitted emission limits for Systems 17 and 71. An Actual-to-Potential PSD Analysis was conducted per 40CFR 52.21 for each of the proposed modifications and is shown in the following tables:**

<b>Actual-to-Potential PSD Analysis</b>			
<b>Roaster Circuit: Roaster #1 and Roaster #2 Feed Process (System 17)</b>			
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Baseline Actual Emissions (tpy) <sup>1</sup>	0.0	0.0	0.0
Potential Emissions (tpy) <sup>2, 3</sup>	4.4	4.4	< 4.4
<b>Total Change in Emissions</b>	<b>4.4</b>	<b>4.4</b>	<b>&lt; 4.4</b>
<b>PSD Thresholds</b>	<b>25</b>	<b>15</b>	<b>10</b>

<sup>1</sup>As a worse-case analysis, Baseline Actual Emissions are assumed to be zero.

<sup>2</sup>The potential emissions for System 17 are used in lieu of the Projected Actual Emissions per 40 CFR 52.21(b)(41)(ii)(d).

<sup>3</sup>System 17 does not have annual emission limits, however, given the hourly emission limit of 1.01 lbs/hr of PM and PM<sub>10</sub> and assuming 8,760 hours per year of operation for S2.208, the potential annual emissions for S2.208 could not exceed 4.42 tons/yr of PM and PM<sub>10</sub>.

**GENERAL COMPANY INFORMATION (CONTINUED)**

<b>Actual-to-Potential PSD Analysis</b>			
<b>Metallurgical Laboratory Sample Preparation (System 71)</b>			
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Baseline Actual Emissions (tpy) <sup>1</sup>	0.0	0.0	0.0
Potential Emissions (tpy) <sup>2,3</sup>	2.8	2.8	< 2.8
<b>Total Change in Emissions</b>	<b>2.8</b>	<b>2.8</b>	<b>&lt; 2.8</b>
<b>PSD Thresholds</b>	<b>25</b>	<b>15</b>	<b>10</b>

<sup>1</sup>As a worse-case analysis, Baseline Actual Emissions are assumed to be zero.

<sup>2</sup>The potential emissions for System 71 are used in lieu of the Projected Actual Emissions per 40 CFR 52.21(b)(41)(ii)(d).

<sup>3</sup>System 71 does not have annual emission limits, however, given the hourly emission limit of 0.64 lbs/hr of PM and PM<sub>10</sub> and assuming 8,760 hours per year of operation for S2.067, the potential annual emissions for S2.067 could not exceed 2.8 tons/yr of PM and PM<sub>10</sub>.

See Appendix 6, Tables 1 and 2 for the emission calculations.

Actual-to-Potential PSD Analyses were also conducted per 40 CFR 52.21 for the approved notifications of change for Systems 75, 100, and 102. These notifications of change are unrelated to the modifications proposed in this application.

<b>Actual-to-Potential PSD Analysis</b>	
<b>Fuel Storage Tanks (System 75 – S2.080 and S2.081)</b>	
	<b>VOC</b>
Baseline Actual Emissions (tpy) <sup>1</sup>	0.000
Potential Emissions (tpy) <sup>2</sup>	0.365
<b>Total Change in Emissions</b>	<b>0.365</b>
<b>PSD Thresholds</b>	<b>40</b>

<sup>1</sup>As a worse-case analysis, Baseline Actual Emissions are assumed to be zero.

<sup>2</sup>The potential emissions for System 75 are used in lieu of the Projected Actual Emissions per 40 CFR 52.21(b)(41)(ii)(d).

<b>Actual-to-Potential PSD Analysis</b>			
<b>Meikle Backfill/Cement Feed Plant Silo #3 (System 100)</b>			
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Baseline Actual Emissions (tpy) <sup>1</sup>	0.0	0.0	0.0
Potential Emissions (tpy) <sup>2</sup> (System 100)	0.4	0.2	< 0.2
<b>Total Change in Emissions</b>	<b>0.4</b>	<b>0.2</b>	<b>&lt; 0.2</b>
<b>PSD Thresholds</b>	<b>25</b>	<b>15</b>	<b>10</b>

<sup>1</sup>As a worse-case analysis, Baseline Actual Emissions are assumed to be zero.

<sup>2</sup>The potential emissions for System 100 are used in lieu of the Projected Actual Emissions per 40 CFR 52.21(b)(41)(ii)(d).

<b>Actual-to-Potential PSD Analysis</b>			
<b>Rodeo Shotcrete Loadout Station Silo #1 (System 102)</b>			
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Baseline Actual Emissions (tpy) <sup>1</sup>	0.0	0.0	0.0
Potential Emissions (tpy) <sup>2</sup> (System 102)	0.3	0.2	< 0.2
<b>Total Change in Emissions</b>	<b>0.3</b>	<b>0.2</b>	<b>&lt; 0.2</b>
<b>PSD Thresholds</b>	<b>25</b>	<b>15</b>	<b>10</b>

<sup>1</sup>As a worse-case analysis, Baseline Actual Emissions are assumed to be zero.

<sup>2</sup>The potential emissions for System 102 are used in lieu of the Projected Actual Emissions per 40 CFR 52.21(b)(41)(ii)(d).

**16. Application Submittal:**

Please remove the cover page, Table of Contents and General Information page and all Attachments of the application packet. Submit the remainder of the application packet as your formal application. This should consist of, at a minimum, the Class I-B Minor Revision Application cover page, the general Company Information, and Appendices 1 through

## Question 15.c. Continued

### Debottlenecking Analysis

Goldstrike is proposing to add inline coal size reduction equipment to System 17 to maintain roaster operations and maximize gold recovery. Currently, Goldstrike adds coal to the roasters as a fuel supplement to control bed temperatures. The amount of coal added to the roasters depends on the inherent fuel characteristics of the ore being processed. Originally, the roaster circuit was designed to receive coal with a particle size of 3/8 inch. However, due to cost, supply, and safety issues, the particle size of coal currently delivered to the roaster coal system has increased to 3/4" - 1/2".

Although the addition of coal helps regulate roaster bed temperatures, any carbon not combusted in the roaster causes "preg-robbing" in the carbon-in-leach (CIL) circuit. Uncombusted carbon has an affinity for gold which reduces gold recovery. Carbon with a larger particle size is more likely to not fully combust in the roaster. The addition of inline coal size reduction equipment will reduce the particle size of the coal, maximizing the combustion of carbon and minimizing preg-robbing. This change is not designed to increase the amount of ore processed in the roaster, but rather to minimize gold losses at any given production rate. Therefore, this change has no debottlenecking implication.

### Aggregation Analysis

#### *Proposed Modifications*

The modifications proposed in this application (the addition of two new crushers to the existing Metallurgical Laboratory Sample Preparation system and the addition of new inline coal size reduction equipment) are unrelated to other projects that have taken place over the last several years. The past projects (which required minor modifications to the operating permit) are described below. In addition, the decision to add two new laboratory crushers and the new inline coal size reduction equipment postdates all of the past projects described below. The Authorization for Expenditures (AFE) were initiated on March 23, 2009, and May 19, 2009. Thus, the addition of two new laboratory crushers and the new inline coal size reduction equipment constitute separate projects.

#### *Past Modifications*

**Roaster Feed (System 18) – Permit Issued March 30, 2007:** The application received by NDEP-BAPC on December 14, 2006, proposed specifying limited amounts of petroleum contaminated soil (PCS), carbon fines, and spent carbon from carbon adsorption controls for processing in the roaster in addition to ore. This request did not alter the roaster design capacity or otherwise affect ore processing. Because this project did not involve any capital expenditure, no AFE-type action is associated with the project. Furthermore, this permitting action did not involve any change in the potential to emit.

**New Fine Ore Feed System (System 103) – Permit Issued March 30, 2007:** The application received by NDEP-BAPC on January 4, 2007, proposed to authorize the construction and operation of a fine ore feed system to provide a more efficient method of handling and processing fine ore inputs to the roaster compared to the existing ore handling system. This system did not otherwise affect roaster operations. The AFE process was initiated in November 2006.

**Existing Backfill Crushing and Screening Plant (System 95) – Permit Issued April 6, 2008:** The application received by NDEP-BAPC on March 22, 2007, proposed to increase the throughput of the existing plant and to remove emission units from the permit not in use. Because the throughput increase is accomplished without any capital expenditure, there was no specific AFE action involved with the proposed throughput increase. The decision to seek an increase in throughput would have been relatively contemporaneous with the March 2007 submittal of the application, preceding it by several months.

#### **Question 15.c. Continued**

**Existing Portable Batch Plant (Systems 99C through 99F) – Permit Issued April 6, 2008:** The application received by NDEP-BAPC on March 22, 2007, proposed to revise the current permit description of this existing plant to better reflect the simpler design of the plant. This revision included removing emission units that are not part of the final design. Because the redesigned configuration did not involve any capital expenditure, no AFE-type action is associated with this revision.

**New Fuel Oil Storage Tank (System 104) – Permit Issued April 6, 2008:** The application received by NDEP-BAPC on March 22, 2007, proposed to add a new fuel oil storage tank for additional fuel storage capacity. The tank is a source of VOC emissions only. The aggregation of VOC emissions is an academic issue because of the small PTE's involved; that is, much less than significant for all projects.

**New Mobile Boiler 1.5 (System 105) – Permit Issued April 6, 2008:** The application received by NDEP-BAPC on March 22, 2007, proposed to install a new mobile boiler. The new boiler supplies heat to the existing strip circuit. The boiler has relatively small emissions; in particular, it has a PTE of 0.57 ton per year of PM/PM<sub>10</sub>. It was included in the 2008 fiscal year budget.

**Stacker Control Technology Revision (System 12) – Permit Issued April 6, 2008:** The application received by NDEP-BAPC on March 22, 2007, proposed to revise the control technology for the coarse ore stacker so that it could be controlled by either an enclosure or pneumatic sprays. The purpose of this revision was to prepare the stacker for the planned construction of a dome around the ore stockpile (and stacker drop point) to prevent moisture from reaching the ore. The now constructed dome acts as an enclosure at the stacker drop point so the pneumatic sprays are no longer needed. The AFE process was initiated in February 2007.

**New Autoclave Mixing Tank (System 106) and Existing Silo (System 63) – Permit Issued June 30, 2008:** The application received by NDEP-BAPC on February 19, 2008, proposed to add a new autoclave mixing tank pneumatic conveying system to facilitate the handling, transfer, and mixing of soda ash. The system provides Goldstrike the flexibility to utilize lime or soda ash depending on whether the autoclaves are operated in an acidic or alkaline autoclaving mode. The application also proposed to add soda ash as a material that can be stored in the existing lime silo. The AFE process was initiated on December 2, 2007.

**New Equipment (System 107) Added to the Existing Intermediate Crushing System (System 97) – Permit Issued October 17, 2008:** The application received by NDEP-BAPC on September 3, 2008, proposed to add equipment (a crusher, a screen, and several conveyors) to the existing intermediate crushing system (System 97). This equipment provides Goldstrike with additional ore size reduction capabilities in the event that it becomes necessary to bypass the SAG mill. The permitting of this additional intermediate crushing equipment provides operational flexibility in the event of a SAG mill failure or other currently unforeseen circumstances. The AFE process was initiated on July 18, 2007.

# **Appendix 1**

## **EMISSION UNIT APPLICATION FORMS**

**(Industrial Process/Combustion Equipment/Storage Silo/  
Liquid Storage Tank/ Surface Area Disturbance)**

## Instructions

**PLEASE RESPOND SEPARATELY TO ITEMS 1 through 8 FOR EACH EMISSION UNIT, as appropriate.** Each emission unit at the stationary source must be identified by completion of the appropriate application form contained in this appendix. Forms may be duplicated as needed. Complete all applicable attachments (**Appendix 1**) included in this application package [NAC 445B.295].

- Section 1. Equipment Description: Provide information about the Standard Industrial Classification Code (SIC), describe the processes and products by SIC, including any associated with an alternative operating scenario identified in this application, model number, manufacture date, dimensions and UTM coordinates. [NAC 445B.295.3]
- Section 2. Design Rate/Operating Parameters: Describe all production rates, operating schedules and materials used in the process. [NAC 445B.295.3]
- Section 3. Fuel Usage: Describe all fuels and fuel usage. [NAC 445B.295.3]
- Section 4. Pollution Control Equipment/Exhaust Stack Parameters: Identify and describe all air pollution control equipment. [NAC 445B.295.4]
- Section 5. Compliance Monitoring Devices and Activities: Identify and describe any equipment for the control of air pollution and any devices or activities for monitoring compliance with emission limitations. [NAC 445B.295.4]
- Section 6. Work Practice Standards: provide information on limitations on the operation or any standards for work practices which affect emissions for all regulated air pollutants. [NAC 445B.295.5].
- Section 7. Requested Emission Limits: Provide the requested emission limits for each emission unit. Include emission rates of all regulated air pollutants that are subject to an emissions limitation pursuant to an applicable requirement. The emission rates must be described in pounds per hour and tons per year and in such terms as are necessary to establish compliance using the applicable standard reference test method. [NAC 445B.295.8, NAC 445B.3363(d)]
- Section 8. Applicable Requirements, Test Methods, and Compliance Status: One copy of Section 8 is provided following the Liquid Storage Tank Application. Please complete a copy of Section 8 for **each individual application form completed**. [NAC 445B.3363.1(g), 445B.3363.1(h)]

**Alternative Operating Scenarios**: Complete a separate application form for each emission unit having an alternative operating scenario. (*A common example of an alternative operating scenario is a steam boiler that utilizes natural gas as the primary fuel, but may combust diesel fuel as an alternate fuel source*). Please check the box in the upper right hand corner of each application form for emission units requesting an alternative operating scenario. Additionally, for each emission unit application form requesting an alternative operating scenario:

1. Define each alternative operating scenario [NAC 445B.296.1(a)];
2. Demonstrate that each scenario will comply with each applicable requirement or relevant requirement of NAC 445B.001 to 445B.3497, inclusive [NAC 445B.296.1(b)];
3. Detail proposed conditions, including monitoring and recordkeeping for each alternative operating scenario, which will ensure compliance. Contemporaneous log entries must be provided every time the source changes from one scenario to another [NAC 445B.296.1(c)].
4. Provide emission rates and detailed calculations for each alternative operating scenario in Appendix 4 [NAC 445B.296.1(d)].

### **Surface Area Disturbance**

Complete a Surface Area Disturbance application form for any land disturbances that equal or exceed 5 acres. (Note: The submittal of a dust control plan is required for each surface area disturbance, as specified in Appendix 7. Please provide the dust control plan in Appendix 7.)

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CLASS I-B MINOR REVISION**

Check here if this is an  
alternative operating scenario

**Section 1 - Equipment Description – System 17 – S2.208.19**

a.	Type of equipment <u>Roaster Circuit: Roaster #1 and Roaster #2 Feed Process (Inline Coal Size Reduction Equipment #1)</u>
b.	Standard Industrial Classification (SIC) Code <u>1041</u>
c.	Manufacturer of equipment <u>Gundlach Machine Company</u>
d.	Model number <u>1010S</u> Serial number <u>not specified**</u> *Equip. number <u>not specified**</u>
e.	Date equipment manufactured: <u>not specified**</u>
f.	Please check one: <input type="checkbox"/> Temporary (At the same location for less than 12 months) <input checked="" type="checkbox"/> Stationary (At the same location for more than 12 months)
g.	For crushers: size output setting, check one: <input type="checkbox"/> Primary (> 4") <input type="checkbox"/> Secondary (< 4" but > 1") <input checked="" type="checkbox"/> Tertiary (< 1")
h.	Please check if portable: <input type="checkbox"/> Portable (transportable or movable within the confines of the stationary source)
i.	UTM Coordinates <u>4,538,500</u> meters N; <u>552,200</u> meters E; Zone 11 (Please specify NAD 27 <input type="checkbox"/> or NAD 83 <input checked="" type="checkbox"/> )
j.	Basic equipment dimensions (feet): L <u>8</u> W <u>2.5</u> H <u>2</u>

\*The equipment number is the facility's own numbering system for this piece of equipment.

\*\*The equipment is not yet on site.

**Section 2 - Design Rate/Operating Parameters**

a.	Maximum design capacity (tons per hour) <u>5 tons coal per hour</u>
b.	Requested operating rate (tons per hour)* _____
c.	Requested operating time: (time of day)* _____ to _____ Hours per day <u>0-24</u> Days per year <u>365</u>
d.	Batch load or charge weight (tons) (if applicable) <u>N/A</u>
e.	Total hours required to process batch or charge (if applicable) <u>N/A</u>
f.	Maximum operating rate (tons per year) <u>No limit</u>
g.	Requested operating rate (tons per year)* _____
f.	Type of material processed <u>Ore</u>
g.	Minimum moisture content <u>N/A</u>

\*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 3 - Fuel Usage**

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	<b>None</b> gallons				
	<b>None</b> gallons				
Gasoline	<b>None</b> gallons				
Propane	<b>None</b> cubic feet				
Natural Gas	<b>None</b> cubic feet				
*Waste Oil	<b>None</b> gallons				
Other	<b>None</b>				

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								
<b>None</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

\*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)**

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO<sub>x</sub> burner, no control, etc.)

	Control #1*	Control #2
Type of Control (See Note 1)	<b>Baghouse System (DC-208 and DC-209)</b>	
Pollutant(s) Controlled	<b>Particulate</b>	
Manufacturer	<b>Not specified</b>	
Manufacturer's Guarantee (see Note 2)	<b>N/A</b>	
Stack height (feet from ground level)	<b>70</b>	
Stack inside diameter (feet)	<b>2.58</b>	
Temperature (°F) at design capacity	<b>118.1</b>	
Stack exit velocity (feet per second)	<b>43</b>	
Gas volume flow rate: Actual cubic feet per minute	<b>13,496</b>	
Gas volume flow rate: Dry standard cubic feet per minute	<b>10,094</b>	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	<b>N/A</b>	

\* Stack parameters are taken from the 7/13/2005 stack test for PM.

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	<b>N/A</b>	
Pollutant(s) Controlled	<b>N/A</b>	
Manufacturer	<b>N/A</b>	
Manufacturer's Guarantee (see Note 1)	<b>N/A</b>	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

**Note 1:** Specify "uncontrolled" if no pollution control device is installed.

**Note 2:** Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 5 - Identify and Describe Compliance Monitoring Devices or Activities** (attach additional pages if necessary)

(Eg., Emissions from this unit will be monitored by CEMS for NO<sub>x</sub> and CO. Emissions for all other pollutants will be monitored periodically by annual stack test, daily opacity readings using Method 9 with weekly O&M baghouse checks and daily ΔP readings.)

**Emissions from this unit are currently monitored periodically by stack tests for PM, PM<sub>10</sub>, and opacity every five years, daily baghouse ΔP readings, and weekly visible emission assessments. If the visible emission survey detects any visible emissions, a Method 9 is conducted and recorded.**

**Section 6 - Identify and Describe Work Practice Standards, Etc.** (attach additional pages if necessary)

(Eg., 1. At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices.  
2. Water spray nozzles will be checked to verify proper operation and adequate water flow is present.)

**Emissions from S2.208 are ducted to a control system consisting of a baghouse (DC-208 for the Roaster 1 feed circuit and DC-209 for the Roaster 2 feed circuit). DC-208 and DC-209 are operated in accordance with the manufacturer's recommendations at all times during operation of S2.208, including startup and shutdown. Emissions from DC-208 and DC-209 are vented to the atmosphere through a single stack. Maximum volume flow rate of DC-208 and DC-209 do not exceed 14,760 standard cubic feet per minute (scfm). DC-208 and DC-209 filter media consists of polyester with a maximum air-to-cloth ratio of 4:1. The capture efficiency of the control system will be 100% such that all process emissions from each emission unit indicated for S2.208 will be captured and ducted to DC-208 and DC-209.**

**DC-208 and DC-209 are inspected annually.**

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 7 - Requested Emission Limits**

<b>Pollutant</b>	<b>Potential to Emit (pounds/hour*)</b>	<b>Potential to Emit (tons/year)</b>	<b>Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)</b>
Total Particulate Matter (PM)	<b>1.01, total for S2.208</b>	N/A	See Appendix 6.
Particulates as PM <sub>10</sub>	<b>1.01, total for S2.208</b>	N/A	See Appendix 6.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant <sup>1</sup> )			
Other Regulated Pollutants (Specify <sup>2</sup> )			

\*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

<sup>1</sup>A list of Hazardous Air Pollutants is contained in Attachment 4.

<sup>2</sup>Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

# SECTION 8 EMISSION UNIT SPECIFIC APPLICABLE REQUIREMENTS

System 17 – S2.208.19 – Roaster Circuit: Roaster #1 and  
Roaster #2 Feed Process (Inline Coal Size Reduction Equipment  
#1)

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)  <b>Emissions of Particulate Matter - Fuel Burning Equipment</b>            1. Source may not cause or permit the emission of PM<sub>10</sub> resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:            a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.            b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:  <math>Y = 1.02X^{-0.231}</math>            c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:  <math>Y = 17.0X^{-0.568}</math>            2. For the purposes of paragraphs b and c of subsection 1:            a. "X" means the operating rate in million Btu's per hour.            b. "Y" means the allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b>            Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Heat input in millions of</th> <th style="text-align: right;">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td>Up to and including 10 . . . . .</td> <td style="text-align: right;">0.600</td> </tr> <tr> <td>100. . . . .</td> <td style="text-align: right;">0.352</td> </tr> <tr> <td>1,000. . . . .</td> <td style="text-align: right;">0.206</td> </tr> <tr> <td>10,000. . . . .</td> <td style="text-align: right;">0.091</td> </tr> <tr> <td>100,000. . . . .</td> <td style="text-align: right;">0.025</td> </tr> </tbody> </table>	Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 . . . . .	0.600	100. . . . .	0.352	1,000. . . . .	0.206	10,000. . . . .	0.091	100,000. . . . .	0.025	N/A	N/A	N/A
Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 . . . . .	0.600														
100. . . . .	0.352														
1,000. . . . .	0.206														
10,000. . . . .	0.091														
100,000. . . . .	0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b>            For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation:  <math>Y = 1.02X^{-0.231}</math>            Where "X" = maximum equipment capacity rate in million Btu's per hour.            "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b>            For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation:  <math>Y = 17.0X^{-0.568}</math>            where "X" = maximum equipment capacity rate in million Btu's per hour.            "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.731(3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Fuel Burning Equipment</u>            Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22033, 445B.22027 <i>(State Only Requirement)</i>  <u>Emissions of Particulate Matter - Sources Not Otherwise Limited</u>            1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM<sub>10</sub> to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.            2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 4.10P^{0.67}</math>            3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 55P^{0.11} - 40</math>            4. For the purposes of subsections 2 and 3:            (a) "E" means the maximum rate of emission in pounds per hour.            (b) "P" means the maximum allowable throughput in tons per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.             SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:  <math>E = 0.0193P^{0.67} (4.10P^{0.67})</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	N/A	N/A	N/A
<p>SIP 445.732 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:  <math>E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.2205 (<i>State Only Requirement</i>)  <u>Other Processes Which Emit Sulfur</u>            1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:  <math>E = 0.292P^{0.904}</math>            2. For the purposes of subsection 1:            (a) "E" means the allowable sulfur emission in pounds per hour.            (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:  <math>E = 0.271P^{0.904} (0.292P^{0.904})</math>            When E is equal to or greater than 5 kilograms (10 pounds) per hour.            Where:            "E" is the allowable sulfur emission in kilograms (pounds) per hour,            "P" is the total feed sulfur in kilograms (pounds) per hour.            SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22017 (<i>State Only Requirement</i>)  <u>Maximum Opacity of Emissions</u>            1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:            (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.            (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).            2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.721 (<i>Federally Enforceable SIP Requirement</i>)  <u>Visible Emissions from Stationary Sources</u>            These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	N/A	N/A	N/A

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>40 CFR Part 60 Subpart LL (<i>Federal NSPS</i>)  <u>Standards of Performance for Metallic Mineral Processing Plants</u>  (a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharge 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 (0.02 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.</p>	<b>Applicable</b>	<b>See Sections 5 and 6 of previous Industrial Process Application Form.</b>	<b>In Compliance</b>
<p>40 CFR Part 60 Subpart Y (<i>Federal NSPS</i>)  <u>Standards of Performance for Coal Preparation Plants</u>  60.250  (a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 181 Mg (200tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.  60.252  (c) On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<b>N/A – S2.208 processes less than 200 tons of coal per day (6.8 ton/hr x 24 hr/day = 163.2 ton/day).</b>	<b>N/A</b>	<b>N/A</b>

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CLASS I-B MINOR REVISION**

Check here if this is an  
alternative operating scenario

**Section 1 - Equipment Description – System 17 – S2.208.20**

a.	Type of equipment <u>Roaster Circuit: Roaster #1 and Roaster #2 Feed Process (Inline Coal Size Reduction Equipment #2)</u>
b.	Standard Industrial Classification (SIC) Code <u>1041</u>
c.	Manufacturer of equipment <u>Gundlach Machine Company</u>
d.	Model number <u>1010S</u> Serial number <u>not specified**</u> *Equip. number <u>not specified**</u>
e.	Date equipment manufactured: <u>not specified**</u>
f.	Please check one: <input type="checkbox"/> Temporary (At the same location for less than 12 months) <input checked="" type="checkbox"/> Stationary (At the same location for more than 12 months)
g.	For crushers: size output setting, check one: <input type="checkbox"/> Primary (> 4") <input type="checkbox"/> Secondary (< 4" but > 1") <input checked="" type="checkbox"/> Tertiary (< 1")
h.	Please check if portable: <input type="checkbox"/> Portable (transportable or movable within the confines of the stationary source)
i.	UTM Coordinates <u>4,538,500</u> meters N; <u>552,200</u> meters E; Zone 11 (Please specify NAD 27 <input type="checkbox"/> or NAD 83 <input checked="" type="checkbox"/> )
j.	Basic equipment dimensions (feet): L <u>8</u> W <u>2.5</u> H <u>2</u>

\*The equipment number is the facility's own numbering system for this piece of equipment.

\*\*The equipment is not yet on site.

**Section 2 - Design Rate/Operating Parameters**

a.	Maximum design capacity (tons per hour) <u>5 tons coal per hour</u>
b.	Requested operating rate (tons per hour)* _____
c.	Requested operating time: (time of day)* _____ to _____ Hours per day <u>0-24</u> Days per year <u>365</u>
d.	Batch load or charge weight (tons) (if applicable) <u>N/A</u>
e.	Total hours required to process batch or charge (if applicable) <u>N/A</u>
f.	Maximum operating rate (tons per year) <u>No limit</u>
g.	Requested operating rate (tons per year)* _____
f.	Type of material processed <u>Ore</u>
g.	Minimum moisture content <u>N/A</u>

\*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

## INDUSTRIAL PROCESS APPLICATION FORM CONTINUED

### Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	<b>None</b> gallons				
	<b>None</b> gallons				
Gasoline	<b>None</b> gallons				
Propane	<b>None</b> cubic feet				
Natural Gas	<b>None</b> cubic feet				
*Waste Oil	<b>None</b> gallons				
Other	<b>None</b>				

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								
<b>None</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

\*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)**

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO<sub>x</sub> burner, no control, etc.)

	Control #1*	Control #2
Type of Control (See Note 1)	<b>Baghouse System (DC-208 and DC-209)</b>	
Pollutant(s) Controlled	<b>Particulate</b>	
Manufacturer	<b>Not specified</b>	
Manufacturer's Guarantee (see Note 2)	<b>N/A</b>	
Stack height (feet from ground level)	<b>70</b>	
Stack inside diameter (feet)	<b>2.58</b>	
Temperature (°F) at design capacity	<b>118.1</b>	
Stack exit velocity (feet per second)	<b>43</b>	
Gas volume flow rate: Actual cubic feet per minute	<b>13,496</b>	
Gas volume flow rate: Dry standard cubic feet per minute	<b>10,094</b>	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	<b>N/A</b>	

\* Stack parameters are taken from the 7/13/2005 stack test for PM.

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	<b>N/A</b>	
Pollutant(s) Controlled	<b>N/A</b>	
Manufacturer	<b>N/A</b>	
Manufacturer's Guarantee (see Note 1)	<b>N/A</b>	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

**Note 1:** Specify "uncontrolled" if no pollution control device is installed.

**Note 2:** Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 5 - Identify and Describe Compliance Monitoring Devices or Activities** (attach additional pages if necessary)

(Eg., Emissions from this unit will be monitored by CEMS for NO<sub>x</sub> and CO. Emissions for all other pollutants will be monitored periodically by annual stack test, daily opacity readings using Method 9 with weekly O&M baghouse checks and daily ΔP readings.)

**Emissions from this unit are currently monitored periodically by stack tests for PM, PM<sub>10</sub>, and opacity every five years, daily baghouse ΔP readings, and weekly visible emission assessments. If the visible emission survey detects any visible emissions, a Method 9 is conducted and recorded.**

**Section 6 - Identify and Describe Work Practice Standards, Etc.** (attach additional pages if necessary)

(Eg., 1. At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices.

2. Water spray nozzles will be checked to verify proper operation and adequate water flow is present.)

**Emissions from S2.208 are ducted to a control system consisting of a baghouse (DC-208 for the Roaster 1 feed circuit and DC-209 for the Roaster 2 feed circuit). DC-208 and DC-209 are operated in accordance with the manufacturer's recommendations at all times during operation of S2.208, including startup and shutdown. Emissions from DC-208 and DC-209 are vented to the atmosphere through a single stack. Maximum volume flow rate of DC-208 and DC-209 do not exceed 14,760 standard cubic feet per minute (scfm). DC-208 and DC-209 filter media consists of polyester with a maximum air-to-cloth ratio of 4:1. The capture efficiency of the control system will be 100% such that all process emissions from each emission unit indicated for S2.208 will be captured and ducted to DC-208 and DC-209.**

**DC-208 and DC-209 are inspected annually.**

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 7 - Requested Emission Limits**

<b>Pollutant</b>	<b>Potential to Emit (pounds/hour*)</b>	<b>Potential to Emit (tons/year)</b>	<b>Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)</b>
Total Particulate Matter (PM)	<b>1.01, total for S2.208</b>	N/A	See Appendix 6.
Particulates as PM <sub>10</sub>	<b>1.01, total for S2.208</b>	N/A	See Appendix 6.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant <sup>1</sup> )			
Other Regulated Pollutants (Specify <sup>2</sup> )			

\*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

<sup>1</sup>A list of Hazardous Air Pollutants is contained in Attachment 4.

<sup>2</sup>Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

# SECTION 8 EMISSION UNIT SPECIFIC APPLICABLE REQUIREMENTS

System 17 – S2.208.20 – Roaster Circuit: Roaster #1 and  
Roaster #2 Feed Process (Inline Coal Size Reduction Equipment  
#2)

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)  <b>Emissions of Particulate Matter - Fuel Burning Equipment</b></p> <p>1. Source may not cause or permit the emission of PM<sub>10</sub> resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <p>a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.</p> <p>b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <p>a. "X" means the operating rate in million Btu's per hour.</p> <p>b. "Y" means the allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Heat input in millions of</th> <th style="text-align: right;">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td>Up to and including 10 . . . . .</td> <td style="text-align: right;">0.600</td> </tr> <tr> <td>100. . . . .</td> <td style="text-align: right;">0.352</td> </tr> <tr> <td>1,000. . . . .</td> <td style="text-align: right;">0.206</td> </tr> <tr> <td>10,000. . . . .</td> <td style="text-align: right;">0.091</td> </tr> <tr> <td>100,000. . . . .</td> <td style="text-align: right;">0.025</td> </tr> </tbody> </table>	Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 . . . . .	0.600	100. . . . .	0.352	1,000. . . . .	0.206	10,000. . . . .	0.091	100,000. . . . .	0.025	N/A	N/A	N/A
Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 . . . . .	0.600														
100. . . . .	0.352														
1,000. . . . .	0.206														
10,000. . . . .	0.091														
100,000. . . . .	0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.731 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Fuel Burning Equipment</u>            Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22033, 445B.22027 <i>(State Only Requirement)</i>  <u>Emissions of Particulate Matter - Sources Not Otherwise Limited</u>            1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM<sub>10</sub> to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.            2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 4.10P^{0.67}</math>            3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 55P^{0.11} - 40</math>            4. For the purposes of subsections 2 and 3:            (a) "E" means the maximum rate of emission in pounds per hour.            (b) "P" means the maximum allowable throughput in tons per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.             SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:  <math>E = 0.0193P^{0.67} (4.10P^{0.67})</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	N/A	N/A	N/A
<p>SIP 445.732 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:  <math>E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status						
<p>NAC 445B.2204, 445B.22043, 445B.22047 (<i>State Only Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <ol style="list-style-type: none"> <li>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</li> <li>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation:  <math>Y = 0.7X</math></li> <li>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:  Liquid fuel, <math>Y = 0.4X</math>  Solid Fuel, <math>Y = 0.6X</math>  Combination, <math>Y = (L(0.4) - S(0.6))/(L + S)</math></li> <li>4. For the purposes of subsections 2 and 3:  (a) "X" means the operating input of heat in millions of Btu's per hour.  (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</li> <li>5. For the purposes of subsection 3:  (a) "L" means the percentage of total input of heat derived from liquid fuel.  (b) "S" means the percentage of total heat derived from solid fuel.</li> </ol>	N/A	N/A	N/A						
<p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:  <math>Y = 1.26X</math> (<math>Y = 0.7X</math>)  "X" = Operating heat input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>	N/A	N/A	N/A						
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Liquid Fuel</u></td> <td style="text-align: center; width: 33%;"><u>Solid Fuels</u></td> <td style="text-align: center; width: 33%;"><u>Combination Fuel</u></td> </tr> <tr> <td style="text-align: center;"><math>Y = 0.7X</math> (<math>Y = 0.4X</math>)</td> <td style="text-align: center;"><math>Y = 1.1X</math> (<math>Y = 0.6X</math>)</td> <td style="text-align: center;"><math>Y = \frac{L(0.7) + S(1.1)}{L + S}</math></td> </tr> </table> <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.  "L" = Percentage of total heat input derived from liquid fuel.  "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p>	<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>	$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$			
<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>							
$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$							

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.2205 (<i>State Only Requirement</i>)  <u>Other Processes Which Emit Sulfur</u>            1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:  <math>E = 0.292P^{0.904}</math>            2. For the purposes of subsection 1:            (a) "E" means the allowable sulfur emission in pounds per hour.            (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:  <math>E = 0.271P^{0.904} (0.292P^{0.904})</math>            When E is equal to or greater than 5 kilograms (10 pounds) per hour.            Where:            "E" is the allowable sulfur emission in kilograms (pounds) per hour,            "P" is the total feed sulfur in kilograms (pounds) per hour.            SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22017 (<i>State Only Requirement</i>)  <u>Maximum Opacity of Emissions</u>            1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:            (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.            (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).            2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.721 (<i>Federally Enforceable SIP Requirement</i>)  <u>Visible Emissions from Stationary Sources</u>            These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	N/A	N/A	N/A

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status						
<p>NAC 445B.2204, 445B.22043, 445B.22047 (<i>State Only Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <ol style="list-style-type: none"> <li>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</li> <li>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation:  <math>Y = 0.7X</math></li> <li>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:  Liquid fuel, <math>Y = 0.4X</math>  Solid Fuel, <math>Y = 0.6X</math>  Combination, <math>Y = (L(0.4) - S(0.6))/(L + S)</math></li> <li>4. For the purposes of subsections 2 and 3:  (a) "X" means the operating input of heat in millions of Btu's per hour.  (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</li> <li>5. For the purposes of subsection 3:  (a) "L" means the percentage of total input of heat derived from liquid fuel.  (b) "S" means the percentage of total heat derived from solid fuel.</li> </ol>	N/A	N/A	N/A						
<p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:  <math>Y = 1.26X</math> (<math>Y = 0.7X</math>)  "X" = Operating heat input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>	N/A	N/A	N/A						
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Liquid Fuel</u></td> <td style="text-align: center; width: 33%;"><u>Solid Fuels</u></td> <td style="text-align: center; width: 33%;"><u>Combination Fuel</u></td> </tr> <tr> <td style="text-align: center;"><math>Y = 0.7X</math> (<math>Y = 0.4X</math>)</td> <td style="text-align: center;"><math>Y = 1.1X</math> (<math>Y = 0.6X</math>)</td> <td style="text-align: center;"><math>Y = \frac{L(0.7) + S(1.1)}{L + S}</math></td> </tr> </table> <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.  "L" = Percentage of total heat input derived from liquid fuel.  "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p>	<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>	$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$			
<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>							
$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$							

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>40 CFR Part 60 Subpart LL (<i>Federal NSPS</i>)  <u>Standards of Performance for Metallic Mineral Processing Plants</u></p> <p>(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharge into the atmosphere from an affected facility any stack emissions that:</p> <p>(1) Contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.02 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.</p>	<p><b>Applicable</b></p>	<p><b>See Sections 5 and 6 of previous Industrial Process Application Form.</b></p>	<p><b>In Compliance</b></p>
<p>40 CFR Part 60 Subpart Y (<i>Federal NSPS</i>)  <u>Standards of Performance for Coal Preparation Plants</u>  <u>60.250</u></p> <p>(a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 181 Mg (200tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.</p> <p>60.252  (c) On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p><b>N/A – S2.208 processes less than 200 tons of coal per day (6.8 ton/hr x 24 hr/day = 163.2 ton/day).</b></p>	<p>N/A</p>	<p>N/A</p>

**INDUSTRIAL PROCESS  
APPLICATION FORM  
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Check here if this is an alternative operating scenario

**Section 1 - Equipment Description – System 71 – S2.067.4**

- a. Type of equipment Metallurgical Laboratory Sample Preparation (Roll Crusher)
- b. Standard Industrial Classification (SIC) Code 1041
- c. Manufacturer of equipment Marcy Laboratory
- d. Model number 8000 Serial number not specified\*\* \*Equip. number not specified\*\*
- e. Date equipment manufactured: not specified\*\*
- f. Please check one:  Temporary (At the same location for less than 12 months)  
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:  Primary (> 4")  
 Secondary (< 4" but > 1")  
 Tertiary (< 1")
- h. Please check if portable:  Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,536,000 meters N; 554,300 meters E; Zone 11  
(Please specify NAD 27  or NAD 83 )
- j. Basic equipment dimensions (feet): L 5.1 W 2.7 H 2.8

\*The equipment number is the facility's own numbering system for this piece of equipment.

\*\*The equipment has not yet been purchased.

**Section 2 - Design Rate/Operating Parameters**

- a. Maximum design capacity (tons per hour) 0.21, total for S2.067
- b. Requested operating rate (tons per hour)\* \_\_\_\_\_
- c. Requested operating time: (time of day)\* \_\_\_\_\_ to \_\_\_\_\_  
Hours per day 0-24 Days per year 365
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) No limit
- g. Requested operating rate (tons per year)\* \_\_\_\_\_
- f. Type of material processed Gold Ore and Mine Rock Samples
- g. Minimum moisture content N/A

\*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 3 - Fuel Usage**

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	<b>None</b> gallons				
	<b>None</b> gallons				
Gasoline	<b>None</b> gallons				
Propane	<b>None</b> cubic feet				
Natural Gas	<b>None</b> cubic feet				
*Waste Oil	<b>None</b> gallons				
Other	<b>None</b>				

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								
<b>None</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

\*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section *must* be completed)**

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO<sub>x</sub> burner, no control, etc.)

	Control #1*	Control #2
Type of Control (See Note 1)	<b>Baghouse</b>	
Pollutant(s) Controlled	<b>Particulate</b>	
Manufacturer	<b>Torit</b>	
Manufacturer's Guarantee (see Note 2)	<b>N/A</b>	
Stack height (feet from ground level)	<b>13</b>	
Stack inside diameter (feet)	<b>2</b>	
Temperature (°F) at design capacity	<b>68</b>	
Stack exit velocity (feet per second)	<b>48.3</b>	
Gas volume flow rate: Actual cubic feet per minute	<b>9,100</b>	
Gas volume flow rate: Dry standard cubic feet per minute	<b>7,500</b>	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	<b>N/A</b>	

\* Stack parameters are taken from the 7/13/2005 stack test for PM.

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	<b>N/A</b>	
Pollutant(s) Controlled	<b>N/A</b>	
Manufacturer	<b>N/A</b>	
Manufacturer's Guarantee (see Note 1)	<b>N/A</b>	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

**Note 1:** Specify "uncontrolled" if no pollution control device is installed.

**Note 2:** Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 5 - Identify and Describe Compliance Monitoring Devices or Activities** (attach additional pages if necessary)

(Eg., Emissions from this unit will be monitored by CEMS for NO<sub>x</sub> and CO. Emissions for all other pollutants will be monitored periodically by annual stack test, daily opacity readings using Method 9 with weekly O&M baghouse checks and daily ΔP readings.)

**Emissions from this unit are currently monitored periodically by daily baghouse ΔP readings and monthly visible emission assessments. If the visible emission survey detects any visible emissions, a Method 9 is conducted and recorded.**

**Section 6 - Identify and Describe Work Practice Standards, Etc.** (attach additional pages if necessary)

(Eg., 1. At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices.  
2. Water spray nozzles will be checked to verify proper operation and adequate water flow is present.)

**Emissions from S2.067 are ducted to a control system consisting of a baghouse. The baghouse is operated in accordance with the manufacturer's recommendations at all times during operation of S2.067, including startup and shutdown. The capture efficiency of the control system will be 100% such that all process emissions from S2.067 are captured and ducted to the baghouse.**

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 7 - Requested Emission Limits**

<b>Pollutant</b>	<b>Potential to Emit (pounds/hour*)</b>	<b>Potential to Emit (tons/year)</b>	<b>Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)</b>
Total Particulate Matter (PM)	<b>0.64, total for S2.067</b>	N/A	See Appendix 6.
Particulates as PM <sub>10</sub>	<b>0.64, total for S2.067</b>	N/A	See Appendix 6.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant <sup>1</sup> )			
Other Regulated Pollutants (Specify <sup>2</sup> )			

\*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

<sup>1</sup>A list of Hazardous Air Pollutants is contained in Attachment 4.

<sup>2</sup>Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**SECTION 8  
EMISSION UNIT SPECIFIC  
APPLICABLE  
REQUIREMENTS**

System 71 – S2.067.4 – Metallurgical Laboratory Sample  
Preparation (Roll Crusher)

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)  <b>Emissions of Particulate Matter - Fuel Burning Equipment</b></p> <p>1. Source may not cause or permit the emission of PM<sub>10</sub> resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <p>a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.</p> <p>b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <p>a. "X" means the operating rate in million Btu's per hour.</p> <p>b. "Y" means the allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Heat input in millions of</th> <th style="text-align: right;">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td>Up to and including 10 . . . . .</td> <td style="text-align: right;">0.600</td> </tr> <tr> <td>100. . . . .</td> <td style="text-align: right;">0.352</td> </tr> <tr> <td>1,000. . . . .</td> <td style="text-align: right;">0.206</td> </tr> <tr> <td>10,000. . . . .</td> <td style="text-align: right;">0.091</td> </tr> <tr> <td>100,000. . . . .</td> <td style="text-align: right;">0.025</td> </tr> </tbody> </table>	Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 . . . . .	0.600	100. . . . .	0.352	1,000. . . . .	0.206	10,000. . . . .	0.091	100,000. . . . .	0.025	N/A	N/A	N/A
Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 . . . . .	0.600														
100. . . . .	0.352														
1,000. . . . .	0.206														
10,000. . . . .	0.091														
100,000. . . . .	0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.731 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Fuel Burning Equipment</u>            Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22033, 445B.22027 <i>(State Only Requirement)</i>  <u>Emissions of Particulate Matter - Sources Not Otherwise Limited</u>            1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM<sub>10</sub> to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.            2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 4.10P^{0.67}</math>            3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 55P^{0.11} - 40</math>            4. For the purposes of subsections 2 and 3:            (a) "E" means the maximum rate of emission in pounds per hour.            (b) "P" means the maximum allowable throughput in tons per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.             SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:  <math>E = 0.0193P^{0.67} (4.10P^{0.67})</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:  <math>E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	N/A	N/A	N/A

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status						
<p>NAC 445B.2204, 445B.22043, 445B.22047 (<i>State Only Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <ol style="list-style-type: none"> <li>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</li> <li>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation:  <math>Y = 0.7X</math></li> <li>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:  Liquid fuel, <math>Y = 0.4X</math>  Solid Fuel, <math>Y = 0.6X</math>  Combination, <math>Y = (L(0.4) - S(0.6))/(L + S)</math></li> <li>4. For the purposes of subsections 2 and 3:  (a) "X" means the operating input of heat in millions of Btu's per hour.  (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</li> <li>5. For the purposes of subsection 3:  (a) "L" means the percentage of total input of heat derived from liquid fuel.  (b) "S" means the percentage of total heat derived from solid fuel.</li> </ol>	N/A	N/A	N/A						
<p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:  <math>Y = 1.26X</math> (<math>Y = 0.7X</math>)  "X" = Operating heat input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>	N/A	N/A	N/A						
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Liquid Fuel</u></td> <td style="text-align: center; width: 33%;"><u>Solid Fuels</u></td> <td style="text-align: center; width: 33%;"><u>Combination Fuel</u></td> </tr> <tr> <td style="text-align: center;"><math>Y = 0.7X</math> (<math>Y = 0.4X</math>)</td> <td style="text-align: center;"><math>Y = 1.1X</math> (<math>Y = 0.6X</math>)</td> <td style="text-align: center;"><math>Y = \frac{L(0.7) + S(1.1)}{L + S}</math></td> </tr> </table> <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.  "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.  "L" = Percentage of total heat input derived from liquid fuel.  "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p>	<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>	$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$			
<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>							
$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$							

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.2205 (<i>State Only Requirement</i>)  <u>Other Processes Which Emit Sulfur</u>            1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:  <math>E = 0.292P^{0.904}</math>            2. For the purposes of subsection 1:            (a) "E" means the allowable sulfur emission in pounds per hour.            (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:  <math>E = 0.271P^{0.904} (0.292P^{0.904})</math>            When E is equal to or greater than 5 kilograms (10 pounds) per hour.            Where:            "E" is the allowable sulfur emission in kilograms (pounds) per hour,            "P" is the total feed sulfur in kilograms (pounds) per hour.            SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22017 (<i>State Only Requirement</i>)  <u>Maximum Opacity of Emissions</u>            1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:            (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.            (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).            2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.721 (<i>Federally Enforceable SIP Requirement</i>)  <u>Visible Emissions from Stationary Sources</u>            These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	N/A	N/A	N/A

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CLASS I-B MINOR REVISION**

Check here if this is an alternative operating scenario

**Section 1 - Equipment Description – System 71 – S2.067.5**

a.	Type of equipment	<u>Metallurgical Laboratory Sample Preparation (Jaw Crusher)</u>				
b.	Standard Industrial Classification (SIC) Code	<u>1041</u>				
c.	Manufacturer of equipment	<u>Morse</u>				
d.	Model number	<u>4,000</u>	Serial number	<u>not specified**</u>	*Equip. number	<u>not specified**</u>
e.	Date equipment manufactured:	<u>not specified**</u>				
f.	Please check one:	<input type="checkbox"/> Temporary (At the same location for less than 12 months)	<input checked="" type="checkbox"/> Stationary (At the same location for more than 12 months)			
g.	For crushers: size output setting, check one:	<input type="checkbox"/> Primary (> 4")	<input type="checkbox"/> Secondary (< 4" but > 1")	<input checked="" type="checkbox"/> Tertiary (< 1")		
h.	Please check if portable:	<input type="checkbox"/> Portable (transportable or movable within the confines of the stationary source)				
i.	UTM Coordinates	<u>4,536,000</u>	meters N;	<u>554,300</u>	meters E; Zone 11	
	(Please specify NAD 27 <input type="checkbox"/> or NAD 83 <input checked="" type="checkbox"/> )					
j.	Basic equipment dimensions (feet): L	<u>6.25</u>	W	<u>3.4</u>	H	<u>4.3</u>

\*The equipment number is the facility's own numbering system for this piece of equipment.

\*\*The equipment has not yet been purchased.

**Section 2 - Design Rate/Operating Parameters**

a.	Maximum design capacity (tons per hour)	<u>0.21, total for S2.067</u>		
b.	Requested operating rate (tons per hour)*	_____		
c.	Requested operating time: (time of day)*	_____ to _____		
	Hours per day	<u>0-24</u>	Days per year	<u>365</u>
d.	Batch load or charge weight (tons) (if applicable)	<u>N/A</u>		
e.	Total hours required to process batch or charge (if applicable)	<u>N/A</u>		
f.	Maximum operating rate (tons per year)	<u>No limit</u>		
g.	Requested operating rate (tons per year)*	_____		
f.	Type of material processed	<u>Gold Ore and Mine Rock Samples</u>		
g.	Minimum moisture content	<u>N/A</u>		

\*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 3 - Fuel Usage**

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	<b>None</b> gallons				
	<b>None</b> gallons				
Gasoline	<b>None</b> gallons				
Propane	<b>None</b> cubic feet				
Natural Gas	<b>None</b> cubic feet				
*Waste Oil	<b>None</b> gallons				
Other	<b>None</b>				

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								
<b>None</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

\*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)**

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO<sub>x</sub> burner, no control, etc.)

	Control #1*	Control #2
Type of Control (See Note 1)	<b>Baghouse</b>	
Pollutant(s) Controlled	<b>Particulate</b>	
Manufacturer	<b>Torit</b>	
Manufacturer's Guarantee (see Note 2)	<b>N/A</b>	
Stack height (feet from ground level)	<b>13</b>	
Stack inside diameter (feet)	<b>2</b>	
Temperature (°F) at design capacity	<b>68</b>	
Stack exit velocity (feet per second)	<b>48.3</b>	
Gas volume flow rate: Actual cubic feet per minute	<b>9,100</b>	
Gas volume flow rate: Dry standard cubic feet per minute	<b>7,500</b>	
Unusual stack characteristics (e.g. raincap, horizontal discharge)	<b>N/A</b>	

\* Stack parameters are taken from the 7/13/2005 stack test for PM.

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	<b>N/A</b>	
Pollutant(s) Controlled	<b>N/A</b>	
Manufacturer	<b>N/A</b>	
Manufacturer's Guarantee (see Note 1)	<b>N/A</b>	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

**Note 1:** Specify "uncontrolled" if no pollution control device is installed.

**Note 2:** Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 5 - Identify and Describe Compliance Monitoring Devices or Activities** (attach additional pages if necessary)

(Eg., Emissions from this unit will be monitored by CEMS for NO<sub>x</sub> and CO. Emissions for all other pollutants will be monitored periodically by annual stack test, daily opacity readings using Method 9 with weekly O&M baghouse checks and daily ΔP readings.)

**Emissions from this unit are currently monitored periodically by daily baghouse ΔP readings and monthly visible emission assessments. If the visible emission survey detects any visible emissions, a Method 9 is conducted and recorded.**

**Section 6 - Identify and Describe Work Practice Standards, Etc.** (attach additional pages if necessary)

(Eg., 1. At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices.  
2. Water spray nozzles will be checked to verify proper operation and adequate water flow is present.)

**Emissions from S2.067 are ducted to a control system consisting of a baghouse. The baghouse is operated in accordance with the manufacturer's recommendations at all times during operation of S2.067, including startup and shutdown. The capture efficiency of the control system will be 100% such that all process emissions from S2.067 are captured and ducted to the baghouse.**

**INDUSTRIAL PROCESS  
APPLICATION FORM  
CONTINUED**

**Section 7 - Requested Emission Limits**

<b>Pollutant</b>	<b>Potential to Emit (pounds/hour*)</b>	<b>Potential to Emit (tons/year)</b>	<b>Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)</b>
Total Particulate Matter (PM)	<b>0.64, total for S2.067</b>	N/A	See Appendix 6.
Particulates as PM <sub>10</sub>	<b>0.64, total for S2.067</b>	N/A	See Appendix 6.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant <sup>1</sup> )			
Other Regulated Pollutants (Specify <sup>2</sup> )			

\*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

<sup>1</sup>A list of Hazardous Air Pollutants is contained in Attachment 4.

<sup>2</sup>Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**SECTION 8  
EMISSION UNIT SPECIFIC  
APPLICABLE  
REQUIREMENTS**

**System 71 – S2.067.5 – Metallurgical Laboratory Sample  
Preparation (Jaw Crusher)**

**SECTION 8**  
**EMISSION UNIT SPECIFIC**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)  <b>Emissions of Particulate Matter - Fuel Burning Equipment</b></p> <p>1. Source may not cause or permit the emission of PM<sub>10</sub> resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <p>a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.</p> <p>b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <p>a. "X" means the operating rate in million Btu's per hour.</p> <p>b. "Y" means the allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Heat input in millions of</th> <th style="text-align: left;">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td>Up to and including 10 . . . . .</td> <td>0.600</td> </tr> <tr> <td>100. . . . .</td> <td>0.352</td> </tr> <tr> <td>1,000. . . . .</td> <td>0.206</td> </tr> <tr> <td>10,000. . . . .</td> <td>0.091</td> </tr> <tr> <td>100,000. . . . .</td> <td>0.025</td> </tr> </tbody> </table>	Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 . . . . .	0.600	100. . . . .	0.352	1,000. . . . .	0.206	10,000. . . . .	0.091	100,000. . . . .	0.025	N/A	N/A	N/A
Heat input in millions of	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 . . . . .	0.600														
100. . . . .	0.352														
1,000. . . . .	0.206														
10,000. . . . .	0.091														
100,000. . . . .	0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation:  <math>Y = 1.02X^{-0.231}</math></p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												
<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)  <b>Particulate Matter - Fuel Burning Equipment</b></p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation:  <math>Y = 17.0X^{-0.568}</math></p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour.  "Y" = allowable rate of emission in pounds per million Btu's.</p>	N/A	N/A	N/A												

**SECTION 8**  
**EMISSION UNIT SPECIFIC**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.731 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Fuel Burning Equipment</u>            Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22033, 445B.22027 <i>(State Only Requirement)</i>  <u>Emissions of Particulate Matter - Sources Not Otherwise Limited</u>            1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM<sub>10</sub> to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.            2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 4.10P^{0.67}</math>            3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:  <math>E = 55P^{0.11} - 40</math>            4. For the purposes of subsections 2 and 3:            (a) "E" means the maximum rate of emission in pounds per hour.            (b) "P" means the maximum allowable throughput in tons per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.             SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:  <math>E = 0.0193P^{0.67} (4.10P^{0.67})</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.732 (3) - <i>(Federally Enforceable SIP Requirement)</i>  <u>Particulate Matter - Industrial Sources</u>            When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:  <math>E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)</math>            "E" = Maximum rate of emission in kilograms (pounds) per hour.            "P" = Process weight rate in kilograms (tons) per hour.</p>	N/A	N/A	N/A

**SECTION 8**  
**EMISSION UNIT SPECIFIC**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status						
<p>NAC 445B.2204, 445B.22043, 445B.22047 (<i>State Only Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <ol style="list-style-type: none"> <li>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</li> <li>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation:  <math>Y = 0.7X</math></li> <li>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:            Liquid fuel, <math>Y = 0.4X</math>            Solid Fuel, <math>Y = 0.6X</math>            Combination, <math>Y = (L(0.4) - S(0.6))/(L + S)</math></li> <li>4. For the purposes of subsections 2 and 3:            (a) "X" means the operating input of heat in millions of Btu's per hour.            (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</li> <li>5. For the purposes of subsection 3:            (a) "L" means the percentage of total input of heat derived from liquid fuel.            (b) "S" means the percentage of total heat derived from solid fuel.</li> </ol>	N/A	N/A	N/A						
<p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Sulfur Emissions - Fuel Burning Equipment</u></p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:  <math>Y = 1.26X</math> (<math>Y = 0.7X</math>)            "X" = Operating heat input in millions of kg-cal (Btu's) per hour.            "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>	N/A	N/A	N/A						
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Liquid Fuel</u></td> <td style="text-align: center; width: 33%;"><u>Solid Fuels</u></td> <td style="text-align: center; width: 33%;"><u>Combination Fuel</u></td> </tr> <tr> <td style="text-align: center;"><math>Y = 0.7X</math> (<math>Y = 0.4X</math>)</td> <td style="text-align: center;"><math>Y = 1.1X</math> (<math>Y = 0.6X</math>)</td> <td style="text-align: center;"><math>Y = \frac{L(0.7) + S(1.1)}{L + S}</math></td> </tr> </table> <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.            "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.            "L" = Percentage of total heat input derived from liquid fuel.            "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p>	<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>	$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$			
<u>Liquid Fuel</u>	<u>Solid Fuels</u>	<u>Combination Fuel</u>							
$Y = 0.7X$ ( $Y = 0.4X$ )	$Y = 1.1X$ ( $Y = 0.6X$ )	$Y = \frac{L(0.7) + S(1.1)}{L + S}$							

**SECTION 8**  
**EMISSION UNIT SPECIFIC**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.2205 (<i>State Only Requirement</i>)  <u>Other Processes Which Emit Sulfur</u>            1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:  <math>E = 0.292P^{0.904}</math>            2. For the purposes of subsection 1:            (a) "E" means the allowable sulfur emission in pounds per hour.            (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:  <math>E = 0.271P^{0.904} (0.292P^{0.904})</math>            When E is equal to or greater than 5 kilograms (10 pounds) per hour.            Where:            "E" is the allowable sulfur emission in kilograms (pounds) per hour,            "P" is the total feed sulfur in kilograms (pounds) per hour.            SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	N/A	N/A	N/A
<p>SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>)  <u>Other Sulfur Emitting Processes</u>            SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	N/A	N/A	N/A
<p>NAC 445B.22017 (<i>State Only Requirement</i>)  <u>Maximum Opacity of Emissions</u>            1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:            (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.            (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).            2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	Applicable	See Sections 5 and 6 of previous Industrial Process Application Form.	In Compliance
<p>SIP 445.721 (<i>Federally Enforceable SIP Requirement</i>)  <u>Visible Emissions from Stationary Sources</u>            These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	N/A	N/A	N/A

**SURFACE AREA DISTURBANCE  
APPLICATION FORM  
CLASS I MINOR REVISION**

1. Project Name Barrick Goldstrike Mines, Inc.

2. Surface Area Disturbance Location:

Overall disturbance location description:

Township 35N ; Range 49E ; Section 1 - 4 ;  
Township 36N ; Range 49E ; Section 12 - 15 ;  
Township 36N ; Range 49E ; Section 21 - 28 ;  
Township 36N ; Range 49E ; Section 33 - 36 ;  
Township 36N ; Range 50E ; Section 7 - 9 ;  
Township 36N ; Range 50E ; Section 16 - 21 ;  
Township 36N ; Range 50E ; Section 28 - 32 ;  
Township \_\_\_\_\_ ; Range \_\_\_\_\_ ; Section \_\_\_\_\_ ;

3. Indicate the total number of acres to be disturbed for the project No new disturbances

4. Nevada Administrative Code 445B.22037 requires fugitive dust to be controlled (regardless of the size or amount of acreage disturbed), and requires an ongoing program, using best practical methods, to prevent particulate matter from becoming airborne. All activities which have the potential to adversely affect the local air quality must implement all appropriate measures to limit controllable emissions. Appropriate measures for dust control may consist of a phased approach to acreage disturbance rather than disturbing the entire area all at once; using wet suppression through such application methods as water trucks or water sprays systems to control wind blown dust; the application of soil binding agents or chemical surfactant to roadways and areas of disturbed soil; as well as the use of wind-break or wind-limiting fencing designed to limit wind erosion of soils.

**Barrick Goldstrike will use best practical methods to prevent particulate matter from becoming airborne as appropriate.**

5. Please include a dust control plan in Appendix 8 if the total number of acres to be disturbed in number 3 above equals or exceeds 20 acres. The dust control measures discussed above should be considered in the preparation of the required dust control plan. Two documents entitled "SAD Dust Control Plan Preparation Guidelines" and "SAD Fugitive Dust Control Plan" can be downloaded at [www.ndep.nv.gov/bapc](http://www.ndep.nv.gov/bapc) under Downloads. The acceptance of the dust control plan by the Bureau of Air Pollution Control does not limit the permit holder's need to control fugitive dust from the disturbance and its related activities, nor from putting into effect an ongoing program for using the best practical methods of dust control.

**A dust control plan was submitted May 4, 2007.**

# Appendix 2

## INSIGNIFICANT ACTIVITY INFORMATION FORM

### Instructions

Attachment 1 contains the Approved List of Insignificant Activities. Attachment 3 contains the List of Trivial Activities. Trivial activities are exempted from consideration.

Provide the information requested below for new insignificant activities or insignificant activities which are affected by a change in the applicability of the proposed modification (e.g. emission caps or other self-imposed limitation that affect insignificant activities). **PLEASE RESPOND ON THE INSIGNIFICANT EMISSION UNITS INFORMATION FORM TO SECTIONS 1 THROUGH 4.** [NAC 445B.295.8].

- Section 1. List all insignificant activities that are exempt pursuant to NAC 445B.288.2(a) through (h), and list the appropriate section that provides for the exemption. Provide information sufficient to show that the exemption applies (a copy of NAC 445B.288.2 is provided in Attachment 2).
- Section 2. List all insignificant activities that are exempted because they are on the list approved and maintained by the Director pursuant to NAC 445B.288.4. Provide information sufficient to show that the exemption applies.
- Section 3. List all proposed insignificant activities that are not already contained in the list in Attachment 1. Provide sufficient description of activities, and all emission calculations and references. The list of proposed insignificant activities must also be submitted, under separate cover, to the Director for his review and approval.
- Section 4. Calculate the maximum uncontrolled emissions for insignificant activities listed under Sections 1 through 3. Emissions calculations must be based on the maximum design throughput, maximum design production rate, maximum design heat input rate value, no controls, and 8760 hours per year of operation, unless otherwise indicated in NAC 445B.288.2 or on the list of approved insignificant activities provided in Attachment 1.

**Section 1 - List All Emission Units that are Insignificant Activities Pursuant to NAC 445B.288.2(a) through (h) (see Attachment 2 for regulation).**

Emission Unit	Exemption Regulation (Example - NAC 445B.288.2(b))	Reason Exemption Applies
N/A – There are no insignificant activities associated with this revision.		

**Section 2 - List All Emission Units Proposed as Insignificant Activities Pursuant to List Approved by the Director (see Attachment 1 - List of Approved Insignificant Activities)**

Emission Unit	Reason Exemption Applies
N/A – There are no insignificant activities associated with this revision.	

**Section 3 - List All Emission Units Proposed as Insignificant Activities and Not Otherwise Listed in Section 1 or Section 2 (NAC 445B.288.4). Proposed insignificant activities from this Section must be submitted, under separate cover, to the Director for his approval. The submittal must include a sufficient description of the emission unit(s), all emissions calculations, and references.**

Emission Unit
N/A – There are no insignificant activities associated with this revision.

**Section 4 -Emissions Calculations - Insignificant Emission Units/Activities**

Emissions calculations for each insignificant activity listed in Sections 1 through 3 above must be provided and included in Appendix 4. Emissions calculations must be based on the maximum design throughput, maximum design production rate or maximum design heat input rate value of the emission unit or activity. No consideration for emissions reduction from pollution controls or limits on the hours of operation or other operational constraints may be allowed unless otherwise approved by the Director or as indicated in NAC 445B.288.3 or on the list provided in Attachment 1.

# **Appendix 3**

## **FACILITY-WIDE APPLICABLE REQUIREMENTS**

### **Instructions**

Complete Table 1 provided in Appendix 3. Table 1 contains the general applicable requirements for the facility. In addition provide the following:

1. List, describe and cite all specific applicable requirements as defined in NAC 445B.019 (e.g., SIP, NAC, NSPS, NESHAPS, 112(r), acid rain, stratospheric ozone, etc.). [NAC 445B.3363.1(g)]
2. Explain any proposed exemption from any specific applicable requirement. [NAC 445B.295.1(f)]
3. Describe methods for determining compliance with each specific applicable requirement. [NAC 445B.295.2(g)]

**TABLE 1**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>Nevada Revised Statute (NRS) 445B.470 (<i>State Only Requirement</i>)  <u>Prohibited Acts</u>            Source shall not knowingly:</p> <ol style="list-style-type: none"> <li>1. Violate any applicable provision, the terms or conditions of any permit or any provision for the filing of information;</li> <li>2. Fail to pay any fee;</li> <li>3. Falsify any material statement, representation or certification in any notice or report; or</li> <li>4. Render inaccurate any monitoring device or method, required pursuant to the provisions of NRS 445B.100 to 445B.450, inclusive, or 445B.470 to 445B.640, inclusive, or any regulation adopted pursuant to those provisions.</li> </ol>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.22013 (<i>State Only Requirement</i>)  <u>Prohibited Discharge</u>            Source shall not cause or permit the discharge into the atmosphere from any stationary source of any hazardous air pollutant or toxic regulated air pollutant that threatens the health and safety of the general public, as determined by the director.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.225 (<i>State Only Requirement</i>)  <u>Prohibited Conduct: Concealment of Emissions</u>            Source shall not install, construct, or use any device which conceals any emission without reducing the total release of regulated air pollutants to the atmosphere.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>State Implementation Plan (SIP) Article 2.2 (<i>Federally Enforceable State Implementation Plan (SIP) Requirement</i>)  <u>Circumvention</u>            2.2.1 - Except for the sole purpose of reducing the odor of an emission, Source shall not install, construct, or use any device which conceals any emission without resulting in a reduction in the total release of air contaminants to the atmosphere.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.326.1 (445.7133.1) <i>Federally Enforceable Part 70 Program</i>  <u>Assertion of Emergency as Affirmative Defense to Action for Noncompliance</u>            Source may assert an affirmative defense to an action brought for noncompliance with a technology-based emission limitation contained in the Operating Permit if the holder of the Operating Permit demonstrates through signed, contemporaneous operating logs or other relevant evidence that:</p> <ol style="list-style-type: none"> <li>a. An emergency occurred as defined in 445B.056 and the holder of the Operating Permit can identify the cause of the emergency;</li> <li>b. The facility was being properly operated at the time of the emergency;</li> <li>c. During the emergency, the holder of the Operating Permit took all reasonable steps to minimize excess emissions; and</li> <li>d. The holder of the Operating Permit submitted notice of the emergency to the director within 2 working days after the emergency. The notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken to restore the normal operation of the</li> </ol>	<b>None</b>	<b>None</b>	<b>In Compliance</b>

**TABLE 1  
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
facility.			
<p>NAC 445B.315.2.h (445.7112.2.h) <u>Federally Enforceable Part 70 Program</u>            Source shall provide the Bureau of Air Quality, within a reasonable time, with any information that the Bureau of Air Quality requests in writing to determine whether cause exists for modifying, revoking and reissuing, reopening and revising or terminating this Operating Permit or to determine compliance with the conditions of this Operating Permit.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.315.i (445.7145, 445.7112.2.i) <u>Federally Enforceable Part 70 Program</u>            Source shall pay fees to the Bureau of Air Quality in accordance with the provisions set forth in NAC 445B.327 and 445B.331.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.315.2.k (445.7112.2.k) <u>Federally Enforceable Part 70 Program</u>            A responsible official of Source shall certify that, based on information and belief formed after reasonable inquiry, the statements made in any document required to be submitted by any condition of an Operating Permit are true, accurate and complete.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>40 CFR 52.21(r)(4) (<u>Federally Enforceable PSD Program</u>)            At such time that Source becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of 40 CFR Part 52.21 shall apply to the source or modification as though construction had not yet commenced on the source or modification.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>(NAC 445B.252) (<u>State Only Requirement</u>)  <u>Testing and Sampling</u>            1. To determine compliance with NAC 445B.001 (445.430) to 445B.395 (445.846), inclusive, before the approval or the continuance of an Operating Permit or similar class of permits, the director may either conduct or order the owner of any stationary source to conduct or have conducted such testing and sampling as the director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial startup of the facility and at such times as may be required by the director.            2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the director:            a. Specifies or approves, in specific cases, the use of a method of reference with minor changes in methodology;            b. Approves the use of an equivalent method;            c. Approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific stationary source is in compliance; or            d. Waives the requirement for tests of performance because the owner or operator of a stationary source has demonstrated by other means to the director's satisfaction that the affected facility is in</p>	<b>None</b>	<b>Stack Testing as Required by Certain Permit Conditions</b>	<b>In Compliance</b>

**TABLE 1**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>compliance with the standard.</p> <p>3. Tests of performance must be conducted under such conditions as the director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown, and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard.</p> <p>4. The owner or operator of an affected facility shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures.</p> <p>5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions, or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the director's approval.</p> <p>6. All testing and sampling will be performed in accordance with recognized methods as specified by the director.</p> <p>7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power, and other pertinent allied facilities as may be required and specified in writing by the director must be provided and paid for by the owner of the stationary source.</p> <p>8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of these regulations, and copies of these results must be provided to the director no later than 60 days after the testing or sampling, or both.</p>			
<p>SIP Article 2.6 (<i>Federally Enforceable SIP Requirement</i>) <u>Testing and Sampling</u></p> <p>2.6.1 - To determine compliance with these regulations prior to approval of or prior to the continuance of an operating permit or similar class of permits, the Director may either conduct or order the owner of any source to conduct or have conducted such testing and sampling as the Director determines necessary.</p> <p>2.6.2 - Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Director.</p> <p>2.6.3 - Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, or (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Director's satisfaction that the affected facility is in compliance with the standard.</p>	None	<b>Stack Testing as Required by Certain Permit Conditions</b>	<b>In Compliance</b>

**TABLE 1**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>2.6.4 - Performance tests shall be conducted under such conditions as the Director shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Director such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.</p> <p>2.6.5 - The owner or operator of an affected facility shall provide the Director 30 days prior notice of the performance test to afford the Director the opportunity to have an observer present.</p> <p>2.6.6 - Each performance test shall consist of at least two separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the runs shall apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions, or other circumstances with less than two valid samples being obtained, an additional performance test(s) must be conducted.</p> <p>2.6.7 - All testing and sampling will be performed in accordance with recognized methods as specified by the Director.</p> <p>2.6.8 - The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power, and other pertinent allied facilities as may be required and specified in writing by the Director shall be provided and paid for by the owner of the source.</p> <p>2.6.9 - All information and analytical results of testing and sampling shall be certified as to their truth and accuracy and as to their compliance with all provisions of these (SIP) regulations and copies of these results shall be provided to both the owner and Director.</p>			
<p>NAC 445B.22067 (<i>State Only Requirement</i>) <u>Open Burning</u> The open burning of any combustible refuse, waste, garbage, oil, or for any salvage operations, except as specifically exempted, is prohibited. Specific exemptions from open burning are described in NAC 445B.22067.2.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>SIP Article 5.1 (<i>Federally Enforceable SIP Requirement</i>) <u>Open Burning</u> The open burning of any combustible refuse, waste, garbage, oil fires, or for any salvage operations, except as specifically exempted, is prohibited. Specific exemptions from open burning are described in SIP Articles 5.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4 and 5.2.5.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.22087 (<i>State Only Requirement</i>) <u>Odors</u> Source may not discharge or cause to be discharged, from any stationary source, any material or regulated air</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>

**TABLE 1  
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
pollutant which is or tends to be offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents comfortable enjoyment of life or property.			
<p>SIP Article 10 (<i>Federally Enforceable SIP Requirement</i>)  <u>Odors</u>            10.1.1 - Source shall not discharge, or cause to be discharged from any source any material or air contaminant which is, or tends to be, offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents the comfortable enjoyment of life or property.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>NAC 445B.22093 (<i>State Only Requirement</i>)  <u>Organic Solvents and Other Volatile Compounds</u>            1. Solvents or other volatile compounds such as paints, acids, alkalies, pesticides, fertilizers, and manure must be processed, stored, used, and transported in such a manner and by such means as to minimize the tendency to evaporate, leak, escape, or be otherwise discharged into the ambient air causing or contributing to air pollution. If methods of control are available and feasible effectively to reduce the contribution to air pollution from evaporation, leakage, or discharge, as determined by the director, the installation and use of such methods, devices, or equipment for control is mandatory.            2. Source may not place, store, or hold in any new reservoir, stationary tank or other container with a capacity equal to or greater than 40,000 gallons any gasoline, petroleum distillate, or other volatile organic compound having a vapor pressure of 1.5 lb/square inch absolute or greater under actual storage conditions unless the tank, reservoir, or other container is a pressure tank maintaining working pressure sufficient at all times to prevent loss of vapor or gas to the atmosphere or is equipped with one of the following devices properly installed, in good working order, and in operation:                a. A floating roof which consists of a pontoon type or double-deck roof which rests on the surface of the liquid contents and is equipped with a seal to close the space between the roof eave and tank wall or a vapor balloon or a vapor dome designed in accordance with accepted standards of the petroleum industry. This control equipment is not permitted if the gasoline or petroleum distillate has a vapor pressure of 11 lb/square inch absolute or greater under actual conditions. All gauging and sampling devices for tanks must be gas tight except when gauging or sampling is taking place.                b. Other equipment proven to be of equal efficiency for preventing discharge of gases and vapors to the atmosphere.            3. Any tank for the storage of any other petroleum or volatile organic compound which is constructed or extensively remodeled on or after November 7, 1975, must be equipped with a submerged fill pipe or the equivalent, as approved by the director, for control of emissions.            4. All facilities for dock loading of products consisting of petroleum or other volatile organic compounds having a vapor pressure of 1.5 lb/square inch absolute or greater at loading pressure must have facilities for submerged filling by submerged fill pipe or an acceptable equivalent, for the control of emissions.</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>SIP Article 9 (<i>Federally Enforceable SIP Requirement</i>)  <u>Organic Solvent, other Volatile Compounds</u>            9.1 - Materials such as, but not limited to, solvents or other volatile compounds such as paints, acids, alkalies, pesticides, fertilizers, and manure shall be processed, stored, used, and transported in such a manner and by</p>	<b>None</b>	<b>None</b>	<b>In Compliance</b>

**TABLE 1  
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
such means as to minimize the tendency to evaporate, leak, escape, or be otherwise discharged into the ambient air causing or contributing to air pollution; and where control methods are available and feasible effectively to reduce the contribution to air pollution from evaporation, leakage, or discharge, as determined by the Director, the installation and use of such control methods, devices, or equipment shall be mandatory.			
<p>SIP Article 9.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Storage Containers Equal to or Greater than 150 kiloliters (40,000 Gallons)</u>            9.2.1 - Source shall not place, store, or hold in any new reservoir, stationary tank or other container any gasoline, petroleum distillate, or other volatile organic compound having a vapor pressure of 1,055 kilograms per square meter (1.5 lb/square inch absolute) or greater (under actual storage conditions) unless such tank, reservoir, or other container is a pressure tank maintaining working pressure sufficient at all times to prevent vapor or gas loss to the atmosphere or is equipped with one of the following vapor loss control devices (see 9.2.1, 9.2.1.2) properly installed, in good working order, and in operation.</p> <p>9.2.1.1 - A floating roof which consists of a pontoon type or double-deck roof which rests on the surface of the liquid contents and is equipped with a closure seal to close the space between the roof eave and tank wall; or a vapor balloon or a vapor dome, designed in accordance with accepted standards of the petroleum industry. This control equipment shall not be permitted if the gasoline or petroleum distillate has a vapor pressure of 7,734 kilograms (11 lb/square inch absolute) or greater under actual conditions. All tank gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.</p> <p>9.2.1.2 - Other equipment proven to be of equal efficiency for preventing discharge of gases and vapors to the atmosphere.</p>	N/A	N/A	N/A
<p>SIP Article 9.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Storage Containers Equal to or Greater than 150 kiloliters (40,000 Gallons)</u> (Continued)            9.2.2 - Any other petroleum or volatile organic compound storage tank which is constructed or extensively remodeled, on or after the effective date of these regulations, shall be equipped with submerged fill pipe or equivalent, as approved by the Director for control of emissions.</p>	None	None	<b>In Compliance</b>
<p>SIP Article 9.2 (<i>Federally Enforceable SIP Requirement</i>)  <u>Storage Containers Equal to or Greater than 150 kiloliters (40,000 Gallons)</u> (Continued)            9.2.3 - All facilities for dock loading of petroleum or volatile organic compound products, having a vapor pressure of 1,055 kilograms per square meter (1.5 pounds per square inch absolute) or greater at loading pressure, shall provide for submerged filling by a submerged fill pipe or acceptable equivalent for the control of emissions</p>	N/A	N/A	N/A
<p>NAC 445B.22037 (<i>State Only Requirement</i>)  <u>Fugitive Dust</u>            1. Source may not cause or permit the handling, transporting, or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.            2. Except as otherwise provided in subsection 4, Source may not cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using</p>	None	<b>Follow the Fugitive Dust Control Plan 5/4/2007</b>	<b>In Compliance</b>

**TABLE 1**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, best practical methods includes, but is not limited to, paving, chemical stabilization, watering, phased construction, and revegetation.</p> <p>3. Except as provided in subsection 4, Source may not disturb or cover 5 acres or more of land or its topsoil until he has obtained an Operating Permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.</p> <p>4. The provisions of subsections 2 and 3 do not apply to:</p> <ol style="list-style-type: none"> <li>a. Agricultural activities occurring on agricultural land; or</li> <li>b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.</li> </ol>			
<p>SIP Article 7.3 (<i>Federally Enforceable SIP Requirement</i>) <u>Fugitive Dust</u></p> <p>7.3.1 - Source shall not cause or permit the handling, transporting, or storing of any material in a manner which allows, or may allow, controllable particulate matter to become airborne.</p> <p>7.3.2 - In areas designated by the Director, Source shall not cause or permit the construction, repair, or demolition work, or the use of unpaved or untreated areas without applying all such measures as may be required by the Director to prevent particulate matter from becoming airborne.</p> <p>7.3.3 - Source may not disturb or cover 8 hectares (20 acres) or more of land or its topsoil, except for agricultural land until Source obtains a registration certificate or operating permit for the purpose of clearing, excavating or leveling such land or any foreign material to fill or cover such land.</p>	<b>None</b>	<b>Follow the Fugitive Dust Control Plan 5/4/2007</b>	<b>In Compliance</b>
<p>NAC 445B.227 (445.664) <i>Federally Enforceable Part 70 Program</i> <u>Facilities Operation</u></p> <p>Source may not:</p> <ol style="list-style-type: none"> <li>1. Operate a stationary source of air pollution unless the control equipment for air pollution which is required by applicable requirements or conditions of this Operating Permit is installed and operating.</li> <li>2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of this Operating Permit.</li> </ol>	<b>None</b>	<b>None</b>	<b>In Compliance</b>
<p>The following provisions are applicable requirements of this Operating Permit:</p> <ol style="list-style-type: none"> <li>1. Source will comply with all applicable provisions of; <ol style="list-style-type: none"> <li>a. 40 CFR Part 60.1 - 60.19 - Standards of Performance for New Stationary Sources - General Provisions;</li> <li>b. 40 CFR Part 61.01 - 61.19 - National Emission Standards for Hazardous Air Pollutants - General Provisions;</li> <li>c. 40 CFR Part 61.140 - 61.157 - National Emission Standards for Asbestos;</li> <li>d. 40 CFR Part 63.1 - 63.15 - National Emission Standards for Hazardous Air Pollutants for Source Categories - General Provisions;</li> <li>e. 40 CFR Part 70 - State Operating Permit Program.</li> </ol> </li> </ol>	<b>40 CFR Part 60 – Applicable to Specific Emission Units 40 CFR Part 70 – Applicable Facility Wide</b>	<b>None</b>	<b>In Compliance</b>

**TABLE 1**  
**APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
Source is subject to 40 CFR Part 68 - Chemical Accident Prevention Provisions. Source shall submit a risk management plan (RMP) by June 21, 1999, or other dates specified in 40 CFR 68.10. Source shall certify compliance with these requirements as part of the annual compliance certification as required by 40 CFR Part 70.	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Source will comply with all provisions of 40 CFR Part 82. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156. Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR 82.158. Persons performing maintenance, service, repair or disposal of appliances must be certified by a certified technician pursuant to 40 CFR 82.161.	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<u>Chemical Accident Prevention Provisions</u> Source shall: 1. Submit a compliance schedule for meeting the requirements of 40 CFR Part 68.215 by the date provided in 40 CFR Part 68.10(a) or; 2. Submit as part of the compliance certification submitted under 40 CFR Part 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 CFR Part 68.215, including the registration and submission of the risk management plan.	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Source is not in compliance with NAC 445B.230 - Plan for reduction of emissions. In order to achieve compliance Source shall submit a plan for reducing or eliminating emissions associated with the stationary source in accordance with the episode stages of alert, warning, and emergency as contained in the applicable State Implementation Plan for the State of Nevada. The plan must be submitted on or before July 1, 1998.	<b>None</b>	<b>Plan for Reduction of Emissions 3/25/1998</b>	<b>In Compliance</b>

# Appendix 4

## **STREAMLINING AND SHIELD ALLOWANCE**

The incorporation of streamlining and a shield allowance is optional.

Use as a guideline the examples in this Appendix to identify and streamline multiple applicable requirements for an emission unit, if desired.

1. Provide a side-by-side comparison of all requirements included in the streamlining proposal that are currently applicable and effective for the specific emission unit.
2. Determine the most stringent emissions and/or performance standard and provide the documentation relied upon to make this determination.
3. Propose one set of permit terms and conditions (i.e. the streamlined requirements) to include the most stringent emissions limitations and/or standards.
4. Certify compliance with applicable requirement

# **Appendix 5**

## **FACILITY-WIDE POTENTIAL TO EMIT TABLES**

Provide the stationary source's total emissions by completing Table 1 and Table 2 of Appendix 5. (Note: *Table 1 must include the insignificant activity emissions identified in Table 2.*) [NAC 445B.295.8].

**TABLE 1****FACILITY-WIDE (STATIONARY SOURCE)  
POTENTIAL TO EMIT  
POUNDS/HOUR AND TONS/YEAR**

<b>Pollutant</b>	<b>Potential to Emit (pounds/hour)</b>	<b>Potential to Emit (tons/year)</b>
Total Particulate Matter (PM)	<b>151.11</b>	<b>440.45</b>
Particulates as PM <sub>10</sub>	<b>132.12</b>	<b>397.97</b>
Sulfur Dioxide	<b>70.96</b>	<b>248.41</b>
Carbon Monoxide	<b>227.35</b>	<b>363.73</b>
Oxides of Nitrogen	<b>982.65</b>	<b>400.80</b>
Volatile Organic Compounds	<b>73.49</b>	<b>163.98</b>
Lead	<b>N/A</b>	<b>N/A</b>
Hazardous Air Pollutants (Specify Each Pollutant)	<b>N/A</b>	<b>N/A</b>
Other Regulated Pollutants (Specify)		
<b>Hydrogen Sulfide</b>	<b>18.47</b>	<b>80.91</b>



# Appendix 6

## DETAILED EMISSIONS CALCULATIONS

### Please Attach Emission Calculations

#### Instructions

1. Provide descriptions of all emissions, and provide emission rates, of any pollutants for which the source is major and all emissions of regulated air pollutants from all emission units. [NAC 445B.3363.1(a), NAC 445B.3363.1(b), NAC 445B.295.8]
2. Provide the emission rates of all regulated air pollutants that are subject to an emissions limitation pursuant to an applicable requirement. The emission rate must be described in pounds per hour and tons per year and in such terms as are necessary to establish compliance using the applicable standard reference test method. [NAC 445B.3363.1(d)]
3. Provide all supporting calculations and documentation of all emission factors for the emission rates specified in 1 and 2 above. This information shall be provided for each emission unit. *(Note: A listing of default emission control efficiency values is contained in Attachment 4.)* [NAC 445B.3363.1(f)]
4. Provide any other information required by any applicable requirement for each emission unit. [NAC 445B.3363.1(e)]
5. Provide all emissions of regulated air pollutants (in pounds per hour and tons per year) from **each insignificant activity** (see Section 4 of Appendix 2 to determine if these calculations are required), and calculations and supporting documentation. The emissions and supporting calculations should reflect all insignificant activities listed in Appendix 2. [NAC 445B.295.8]

**TABLE 1  
POTENTIAL PARTICULATE EMISSIONS OF MODIFIED EMISSION UNITS**

Source No.	Source Description	Material	Process Rate (ton/hr)	Process Rate (ton/yr)	PM Emission Factor	PM10 Emission Factor	Emission Factor Units	Control Technology	Control Efficiency (%)	PM	PM10	PM	PM10	Emission Factor Reference
										Calculated Emissions (lb/hr)	Calculated Emissions (lb/hr)	Calculated Emissions (ton/yr)	Calculated Emissions (ton/yr)	
<b>Sys 17 Roaster Circuit: Roasters #1 and #2 Feed Process</b>														
S2.208	ROASTERS #1 AND #2 FEED PROCESS	Ore	1,000	No limit	0.008	0.008	gr/scf	Baghouse System (DC-208 and DC-209)	(0%)*	1.01	1.01	-	-	Based on, 14,760 scfm**
<b>Total</b>										<b>1.01</b>	<b>1.01</b>	<b>-</b>	<b>-</b>	
<b>Sys 71 Metallurgical Laboratory Sample Preparation</b>														
S2.067	METALLURGICAL LABORATORY SAMPLE PREPARATION	Gold Ore and Mine Rock Samples	0.21	No limit	0.01	0.01	gr/scf	Baghouse	(0%)*	0.64	0.64	-	-	Based on 7,500 scfm ***
<b>Total</b>										<b>0.64</b>	<b>0.64</b>	<b>-</b>	<b>-</b>	

\* The control efficiency is already accounted for in the emission factor.

\*\* Goldstrike does not propose to change the current permitted emission limit for System 17. The most recent source test, conducted on July 13, 2005, demonstrated compliance with this emission limit.

\*\*\* Goldstrike does not propose to change the current permitted emission limit for System 71. The grain loading is based on the original calculation of the current permit limit.

Table D.10  
System 17 - Roasters 1 & 2 Feed Baghouse  
Particulate Test Series PM Results (RM5)

Run No.	Run 1	Run 2	Run 3	
Date	07/13/05	07/13/05	07/13/05	
Start Time	09:12	10:36	12:14	AVERAGE
Stop Time	10:15	11:42	13:18	
Test Elapsed time (min)	60	60	60	60
Barometric Pressure (in. Hg)	24.80	24.80	24.80	24.80
Orifice calibration Factor	1.777	1.777	1.777	1.777
Dry Gas Meter Calibration Factor	1.011	1.011	1.011	1.011
Average Meter Temperature (°F)	95.4	103.8	105.3	101.5
Volume Metered (acf)	56.087	57.975	56.562	56.875
Volume Metered (dscf)	44.965	45.804	44.549	45.106
Volume of Water Collected (g)	13.4	12.9	10.2	12.2
Volume of Water Collected (scf)	0.632	0.608	0.481	0.574
Average Delta H (in. H <sub>2</sub> O)	2.28	2.40	2.28	2.32
Measured Moisture (%)	1.4%	1.3%	1.1%	1.3%
Saturation Moisture (%)	12.1%	13.5%	13.7%	13.1%
Moisture Used for Calculations (%)	1.4%	1.3%	1.1%	1.3%
Oxygen Concentration (%)	20.9	20.9	20.9	20.9
Carbon Dioxide Concentration (%)	0.0	0.0	0.0	0.0
Nitrogen Concentration (%)	79.1	79.1	79.1	79.1
Dry Molecular Weight (lb/lbmole)	28.84	28.84	28.84	28.84
Wet Molecular Weight (lb/lbmole)	28.69	28.69	28.72	28.70
Pitot Coefficient	0.84	0.84	0.84	0.84
Stack Static Pressure (in. H <sub>2</sub> O)	0.31	0.31	0.31	0.31
Stack Pressure (in. Hg)	24.82	24.82	24.82	24.82
AVG SQRT of dP (in. H <sub>2</sub> O)	0.6594	0.6747	0.6561	0.6634
Stack Temperature (°F)	115.4	119.2	119.8	118.1
Velocity (ft/sec) Traverse	42.6	43.7	42.5	42.9
Nozzle Diameter (in.)	0.269	0.269	0.269	0.269
% Isokinetics	99.1	98.9	98.8	98.9
Stack Diameter (in.)	31.00	31.00	31.00	31.00
Stack Area (ft <sup>2</sup> )	5.24	5.24	5.24	5.24
Stack Flow Rate (acfm)	13,386	13,740	13,362	13,496
Stack Flow Rate Outlet (dscfm)	10,045	10,252	9,984	10,094
Collected PM (mg)	15.8	13.1	16.0	15.0
PM Concentration (mg/dscf)	0.35	0.29	0.36	0.33
PM Concentration (mg/dscm)	12.43	10.09	12.66	11.73
PM Emission Rate (lbs/hr)	0.47	0.39	0.47	0.44

Note: The two baghouses for System 17 (DC-208 and DC-209) vent to a common stack.

**test report**

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
<b>AP1041-0739.02 - Systems 01 to 08: Permitted July 14, 1997</b>										
S2.001	1	Mill 1 lime silo (load)	65	15,000	ton	-	-	-	-	8,760
PF1.009	1	Mill 1 lime silo (silo discharge)	2	15,000	ton	-	-	-	-	8,760
PF1.009.1	1	Mill 1 lime silo (screw discharge)	2	15,000	ton	-	-	-	-	8,760
S2.080	2	Boulder Valley lime silo (load)	65	22,500	ton	-	-	-	-	8,760
PF1.027	2	Boulder Valley lime silo (silo discharge)	2.6	22,500	ton	-	-	-	-	8,760
PF1.028	2	Boulder Valley lime silo (screw discharge)	2.6	22,500	ton	-	-	-	-	8,760
S2.022,23	4	Boilers #2 and 3	-	-	-	propane	1,310 ea.	22,400,000 gal, total	-	8,760
S2.024	5	Boiler #4	-	-	-	propane	2,600	22,776,000 gal	-	8,760
S2.031.1	6	Autoclave lime silo #5 (load)	60	2,000	ton	-	-	-	-	8,760
PF1.021.1	6	Autoclave lime silo #5 (silo discharge)	5	2,000	ton	-	-	-	-	8,760
PF1.021.2	6	Autoclave lime silo #5 (screw discharge)	5	2,000	ton	-	-	-	-	8,760
S2.002	7	Mill 2 lime silo (load)	60	90,000	ton	-	-	-	-	8,760
PF1.016	7	Mill 2 lime silo (silo discharge)	20	90,000	ton	-	-	-	-	8,760
PF1.016.1	7	Mill 2 lime silo (screw discharge)	20	90,000	ton	-	-	-	-	8,760
S2.081	8	Boulder Valley MgO silo (load)	60	20,000	ton	-	-	-	-	8,760
PF1.029	8	Boulder Valley MgO silo (silo discharge)	3	20,000	ton	-	-	-	-	8,760
PF1.030	8	Boulder Valley MgO silo (screw discharge)	3	20,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - Systems 09 to 29 (Roaster Project): Permitted September 4, 1998</b>										
S2.201	9	Primary crushing process	1,232	no limit	ton	-	-	-	-	8,760
PF1.201	10	Primary crusher dump hopper (process fugitives)	1,232	8,212,500	ton	-	-	-	-	8,760
S2.202	11	Secondary crushing/screening process	1,232	no limit	ton	-	-	-	-	8,760
PF1.202	12	Coarse ore stacking conveyor	1,232	8,212,500	ton	-	-	-	-	8,760
S2.203	13	Ore/Lime Mill 1 and 2 Feed Process	1,000	no limit	ton	-	-	-	-	8,760
PF1.203	14	Emergency Reclaim Hoppers	856	1,000,000	ton	-	-	-	-	8,760
S2.204,205	15	Mill 1 air pre-heater and dry grinding process	500	3,376,250	ton	prop/gas	140	692,040	MMBtu	8,760
S2.206,207	16	Mill 2 air pre-heater and dry grinding process	500	3,376,250	ton	prop/gas	140	692,040	MMBtu	8,760
S2.208	17	Roasters 1 & 2 feed process	1,000	no limit	ton	-	-	-	-	8,760
S2.209	18	Ore roasting process	1,000	6,752,500	ton	coal/oil/gas/	-	-	-	8,760
S2.210	19	Roaster 1 quench tank	500	no limit	ton	-	-	-	-	8,760
S2.211	19	Roaster 2 quench tank	500	no limit	ton	-	-	-	-	8,760
S2.212	20	coal silo (loading)	120	75,000	ton	-	-	-	-	8,760
PF1.204	20	coal silo (discharge)	20	75,000	ton	-	-	-	-	8,760
S2.213	21	propane vaporizer #1	-	-	-	propane	4.7	-	MMBtu	8,760
S2.214	21	propane vaporizer #2	-	-	-	propane	4.7	-	MMBtu	8,760
S2.215	21	propane vaporizer #3	-	-	-	propane	4.7	-	MMBtu	8,760
S2.216	22	lime silo - slaking (loading)	120	250,000	ton	-	-	-	-	8,760
PF1.205	22	lime silo - slaking (discharge)	40	250,000	ton	-	-	-	-	8,760
S2.217	23	mill lime silo (loading)	120	125,000	ton	-	-	-	-	8,760
PF1.206,207	23	mill lime silo (discharges)	20 tot.	125000 tot.	ton	-	-	-	-	8,760
S2.218	24	soda ash silo (loading)	120	100,000	ton	-	-	-	-	8,760
PF1.208	24	soda ash silo (discharge)	40	100,000	ton	-	-	-	-	8,760
S2.219	25	fuel oil storage tank	-	-	-	#2 oil	-	2,400,000 gal	-	8,760
S2.220	26	liquid oxygen vaporizer	-	-	-	prop./gas	23	30,000	MMBtu	8,760
S2.221	27	vacuum housekeeping system	-	-	-	-	-	-	-	8,760
S2.222	28	scrubber water cooling tower	2,500	no limit	ppm	-	-	-	-	8,760
S2.223	29	quench water cooling tower	15,000	no limit	ppm	-	-	-	-	8,760
<b>AP1041-0739.02 - Systems 49 to 52 (Meikle Backfill/Cement Feed Plant): Permitted October 6, 1998</b>										
PF1.119	49	aggregate feed hopper (load)	500	900,000	ton	-	-	-	-	8,760
PF1.120	49	aggregate feed hopper (discharge)	500	900,000	ton	-	-	-	-	8,760
PF1.121	50	aggregate feed conveyor (discharge)	500	900,000	ton	-	-	-	-	8,760
S2.101	51	cement/ash silo 1 (loading)	80	65,000	ton	-	-	-	-	8,760

**TABLE 2 - PAGE B  
PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)								Permitted Annual Emission Limits (ton/yr)								
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S			
<b>AP1041-0739.02 - Systems 01 to 08: Permitted July 14, 1997</b>																			
S2.001	1	Mill 1 lime silo (load)	0.176	0.176	-	-	-	-	-	-	-	0.02	0.02	-	-	-	-	-	
PF1.009	1	Mill 1 lime silo (silo discharge)	0.004	0.004	-	-	-	-	-	-	-	0.015	0.015	-	-	-	-	-	
PF1.009.1	1	Mill 1 lime silo (screw discharge)	0.02	0.02	-	-	-	-	-	-	-	0.075	0.075	-	-	-	-	-	
S2.080	2	Boulder Valley lime silo (load)	0.176	0.176	-	-	-	-	-	-	-	0.03	0.03	-	-	-	-	-	
PF1.027	2	Boulder Valley lime silo (silo discharge)	0.005	0.005	-	-	-	-	-	-	-	0.022	0.022	-	-	-	-	-	
PF1.028	2	Boulder Valley lime silo (screw discharge)	0.026	0.026	-	-	-	-	-	-	-	0.113	0.113	-	-	-	-	-	
S2.022,23	4	Boilers #2 and 3	2.2	2.2	13.44	0.05	8.64	0.65	-	-	-	9.4	9.4	57.45	0.22	36.93	2.78	-	
S2.024	5	Boiler #4	2.38	2.38	3.19	0.047	10.53	3.1	-	-	-	10.43	10.43	13.98	0.21	46.11	13.56	-	
S2.031.1	6	Autoclave lime silo #5 (load)	0.16	0.16	-	-	-	-	-	-	-	0.003	0.003	-	-	-	-	-	
PF1.021.1	6	Autoclave lime silo #5 (silo discharge)	0.01	0.01	-	-	-	-	-	-	-	0.002	0.002	-	-	-	-	-	
PF1.021.2	6	Autoclave lime silo #5 (screw discharge)	0.05	0.05	-	-	-	-	-	-	-	0.01	0.01	-	-	-	-	-	
S2.002	7	Mill 2 lime silo (load)	0.16	0.16	-	-	-	-	-	-	-	0.12	0.12	-	-	-	-	-	
PF1.016	7	Mill 2 lime silo (silo discharge)	0.04	0.04	-	-	-	-	-	-	-	0.09	0.09	-	-	-	-	-	
PF1.016.1	7	Mill 2 lime silo (screw discharge)	0.2	0.2	-	-	-	-	-	-	-	0.45	0.45	-	-	-	-	-	
S2.081	8	Boulder Valley MgO silo (load)	0.16	0.16	-	-	-	-	-	-	-	0.027	0.027	-	-	-	-	-	
PF1.029	8	Boulder Valley MgO silo (silo discharge)	0.006	0.006	-	-	-	-	-	-	-	0.02	0.02	-	-	-	-	-	
PF1.030	8	Boulder Valley MgO silo (screw discharge)	0.03	0.03	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	
<b>AP1041-0739.02 - Systems 09 to 29 (Roaster Project): Permitted September 4, 1998</b>																			
S2.201	9	Primary crushing process	2.59	2.59	-	-	-	-	-	-	-	11.344	11.344	-	-	-	-	-	
PF1.201	10	Primary crusher dump hopper (process fugitives)	1.66	0.58	-	-	-	-	-	-	-	5.54	1.94	-	-	-	-	-	
S2.202	11	Secondary crushing/screening process	1.29	1.29	-	-	-	-	-	-	-	5.6502	5.6502	-	-	-	-	-	
PF1.202	12	Coarse ore stacking conveyor	0.230	0.110	-	-	-	-	-	-	-	0.77	0.37	-	-	-	-	-	
S2.203	13	Ore/Lime Mill 1 and 2 Feed Process	1.29	1.29	-	-	-	-	-	-	-	5.6502	5.6502	-	-	-	-	-	
PF1.203	14	Emergency Reclaim Hoppers	2.31	0.8	-	-	-	-	-	-	-	1.35	0.47	-	-	-	-	-	
S2.204,205	15	Mill 1 air pre-heater and dry grinding process	12.6	12.6	9.8	4.28	5.6	1.82	-	-	-	55.188	55.188	24.22	16.88	13.84	4.5	-	
S2.206,207	16	Mill 2 air pre-heater and dry grinding process	12.6	12.6	9.8	4.28	5.6	1.82	-	-	-	55.188	55.188	24.22	16.88	13.84	4.5	-	
S2.208	17	Roasters 1 & 2 feed process	1.01	1.01	-	-	-	-	-	-	-	4.4238	4.4238	-	-	-	-	-	
S2.209	18	Ore roasting process	6	6	36.81	44.9	47.08	22	-	-	-	23.6	23.6	145.2	196.66	185.7	96.36	-	
S2.210	19	Roaster 1 quench tank	1.84	1.84	-	-	-	-	-	-	-	8.06	8.06	-	-	-	-	-	
S2.211	19	Roaster 2 quench tank	1.84	1.84	-	-	-	-	-	-	-	8.06	8.06	-	-	-	-	-	
S2.212	20	coal silo (loading)	0.32	0.32	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	
PF1.204	20	coal silo (discharge)	0.04	0.04	-	-	-	-	-	-	-	0.08	0.08	-	-	-	-	-	
S2.213	21	propane vaporizer #1	0.071	0.071	1.36	0.004	0.42	0.52	-	-	-	0.311	0.311	5.9568	0.0175	1.8396	2.2776	-	
S2.214	21	propane vaporizer #2	0.071	0.071	1.36	0.004	0.42	0.52	-	-	-	0.311	0.311	5.9568	0.0175	1.8396	2.2776	-	
S2.215	21	propane vaporizer #3	0.071	0.071	1.36	0.004	0.42	0.52	-	-	-	0.311	0.311	5.9568	0.0175	1.8396	2.2776	-	
S2.216	22	lime silo - slaking (loading)	0.32	0.32	-	-	-	-	-	-	-	0.34	0.34	-	-	-	-	-	
PF1.205	22	lime silo - slaking (discharge)	0.08	0.08	-	-	-	-	-	-	-	0.25	0.25	-	-	-	-	-	
S2.217	23	mill lime silo (loading)	0.32	0.32	-	-	-	-	-	-	-	0.17	0.17	-	-	-	-	-	
PF1.206,207	23	mill lime silo (discharges)	0.04	0.04	-	-	-	-	-	-	-	0.13	0.13	-	-	-	-	-	
S2.218	24	soda ash silo (loading)	0.32	0.32	-	-	-	-	-	-	-	0.14	0.14	-	-	-	-	-	
PF1.208	24	soda ash silo (discharge)	0.08	0.08	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	
S2.219	25	fuel oil storage tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
S2.220	26	liquid oxygen vaporizer	0.35	0.35	4.14	0.021	8.28	2.53	-	-	-	0.23	0.23	2.7	0.014	5.4	1.65	-	
S2.221	27	vacuum housekeeping system	0.51	0.51	-	-	-	-	-	-	-	2.2338	2.2338	-	-	-	-	-	
S2.222	28	scrubber water cooling tower	0.016	0.016	-	-	-	-	-	-	-	0.0701	0.0701	-	-	-	-	-	
S2.223	29	quench water cooling tower	0.31	0.31	-	-	-	-	-	-	-	1.3578	1.3578	-	-	-	-	-	
<b>AP1041-0739.02 - Systems 49 to 52 (Meikle Backfill/Cement Feed Plant): Permitted October 6, 1998</b>																			
PF1.119	49	aggregate feed hopper (load)	0.074	0.035	-	-	-	-	-	-	-	0.066	0.032	-	-	-	-	-	
PF1.120	49	aggregate feed hopper (discharge)	0.735	0.35	-	-	-	-	-	-	-	0.662	0.315	-	-	-	-	-	
PF1.121	50	aggregate feed conveyor (discharge)	0.735	0.35	-	-	-	-	-	-	-	0.662	0.315	-	-	-	-	-	
S2.101	51	cement/ash silo 1 (loading)	0.216	0.216	-	-	-	-	-	-	-	0.088	0.088	-	-	-	-	-	

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
PF1.122	51	cement/ash silo 1 (discharge)	80	65,000	ton	-	-	-	-	8,760
PF1.122.1	51	cement/ash silo 1 (screw conveyor transfer)	80	65,000	ton	-	-	-	-	8,760
S2.102	52	cement/ash silo 2 (loading)	80	65,000	ton	-	-	-	-	8,760
PF1.123	52	cement/ash silo 2 (discharge)	80	65,000	ton	-	-	-	-	8,760
PF1.123.1	52	cement/ash silo 2 (screw conveyor transfer)	80	65,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - Systems 53 to 58 (Surface Concrete Batch Plant): Permitted October 6, 1998; Removed November 14, 2006</b>										
S2.301	53	cement/fly ash silo (pneumatic loading)	-	-	-	-	-	-	-	-
S2.302	54	cement/fly ash silo (pneumatic loading)	-	-	-	-	-	-	-	-
PF1.324	55	sand/aggregate loading to storage bin(s)	-	-	-	-	-	-	-	-
PF1.322	56	weigh hopper loading	-	-	-	-	-	-	-	-
PF1.323	57	Removed	-	-	-	-	-	-	-	-
PF1.324	58	truck mixer loading	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - Systems 59 to 60 (Meikle Shotcrete Loadout Station): Permitted January 3, 2002</b>										
PF1.325	59	delivery truck (discharge)	90	45,000	ton	-	-	-	-	8,760
PF1.326	60	screw conveyor (discharge)	90	45,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 61 (Carbon Reactivation Kiln 2): Permitted April 8, 2004</b>										
S2.004.1	61	Carbon Kiln #2 Drum	3.0	-	ton	-	-	-	-	8,760
S2.004.2	61	Carbon Kiln #2 Burner	-	-	-	prop/gas	17.5	-	MMBtu	8,760
<b>AP1041-0739.02 - System 62 (Meikle Production Shaft): Permitted May 17, 1999</b>										
PF1.101	62	skips discharge - transfer to upper chute	1,105	3,000,000	ton	-	-	-	-	8,760
PF1.102	62	upper chute discharge - Xfer to 1 of 2 transfer cars	1,105	3,000,000	ton	-	-	-	-	8,760
PF1.103	62	transfer cars discharge - Xfer to 1 of 2 lower chutes	1,105	3,000,000	ton	-	-	-	-	8,760
PF1.104	62	bins loading - lower chutes discharge to 1 of 2 bins	1,105	3,000,000	ton	-	-	-	-	8,760
PF1.105	62	bins discharge - Xfer to haul truck	1,105	3,000,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 63 (Autoclave Silos 1 to 4): Permitted May 17, 1999; Revised June 30, 2008</b>										
S2.028-31	63	Autoclave Silos 1 to 4 (pneumatic loading)	420 tot.	398,480 tot.	ton	-	-	-	-	8,760
PF1.018-21	63	Autoclave Silos 1 to 4 (discharging)	105 tot.	398,480 tot.	ton	-	-	-	-	8,760
<b>AP2813-0133.02 (Air Liquide): Permitted November 9, 2000</b>										
S2.001,2AL	AL1	Reactivation heater & O2 vaporizer	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - Systems 64 to 76 (Remaining Sources from 0122 &amp; 0216 Permit): Permitted May 15, 2000</b>										
PF1.001,3,4	64	Ore Hopper, Jaw Crusher, Apron Feeder	1,000 ea.	5,256,000 ea.	ton	-	-	-	-	8,760
PF1.005	64	Cone Crusher	215	1,007,400	ton	-	-	-	-	8,760
PF1.005.1	64	Conveyor (cone outlet)	215	1,007,400	ton	-	-	-	-	8,760
PF1.006	64	Conveyor No. 001 (jaw outlet)	1,000	5,256,000	ton	-	-	-	-	8,760
PF1.007	64	Conveyor/Radial Stacker No. 002	1,000	5,256,000	ton	-	-	-	-	8,760
PF1.008	64	Conveyor No. 003 (mill inlet)	515	4,511,400	ton	-	-	-	-	8,760
PF1.008.1	64	Apron Feeders (load and discharge)	515	4,511,400	ton	-	-	-	-	8,760
PF1.010	65	Conveyor No. 304 (Fixed Stacker)	1,750	15,330,000	ton	-	-	-	-	8,760
PF1.011,12	65	Dump Pocket, Gyratory Crusher	1,750 ea.	15,330,000 ea.	ton	-	-	-	-	8,760
PF1.013	65	Conveyor No. 101 (Gyratory Outlet)	1,750	15,330,000	ton	-	-	-	-	8,760
PF1.014	65	Cone Crusher	304	2,663,040	ton	-	-	-	-	8,760
PF1.014.1	65	Conveyor (Cone Outlet)	304	2,663,040	ton	-	-	-	-	8,760
PF1.015	65	Conveyor No. 301 (Mill Inlet)	925	8,103,000	ton	-	-	-	-	8,760
PF1.015.1	65	Apron Feeders (load and discharge)	821	7,191,960	ton	-	-	-	-	8,760
S2.015	66	Autoclave 1	130	-	ton	-	-	-	-	8,760
S2.016,17	66	Autoclave 2, 3	200 ea.	-	ton	-	-	-	-	8,760
S2.018	66	Autoclave 4	200	-	ton	-	-	-	-	8,760
S2.019,20	66	Autoclave 5, 6	200 ea.	-	ton	-	-	-	-	8,760

**TABLE 2 - PAGE B**  
**PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)							Permitted Annual Emission Limits (ton/yr)						
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S
PF1.122	51	cement/ash silo 1 (discharge)	0.16	0.16	-	-	-	-	0.065	0.065	-	-	-	-	-	
PF1.122.1	51	cement/ash silo 1 (screw conveyor transfer)	0.16	0.16	-	-	-	-	0.065	0.065	-	-	-	-	-	
S2.102	52	cement/ash silo 2 (loading)	0.216	0.216	-	-	-	-	0.088	0.088	-	-	-	-	-	
PF1.123	52	cement/ash silo 2 (discharge)	0.16	0.16	-	-	-	-	0.065	0.065	-	-	-	-	-	
PF1.123.1	52	cement/ash silo 2 (screw conveyor transfer)	0.16	0.16	-	-	-	-	0.065	0.065	-	-	-	-	-	
<b>AP1041-0739.02 - Systems 53 to 58 (Surface Concrete Batch Plant): Permitted October 6, 1998; Removed November 14, 2006</b>																
S2.301	53	cement/fly ash silo (pneumatic loading)	-	-	-	-	-	-	-	-	-	-	-	-	-	
S2.302	54	cement/fly ash silo (pneumatic loading)	-	-	-	-	-	-	-	-	-	-	-	-	-	
PF1.321	55	sand/aggregate loading to storage bin(s)	-	-	-	-	-	-	-	-	-	-	-	-	-	
PF1.322	56	weigh hopper loading	-	-	-	-	-	-	-	-	-	-	-	-	-	
PF1.323	57	Removed	-	-	-	-	-	-	-	-	-	-	-	-	-	
PF1.324	58	truck mixer loading	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>AP1041-0739.02 - Systems 59 to 60 (Meikle Shotcrete Loadout Station): Permitted January 3, 2002</b>																
PF1.325	59	delivery truck (discharge)	0.18	0.18	-	-	-	-	0.045	0.045	-	-	-	-	-	
PF1.326	60	screw conveyor (discharge)	0.18	0.18	-	-	-	-	0.045	0.045	-	-	-	-	-	
<b>AP1041-0739.02 - System 61 (Carbon Reactivation Kiln 2): Permitted April 8, 2004</b>																
S2.004.1	61	Carbon Kiln #2 Drum	4.21	4.21	0.12	-	1.18	1.13	18.44	18.44	0.5256	-	5.1684	4.9494	-	
S2.004.2	61	Carbon Kiln #2 Burner	0.6	0.6	4.16	0.3	2.44	1	2.63	2.63	18.221	1.314	10.687	4.38	-	
<b>AP1041-0739.02 - System 62 (Meikle Production Shaft): Permitted May 17, 1999</b>																
PF1.101	62	skips discharge - transfer to upper chute	0.28	0.098	-	-	-	-	0.381	0.133	-	-	-	-	-	
PF1.102	62	upper chute discharge - Xfer to 1 of 2 transfer cars	0.28	0.098	-	-	-	-	0.381	0.133	-	-	-	-	-	
PF1.103	62	transfer cars discharge - Xfer to 1 of 2 lower chutes	0.28	0.098	-	-	-	-	0.381	0.133	-	-	-	-	-	
PF1.104	62	bins loading - lower chutes discharge to 1 of 2 bins	0.28	0.098	-	-	-	-	0.381	0.133	-	-	-	-	-	
PF1.105	62	bins discharge - Xfer to haul truck	0.149	0.052	-	-	-	-	0.202	0.071	-	-	-	-	-	
<b>AP1041-0739.02 - System 63 (Autoclave Silos 1 to 4): Permitted May 17, 1999; Revised June 30, 2008</b>																
S2.028-31	63	Autoclave Silos 1 to 4 (pneumatic loading)	2.27	2.27	-	-	-	-	1.08	1.08	-	-	-	-	-	
PF1.018-21	63	Autoclave Silos 1 to 4 (discharging)	0.211	0.211	-	-	-	-	0.398	0.398	-	-	-	-	-	
<b>AP2813-0133.02 (Air Liquide): Permitted November 9, 2000</b>																
S2.001,2AL	AL1	Reactivation heater & O2 vaporizer	0.27	0.27	26.4	0.03	3.6	0.2	0.26	0.26	12.7	0.03	4.9	0.19	-	
<b>AP1041-0739.02 - Systems 64 to 76 (Remaining Sources from 0122 &amp; 0216 Permit): Permitted May 15, 2000</b>																
PF1.001,3,4	64	Ore Hopper, Jaw Crusher, Apron Feeder	1.24	0.59	-	-	-	-	3.26	1.55	-	-	-	-	-	
PF1.005	64	Cone Crusher	0.27	0.13	-	-	-	-	0.62	0.3	-	-	-	-	-	
PF1.005.1	64	Conveyor (cone outlet)	0.055	0.019	-	-	-	-	0.13	0.045	-	-	-	-	-	
PF1.006	64	Conveyor No. 001 (jaw outlet)	0.25	0.089	-	-	-	-	0.67	0.23	-	-	-	-	-	
PF1.007	64	Conveyor/Radial Stacker No. 002	0.13	0.047	-	-	-	-	0.35	0.12	-	-	-	-	-	
PF1.008	64	Conveyor No. 003 (mill inlet)	0.13	0.046	-	-	-	-	0.57	0.2	-	-	-	-	-	
PF1.008.1	64	Apron Feeders (load and discharge)	0.26	0.091	-	-	-	-	1.14	0.4	-	-	-	-	-	
PF1.010	65	Conveyor No. 304 (Fixed Stacker)	0.24	0.082	-	-	-	-	1.03	0.36	-	-	-	-	-	
PF1.011,12	65	Dump Pocket, Gyratory Crusher	2.17	1.03	-	-	-	-	9.5	4.52	-	-	-	-	-	
PF1.013	65	Conveyor No. 101 (Gyratory Outlet)	0.44	0.16	-	-	-	-	1.94	0.68	-	-	-	-	-	
PF1.014	65	Cone Crusher	0.38	0.18	-	-	-	-	1.65	0.79	-	-	-	-	-	
PF1.014.1	65	Conveyor (Cone Outlet)	0.077	0.027	-	-	-	-	0.34	0.12	-	-	-	-	-	
PF1.015	65	Conveyor No. 301 (Mill Inlet)	0.23	0.082	-	-	-	-	1.03	0.36	-	-	-	-	-	
PF1.015.1	65	Apron Feeders (load and discharge)	0.42	0.15	-	-	-	-	1.82	0.64	-	-	-	-	-	
S2.015	66	Autoclave 1	2.28	2.28	-	0.29	-	2.12	9.99	9.99	-	1.27	-	-	9.29	
S2.016,17	66	Autoclave 2, 3	7	7	-	0.9	-	6.54	30.66	30.66	-	3.94	-	-	28.65	
S2.018	66	Autoclave 4	3.5	3.5	-	0.45	-	3.27	15.33	15.33	-	1.97	-	-	14.32	
S2.019,20	66	Autoclave 5, 6	7	7	-	0.9	-	6.54	30.66	30.66	-	3.94	-	-	28.65	

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
S2.009-11	67	Mercury Retort 1, 2, 3	-	-	-	-	-	-	-	8,760
S2.013	68	West Melting Furnace	0.2	438	ton	-	-	-	-	8,760
S2.014	68	East Melting Furnace	0.2	438	ton	-	-	-	-	8,760
S2.033	69	Analytical Lab - Sample Preparation	3.876 tot.	-	ton	-	-	-	-	8,760
S2.051	70	Analytical - Fire Assay Facility	0.468 tot.	-	ton	-	-	-	-	8,760
S2.067	71	Metallurgical Lab - Sample Preparation	0.21 tot.	-	ton	-	-	-	-	8,760
S2.074	72	Metallurgical - Fire Assay Facility	0.0104 tot.	-	ton	-	-	-	-	8,760
S2.025	74	Propane Vaporizer #1	-	-	-	-	4.6	-	MMBtu	8,760
S2.026	74	Propane Vaporizer #2	-	-	-	-	4.6	-	MMBtu	8,760
S2.027	74	Propane Vaporizer #3	-	-	-	-	4.6	-	MMBtu	8,760
S2.080-T	75	Fuel Oil Storage Tank, 250,000 gallons	-	-	-	#2	-	25,000,000	Gal	8,760
S2.081-T	75	Fuel Oil Storage Tank, 150,000 gallons	-	-	-	#2	-	5,600,000	Gal	8,760
S2.082	75	Gasoline Storage Tank, 12,000 gallons	-	-	-	gasoline	-	530,000	Gal	8,760
S2.083	75	Fuel Oil Storage Tank, 34,200 gallons	-	-	-	#2	-	3,000,000	Gal	8,760
S2.104-107	76	Air Heater #1, 2, 3, 4	-	-	-	prop./gas	56.1 tot.	59,540 tot.	MMBtu	8,760
<b>AP1041-0739.02 - System 77 (Rodeo Shaft): Permitted February 6, 2002</b>										
PF1.125	77	Skip	250	730,000	ton	-	-	-	-	8,760
PF1.126	77	Chute	250	730,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 78 (Cooling Tower): Permitted November 19, 1999</b>										
S2.224	78	Oxygen plant cooling tower	2500	-	ppm	-	-	-	-	8,760
<b>AP1041-0739.02 - Systems 81 to 82 (Rodeo Backfill Mixing Plant): Permitted January 3, 2002</b>										
S2.303,304	81	cement/fly ash silo 1&2 (loading)	120 ea.	200,000 tot.	ton	-	-	-	-	8,760
PF1.335,336	81	cement/fly ash silo 1&2 (discharge to screw conveyor)	120 ea.	200,000 tot.	ton	-	-	-	-	8,760
PF1.340	82	mixer loading	120	200,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 85 (Rodeo Backfill Feed Plant): Permitted January 3, 2002</b>										
PF1.347	85	feed hopper (load)	750	1,300,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 86 (Rodeo Shotcrete Loadout Station): Permitted January 3, 2002</b>										
PF1.350	86	delivery truck (discharge)	60	60,000	ton	-	-	-	-	8,760
PF1.351	86	screw conveyor (discharge)	60	60,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 87 (Rodeo Mine Air Heating): Permitted December 9, 1999</b>										
S2.307-310	87	(4) mine air heaters	-	-	-	prop./gas	50, tot.	65,333, tot.	MMBtu	8,760
<b>AP1041-0739.02 - System 88 (Backup Crushing System): Permitted December 5, 2000</b>										
<i>Aggregate Crushing</i>										
PF1.352-A	88	crusher feeder (load)	575	1,800,000	ton	-	-	-	-	8,760
PF1.353-A	88	crusher feeder (discharge)	575	1,800,000	ton	-	-	-	-	8,760
PF1.354-A	88	primary crusher	575	1,800,000	ton	-	-	-	-	8,760
PF1.355-A	88	crusher outlet conveyor transfer	575	1,800,000	ton	-	-	-	-	8,760
PF1.356-A	88	conveyor transfer	575	1,800,000	ton	-	-	-	-	8,760
PF1.357-A	88	hopper (load)	575	1,800,000	ton	-	-	-	-	8,760
PF1.358-A	88	hopper (discharge)	575	1,800,000	ton	-	-	-	-	8,760
PF1.359-A	88	conveyor transfer	575	1,800,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 88 (Backup Crushing System): Permitted December 5, 2000</b>										
<i>Ore Crushing</i>										
PF1.352-O	88	crusher feeder (load)	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.353-O	88	crusher feeder (discharge)	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.354-O	88	primary crusher	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.355-O	88	crusher outlet conveyor transfer	1,232	8,212,500	ton	-	-	-	-	8,760

**TABLE 2 - PAGE B**  
**PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)						Permitted Annual Emission Limits (ton/yr)							
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S
S2.009-11	67	Mercury Retort 1, 2, 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2.013	68	West Melting Furnace	1.4	1.4	-	-	-	-	1.53	1.53	-	-	-	-	-	
S2.014	68	East Melting Furnace	1.4	1.4	-	-	-	-	1.53	1.53	-	-	-	-	-	
S2.033	69	Analytical Lab - Sample Preparation	1.05	1.05	-	-	-	-	4.6	4.6	-	-	-	-	-	
S2.051	70	Analytical - Fire Assay Facility	2.47	2.47	-	-	-	-	10.82	10.82	-	-	-	-	-	
S2.067	71	Metallurgical Lab - Sample Preparation	0.64	0.64	-	-	-	-	2.8	2.8	-	-	-	-	-	
S2.074	72	Metallurgical - Fire Assay Facility	0.192	0.192	-	-	-	-	0.84	0.84	-	-	-	-	-	
S2.025	74	Propane Vaporizer #1	0.069	0.069	1.33	0.004	0.41	0.51	0.3022	0.3022	5.8254	0.0175	1.7958	2.2338		
S2.026	74	Propane Vaporizer #2	0.069	0.069	1.33	0.004	0.41	0.51	0.3022	0.3022	5.8254	0.0175	1.7958	2.2338		
S2.027	74	Propane Vaporizer #3	0.069	0.069	1.33	0.004	0.41	0.51	0.3022	0.3022	5.8254	0.0175	1.7958	2.2338		
S2.080-T	75	Fuel Oil Storage Tank, 250,000 gallons	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
S2.081-T	75	Fuel Oil Storage Tank, 150,000 gallons	-	-	-	-	-	-	-	-	-	-	-	-	0.085	
S2.082	75	Gasoline Storage Tank, 12,000 gallons	-	-	-	-	-	-	-	-	-	-	-	-	3.19	
S2.083	75	Fuel Oil Storage Tank, 34,200 gallons	-	-	-	-	-	-	-	-	-	-	-	-	0.018	
S2.104-107	76	Air Heater #1, 2, 3, 4	0.37	0.37	11.63	0.052	1.96	0.31	0.20	0.20	6.18	0.028	1.04	0.16		
<b>AP1041-0739.02 - System 77 (Rodeo Shaft): Permitted February 6, 2002</b>																
PF1.125	77	Skip	0.063	0.022	-	-	-	-	0.093	0.032	-	-	-	-	-	
PF1.126	77	Chute	0.673	0.236	-	-	-	-	0.983	0.344	-	-	-	-	-	
<b>AP1041-0739.02 - System 78 (Cooling Tower): Permitted November 19, 1999</b>																
S2.224	78	Oxygen plant cooling tower	0.238	0.238	-	-	-	-	1.0424	1.0424	-	-	-	-	-	
<b>AP1041-0739.02 - Systems 81 to 82 (Rodeo Backfill Mixing Plant): Permitted January 3, 2002</b>																
S2.303.304	81	cement/fly ash silo 1&2 (loading)	0.648	0.648	-	-	-	-	0.27	0.27	-	-	-	-	-	
PF1.335.336	81	cement/fly ash silo 1&2 (discharge to screw conveyor)	0.48	0.48	-	-	-	-	0.2	0.2	-	-	-	-	-	
PF1.340	82	mixer loading	0.48	0.48	-	-	-	-	0.4	0.4	-	-	-	-	-	
<b>AP1041-0739.02 - System 85 (Rodeo Backfill Feed Plant): Permitted January 3, 2002</b>																
PF1.347	85	feed hopper (load)	0.236	0.083	-	-	-	-	0.205	0.072	-	-	-	-	-	
<b>AP1041-0739.02 - System 86 (Rodeo Shotcrete Loadout Station): Permitted January 3, 2002</b>																
PF1.350	86	delivery truck (discharge)	0.12	0.12	-	-	-	-	0.06	0.06	-	-	-	-	-	
PF1.351	86	screw conveyor (discharge)	0.12	0.12	-	-	-	-	0.06	0.06	-	-	-	-	-	
<b>AP1041-0739.02 - System 87 (Rodeo Mine Air Heating): Permitted December 9, 1999</b>																
S2.307-310		(4) mine air heaters	0.75	0.75	10	0.046	15	11.5	0.49	0.49	6.53	0.03	9.8	7.51		
<b>AP1041-0739.02 - System 88 (Backup Crushing System): Permitted December 5, 2000</b>																
<i>Aggregate Crushing</i>																
PF1.352-A	88	crusher feeder (load)	1.691	0.805	-	-	-	-	2.646	1.26	-	-	-	-	-	
PF1.353-A	88	crusher feeder (discharge)	0.085	0.04	-	-	-	-	0.132	0.063	-	-	-	-	-	
PF1.354-A	88	primary crusher	0.145	0.069	-	-	-	-	0.227	0.108	-	-	-	-	-	
PF1.355-A	88	crusher outlet conveyor transfer	0.085	0.04	-	-	-	-	0.132	0.063	-	-	-	-	-	
PF1.356-A	88	conveyor transfer	0.085	0.04	-	-	-	-	0.132	0.063	-	-	-	-	-	
PF1.357-A	88	hopper (load)	1.691	0.805	-	-	-	-	2.646	1.26	-	-	-	-	-	
PF1.358-A	88	hopper (discharge)	0.085	0.04	-	-	-	-	0.132	0.063	-	-	-	-	-	
PF1.359-A	88	conveyor transfer	0.085	0.04	-	-	-	-	0.132	0.063	-	-	-	-	-	
<b>AP1041-0739.02 - System 88 (Backup Crushing System): Permitted December 5, 2000</b>																
<i>Ore Crushing</i>																
PF1.352-O	88	crusher feeder (load)	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	
PF1.353-O	88	crusher feeder (discharge)	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	
PF1.354-O	88	primary crusher	1.526	0.727	-	-	-	-	5.088	2.423	-	-	-	-	-	
PF1.355-O	88	crusher outlet conveyor transfer	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
PF1.356-O	88	conveyor transfer	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.357-O	88	hopper (load)	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.358-O	88	hopper (discharge)	1,232	8,212,500	ton	-	-	-	-	8,760
PF1.359-O	88	conveyor transfer	1,232	8,212,500	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 90 (Electric Power Generators): Permitted January 3, 2002</b>										
S2.311.1	90	Diesel generator 1 (Autoclave) MP750	-	-	-	diesel	8.34	-	MMBtu	-
S2.311.2	90	Diesel generator 2 (Autoclave) MP598	-	-	-	diesel	8.86	-	MMBtu	-
S2.311.3	90	Diesel generator 3 (Autoclave) MP606	-	-	-	diesel	8.86	-	MMBtu	-
S2.311.4	90	Diesel generator 4 (Autoclave) MP607	-	-	-	diesel	8.86	-	MMBtu	-
<b>AP1041-0739.02 - System 91 (Electric Power Generators): Permitted January 3, 2002</b>										
S2.312.1	91	Diesel generator 5 (Mill) MP608	-	-	-	diesel	19.68	-	MMBtu	-
S2.312.2	91	Diesel generator 10 (Meikle) KCG-002	-	-	-	diesel	18.70	-	MMBtu	-
<b>AP1041-0739.02 - System 92 (Electric Power Generators): Permitted January 3, 2002</b>										
S2.313.1	92	Diesel generator 6 (Roaster) MP610	-	-	-	diesel	9.25	-	MMBtu	-
S2.313.2	92	Diesel generator 7 (Roaster) MP705	-	-	-	diesel	9.83	-	MMBtu	-
S2.313.3	92	Diesel generator 8 (Roaster) MP706	-	-	-	diesel	9.83	-	MMBtu	-
S2.313.4	92	Diesel generator 9 (Rodeo) MP704	-	-	-	diesel	11.56	-	MMBtu	-
<b>AP1041-0739.02 - Systems 90, 91 &amp; 92 (Cap for Electric Power Generators): Permitted January 3, 2002</b>										
S2.311-313		Diesel generators	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - System 95 (Backfill Crushing &amp; Screening Plant): Permitted January 3, 2002; Revised April 6, 2007</b>										
PF1.400,401	95	jaw crusher pan feeders 1 and 2 (load)	1,000, tot.	3,000,000, tot.	ton	-	-	-	-	8,760
PF1.402,403	95	jaw crusher pan feeders 1 and 2 (discharge)	1,000, tot.	3,000,000, tot.	ton	-	-	-	-	8,760
PF1.404,405	95	jaw crushers 1 and 2	1,000, tot.	3,000,000, tot.	ton	-	-	-	-	8,760
PF1.406	95	cone crusher 1 and transfer belt	1000	3,000,000	ton	-	-	-	-	8,760
<del>PF1.407</del>	<del>95</del>	<del>cone crusher 2 and transfer belt</del>	-	-	-	-	-	-	-	-
PF1.408,409	95	screens 1 and 2 and transfer belts	1,000, tot.	3,000,000, tot.	ton	-	-	-	-	8,760
<del>PF1.409</del>	<del>95</del>	<del>A half of twin screen and transfer belts</del>	-	-	-	-	-	-	-	-
<del>PF1.410</del>	<del>95</del>	<del>B half of twin screen and transfer belts</del>	-	-	-	-	-	-	-	-
PF1.411	95	truck loadout surge bin (discharge)	1000	3,000,000	ton	-	-	-	-	8,760
<del>PF1.412</del>	<del>95</del>	<del>twin screen feed conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.413</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.414</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
PF1.415,416	95	conveyor transfer	1,000, tot.	3,000,000, tot.	ton	-	-	-	-	8,760
<del>PF1.416</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
PF1.417	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.418	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.419	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.420	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.421	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.422	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.423	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.424	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.425	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
<del>PF1.426</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.427</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.428</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.429</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.430</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.431</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-
<del>PF1.432</del>	<del>95</del>	<del>conveyor transfer</del>	-	-	-	-	-	-	-	-

**TABLE 2 - PAGE B  
PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)						Permitted Annual Emission Limits (ton/yr)							
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S
PF1.356-O	88	conveyor transfer	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	-
PF1.357-O	88	hopper (load)	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	-
PF1.358-O	88	hopper (discharge)	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	-
PF1.359-O	88	conveyor transfer	0.166	0.058	-	-	-	-	0.553	0.194	-	-	-	-	-	-
<b>AP1041-0739.02 - System 90 (Electric Power Generators): Permitted January 3, 2002</b>																
S2.311.1	90	Diesel generator 1 (Autoclave) MP750	2	2	61.3	1.2	12.3	2	-	-	-	-	-	-	-	-
S2.311.2	90	Diesel generator 2 (Autoclave) MP598	2	2	61.3	1.2	12.3	2	-	-	-	-	-	-	-	-
S2.311.3	90	Diesel generator 3 (Autoclave) MP606	2	2	61.3	1.2	12.3	2	-	-	-	-	-	-	-	-
S2.311.4	90	Diesel generator 4 (Autoclave) MP607	2	2	61.3	1.2	12.3	2	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - System 91 (Electric Power Generators): Permitted January 3, 2002</b>																
S2.312.1	91	Diesel generator 5 (Mill) MP608	4.1	4.1	151.2	2.4	25.6	4.1	-	-	-	-	-	-	-	-
S2.312.2	91	Diesel generator 10 (Meikle) KCG-002	4.1	4.1	151.2	2.4	25.6	4.1	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - System 92 (Electric Power Generators): Permitted January 3, 2002</b>																
S2.313.1	92	Diesel generator 6 (Roaster) MP610	2	2	73.6	1.1	3.1	2	-	-	-	-	-	-	-	-
S2.313.2	92	Diesel generator 7 (Roaster) MP705	2	2	73.6	1.1	3.1	2	-	-	-	-	-	-	-	-
S2.313.3	92	Diesel generator 8 (Roaster) MP706	2	2	73.6	1.1	3.1	2	-	-	-	-	-	-	-	-
S2.313.4	92	Diesel generator 9 (Rodeo) MP704	2	2	73.6	1.1	3.1	2	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - Systems 90, 91 &amp; 92 (Cap for Electric Power Generators): Permitted January 3, 2002</b>																
S2.311-313		Diesel generators	-	-	-	-	-	-	5.6	5.6	<40	3.22	10	5.6	-	-
<b>AP1041-0739.02 - System 95 (Backfill Crushing &amp; Screening Plant): Permitted January 3, 2002; Revised April 6, 2007</b>																
PF1.400,401	95	jaw crusher pan feeders 1 and 2 (load)	0.046	0.016	-	-	-	-	0.069	0.024	-	-	-	-	-	-
PF1.402,403	95	jaw crusher pan feeders 1 and 2 (discharge)	0.046	0.016	-	-	-	-	0.069	0.024	-	-	-	-	-	-
PF1.404,405	95	jaw crushers 1 and 2	0.27	0.12	-	-	-	-	0.405	0.180	-	-	-	-	-	-
PF1.406	95	cone crusher 1 and transfer belt	0.27	0.12	-	-	-	-	0.405	0.180	-	-	-	-	-	-
PF1.407	95	cone crusher 2 and transfer belt	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.408,409	95	screens 1 and 2 and transfer belts	1.25	0.435	-	-	-	-	1.875	0.653	-	-	-	-	-	-
PF1.409	95	A half of twin screen and transfer belts	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.410	95	B half of twin screen and transfer belts	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.411	95	truck loadout surge bin (discharge)	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.412	95	twin screen feed conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.413	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.414	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.415,416	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.416	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.417	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.418	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.419	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.420	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.421	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.422	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.423	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.424	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.425	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	-
PF1.426	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.427	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.428	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.429	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.430	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.431	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PF1.432	95	conveyor transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
PF1.433	95	stacker conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
PF1.434	95	conveyor transfer	1000	3,000,000	ton	-	-	-	-	8,760
<del>PF1.435</del>	<del>95</del>	<del>stacker conveyor transfer</del>	-	-	-	-	-	-	-	-
PF1.436	95	stacker conveyor transfer	-	-	-	-	-	-	-	-
<b>AP1041-0739.02 - System 97 (Intermediate Crushing): Application submitted January 2003; Permitted March 28, 2003; Revised October 17, 2008</b>										
PF1.457.1	97	feed hopper and feeder (load)	500	4,380,000	ton	-	-	-	-	8,760
PF1.457.2	97	feed hopper and feeder (discharge)	500	4,380,000	ton	-	-	-	-	8,760
PF1.458	97	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.459	97	multi-deck screen	500	4,380,000	ton	-	-	-	-	8,760
PF1.460	97	multi-deck screen under conveyor Xfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.461	97	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.462	97	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.463	97	cone crusher	500	4,380,000	ton	-	-	-	-	8,760
PF1.464	97	stacker conveyor	500	4,380,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 98 (Indoor Air Dust Removal System): Application submitted February 2005; Permitted May 2, 2006 (Section X: March 9, 2006)</b>										
S2.084	98	dust removal system	-	-	-	-	-	-	-	8,760
<b>AP1041-0739.02 - System 99A - F (Portable Batch Plant): Application submitted March 2006; Permitted August 15, 2006; Revised April 6, 2007</b>										
S2.085	99A	Silo/guppy #1 loading	80	60,000	ton	-	-	-	-	8,760
PF1.465	99A	Silo/guppy #1 Xfer to silo/guppy #1 conveyor	20	60,000	ton	-	-	-	-	8,760
PF1.466	99A	Silo/guppy #1 conveyor discharge	20	60,000	ton	-	-	-	-	8,760
S2.086	99B	Cement silo/guppy #2 loading	80	60,000	ton	-	-	-	-	8,760
PF1.467	99B	Cement silo/guppy #2 Xfer to silo/guppy #2 conveyor	20	60,000	ton	-	-	-	-	8,760
PF1.468	99B	Silo/guppy #2 conveyor discharge	20	60,000	ton	-	-	-	-	8,760
PF1.469	99C	Bin loading	300	900,000	ton	-	-	-	-	8,760
PF1.470	99C	Bin transfer to bin conveyor	300	900,000	ton	-	-	-	-	8,760
PF1.471	99C	Aggregate conveyor discharge	-	-	-	-	-	-	-	-
PF1.472	99D	Sand bin loading	-	-	-	-	-	-	-	-
PF1.473	99D	Sand bin Xfer to sand bin conveyor	-	-	-	-	-	-	-	-
PF1.474	99D	Sand bin conveyor discharge	-	-	-	-	-	-	-	-
PF1.475	99E	Weight hopper loading	-	-	-	-	-	-	-	-
PF1.476	99F	Central Mixer loading	20 (380)	60,000 (1.14MM)	ton-cement (total)	-	-	-	-	8,760
<b>AP1041-0739.02 - System 100 (Meikle Backfill/Cement Feed Plant Silo #3): Permitted August 15, 2006; Revised October 22, 2008</b>										
S2.087	100	Silo #3 loading	80	65,000	ton	-	-	-	-	8,760
PF1.477	100	Silo #3 Xfer to weigh hopper	80	65,000	ton	-	-	-	-	8,760
PF1.478	100	Weigh hopper discharge	80	65,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 101 (Meikle Shotcrete Loadout Station Extension): Application submitted March 2006; Permitted August 15, 2006</b>										
PF1.479	101	Conveyor #2 (discharge)	90	45,000	ton	-	-	-	-	8,760
PF1.480	101	Conveyor #3 (discharge)	90	45,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 102 (Rodeo Shotcrete Loadout Station - Silo #1): Permitted August 15, 2006; Revised December 10, 2008</b>										
S2.088	102	Silo #1 loading	80	60,000	ton	-	-	-	-	8,760
PF1.481	102	Silo #1 Xfer to weigh hopper	80	60,000	ton	-	-	-	-	8,760
PF1.482	102	Weigh hopper discharge	80	60,000	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 104 (Fuel Oil Storage Tank): Application submitted February 2007; Permitted April 6, 2007</b>										
S2.317	104	Fuel Oil Storage Tank, 250,000 gallons	-	-	-	#2	-	5,600,000	Gal	8,760
<b>AP1041-0739.02 - Systems 103A and B (Ore Fines Feed System): Application submitted December 2006; Permitted March 30, 2007</b>										
PF1.483	103A	Hopper (loading)	30	262,800	ton	-	-	-	-	8,760
PF1.484	103A	Hopper (discharge)	30	262,800	ton	-	-	-	-	8,760

**TABLE 2 - PAGE B  
PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)							Permitted Annual Emission Limits (ton/yr)						
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S
PF1.433	95	stacker conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	
PF1.434	95	conveyor transfer	0.15	0.055	-	-	-	-	0.225	0.083	-	-	-	-	-	
<del>PF1.435</del>	<del>95</del>	<del>stacker conveyor transfer</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
<del>PF1.436</del>	<del>95</del>	<del>stacker conveyor transfer</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
<b>AP1041-0739.02 - System 97 (Intermediate Crushing): Application submitted January 2003; Permitted March 28, 2003; Revised October 17, 2008</b>																
PF1.457.1	97	feed hopper and feeder (load)	0.067	0.024	-	-	-	-	0.295	0.103	-	-	-	-	-	
PF1.457.2	97	feed hopper and feeder (discharge)	0.127	0.044	-	-	-	-	0.556	0.194	-	-	-	-	-	
PF1.458	97	conveyor transfer	0.127	0.044	-	-	-	-	0.556	0.194	-	-	-	-	-	
PF1.459	97	multi-deck screen	0.882	0.42	-	-	-	-	3.863	1.84	-	-	-	-	-	
PF1.460	97	multi-deck screen under conveyor Xfer	0.127	0.044	-	-	-	-	0.556	0.194	-	-	-	-	-	
PF1.461	97	conveyor transfer	0.127	0.044	-	-	-	-	0.556	0.194	-	-	-	-	-	
PF1.462	97	conveyor transfer	0.127	0.044	-	-	-	-	0.556	0.194	-	-	-	-	-	
PF1.463	97	cone crusher	0.62	0.295	-	-	-	-	2.713	1.292	-	-	-	-	-	
PF1.464	97	stacker conveyor	0.067	0.024	-	-	-	-	0.295	0.103	-	-	-	-	-	
<b>AP1041-0739.02 - System 98 (Indoor Air Dust Removal System): Application submitted February 2005; Permitted May 2, 2006 (Section X: March 9, 2006)</b>																
S2.084	98	dust removal system	1.93	1.93	-	-	-	-	8.4534	8.4534	-	-	-	-	-	
<b>AP1041-0739.02 - System 99A - F (Portable Batch Plant): Application submitted March 2006; Permitted August 15, 2006; Revised April 6, 2007</b>																
S2.085	99A	Silo/guppy #1 loading	0.080	0.030	-	-	-	-	0.03	0.01	-	-	-	-	-	
PF1.465	99A	Silo/guppy #1 Xfer to silo/guppy #1 conveyor	0.100	0.050	-	-	-	-	0.15	0.07	-	-	-	-	-	
PF1.466	99A	Silo/guppy #1 conveyor discharge	0.100	0.050	-	-	-	-	0.15	0.07	-	-	-	-	-	
S2.086	99B	Cement silo/guppy #2 loading	0.080	0.030	-	-	-	-	0.03	0.01	-	-	-	-	-	
PF1.467	99B	Cement silo/guppy #2 Xfer to silo/guppy #2 conveyor	0.100	0.050	-	-	-	-	0.15	0.07	-	-	-	-	-	
PF1.468	99B	Silo/guppy #2 conveyor discharge	0.100	0.050	-	-	-	-	0.15	0.07	-	-	-	-	-	
PF1.469	99C	Bin loading	2.070	0.990	-	-	-	-	3.11	1.49	-	-	-	-	-	
PF1.470	99C	Bin transfer to bin conveyor	1.040	0.500	-	-	-	-	1.55	0.74	-	-	-	-	-	
<del>PF1.471</del>	<del>99C</del>	<del>Aggregate conveyor discharge</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
<del>PF1.472</del>	<del>99D</del>	<del>Sand bin loading</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
<del>PF1.473</del>	<del>99D</del>	<del>Sand bin Xfer to sand bin conveyor</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
<del>PF1.474</del>	<del>99D</del>	<del>Sand bin conveyor discharge</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	
PF1.475	99E	Weight hopper loading	-	-	-	-	-	-	-	-	-	-	-	-	-	
PF1.476	99F	Central Mixer loading	0.350	0.100	-	-	-	-	0.52	0.14	-	-	-	-	-	
<b>AP1041-0739.02 - System 100 (Meikle Backfill/Cement Feed Plant Silo #3): Permitted August 15, 2006; Revised October 22, 2008</b>																
S2.087	100	Silo #3 loading	0.080	0.030	-	-	-	-	0.03	0.01	-	-	-	-	-	
PF1.477	100	Silo #3 Xfer to weigh hopper	0.410	0.190	-	-	-	-	0.17	0.08	-	-	-	-	-	
PF1.478	100	Weigh hopper discharge	0.410	0.190	-	-	-	-	0.17	0.08	-	-	-	-	-	
<b>AP1041-0739.02 - System 101 (Meikle Shotcrete Loadout Station Extension): Application submitted March 2006; Permitted August 15, 2006</b>																
PF1.479	101	Conveyor #2 (discharge)	0.460	0.220	-	-	-	-	0.11	0.05	-	-	-	-	-	
PF1.480	101	Conveyor #3 (discharge)	0.460	0.220	-	-	-	-	0.11	0.05	-	-	-	-	-	
<b>AP1041-0739.02 - System 102 (Rodeo Shotcrete Loadout Station - Silo #1): Permitted August 15, 2006; Revised December 10, 2008</b>																
S2.088	102	Silo #1 loading	0.080	0.030	-	-	-	-	0.03	0.01	-	-	-	-	-	
PF1.481	102	Silo #1 Xfer to weigh hopper	0.410	0.190	-	-	-	-	0.15	0.07	-	-	-	-	-	
PF1.482	102	Weigh hopper discharge	0.410	0.190	-	-	-	-	0.15	0.07	-	-	-	-	-	
<b>AP1041-0739.02 - System 104 (Fuel Oil Storage Tank): Application submitted February 2007; Permitted April 6, 2007</b>																
S2.317	104	Fuel Oil Storage Tank, 250,000 gallons	-	-	-	-	-	-	-	-	-	-	-	-	0.093	
<b>AP1041-0739.02 - Systems 103A and B (Ore Fines Feed System): Application submitted December 2006; Permitted March 30, 2007</b>																
PF1.483	103A	Hopper (loading)	0.080	0.030	-	-	-	-	0.35	0.12	-	-	-	-	-	
PF1.484	103A	Hopper (discharge)	0.006	0.003	-	-	-	-	0.025	0.012	-	-	-	-	-	

**TABLE 2 - PAGE A  
PERMITTED OPERATING RATES**

Src. No.	Sys. No.	Unit or Process Description	Throughput			Fuel Use				Oper. hr/yr
			Unit/hr	Unit/yr	Units	Fuel	Unit/hr	Unit/yr	Units	
PF1.485	103A	Screw conveyor transfer to bucket elevator	30	262,800	ton	-	-	-	-	8,760
S2.316	103B	Ore Fines Drying and Storage System	30	262,800	ton	propane	100	-	gal	8,760
<b>AP1041-0739.02 - System 105 (Mobile Boiler): Application submitted February 2007; Permitted April 6, 2007</b>										
S2.318	105	Mobile Boiler				propane	13.2	-	MMBtu	8,760
<b>AP1041-0739.02 - System 106 (Autoclave Mixing Tank): Application submitted February 2008; Permitted June 30, 2008</b>										
S2.319	106	Autoclave Mixing Tank Loading	10	87,600	ton	-	-	-	-	8,760
<b>AP1041-0739.02 - System 107 (Add. Equipment for Intermediate Crushing System): Application submitted Sept. 3, 2008; Permitted October 17, 2008</b>										
PF1.486	107	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.487	107	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.488	107	cone crusher	500	4,380,000	ton	-	-	-	-	8,760
PF1.489	107	conveyor transfer	500	4,380,000	ton	-	-	-	-	8,760
PF1.490	107	multi-deck screen	500	4,380,000	ton	-	-	-	-	8,760

**TABLE 2 - PAGE B  
PERMITTED HOURLY AND ANNUAL EMISSIONS LIMITS (PTE)**

Src. No.	Sys. No.	Unit or Process Description	Permitted Hourly Limits (lb/hr)							Permitted Annual Emission Limits (ton/yr)						
			PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	H2S
PF1.485	103A	Screw conveyor transfer to bucket elevator	0.006	0.003	-	-	-	-	0.025	0.012	-	-	-	-	-	
S2.316	103B	Ore Fines Drying and Storage System	2.550	2.550	1.9	0.16	0.96	0.09	11.15	11.15	8.322	0.7008	4.2048	0.3942		
<b>AP1041-0739.02 - System 105 (Mobile Boiler): Application submitted February 2007; Permitted April 6, 2007</b>																
S2.318	105	Mobile Boiler	0.13	0.13	1.19	0.23	1.19	0.05	0.58	0.58	5.20	1.00	5.20	0.23		
<b>AP1041-0739.02 - System 106 (Autoclave Mixing Tank): Application submitted February 2008; Permitted June 30, 2008</b>																
S2.319	106	Autoclave Mixing Tank Loading	0.43	0.43	-	-	-	-	1.88	1.88	-	-	-	-		
<b>AP1041-0739.02 - System 107 (Add. Equipment for Intermediate Crushing System): Application submitted Sept. 3, 2008; Permitted October 17, 2008</b>																
PF1.486	107	conveyor transfer	0.050	0.024	-	-	-	-	0.219	0.103	-	-	-	-		
PF1.487	107	conveyor transfer	0.050	0.024	-	-	-	-	0.219	0.103	-	-	-	-		
PF1.488	107	cone crusher	0.600	0.270	-	-	-	-	2.628	1.183	-	-	-	-		
PF1.489	107	conveyor transfer	0.050	0.024	-	-	-	-	0.219	0.103	-	-	-	-		
PF1.490	107	multi-deck screen	1.100	0.370	-	-	-	-	4.818	1.621	-	-	-	-		

**Existing Facility Total Emission:** \*

151.11 132.12 982.65 70.96 227.35 73.49 18.47 440.45 397.97 400.80 248.41 363.73 163.98 80.91

\*\* 147.52 128.90 432.29 387.65

\* Backup Aggregate Crushing - Totals include Operating Permit No. AP1041-0739.01 Condition VI.CJ.3.c.

\*\* Backup Ore Crushing - Totals include Operating Permit No. AP1041-0739.01 Condition VI.CJ.3.c.

# Appendix 7

## EMISSIONS CAP

**Please Attach Emission Cap Information**

**Please Check if not applicable**

### Instructions

Federally enforceable emissions cap: Please include in Appendix 7 the information required in 1 through 3 below for each federally enforceable emissions cap in Appendix 7. The request for a federally enforceable emissions cap must, at a minimum:

1. State each applicable requirement which the applicant seeks to avoid [NAC 445B.296.2(a)];
2. Demonstrate that any applicable requirements not avoided by the cap will be met [NAC 445B.296.2(b)];
3. Contain proposed conditions, including monitoring and recordkeeping conditions for each proposed federally enforceable emissions cap, of the operating permit which will ensure compliance with any applicable requirement [NAC 445B.296.2(c)].
4. Contain any additional information that the director determines necessary to process the application. [NAC 445B.296.2(d)]

*(Note: A common example of an emissions cap is a combined limitation on the yearly (annual) amount of fuel which may be combusted between two boilers.)*

# **Appendix 8**

**NARRATIVE  
DESCRIPTION**

-

**PROCESS FLOW  
DIAGRAM**

-

**PLOT PLAN**

-

**MAP**

-

**FUGITIVE DUST  
CONTROL PLAN**

## Instructions

### **This Appendix must include the following:**

1. A narrative description of each modification. The narrative must include descriptions of all emissions of any regulated air pollutants from each modification. [NAC 445B.3425.2(a), NAC 445B.3425.2(b)]
2. Identify any new applicable requirements that will apply because of the minor modification. [NAC 445B.3425.2(c)]
3. A plot plan of the entire source, drawn to scale (include scale). The plot plan shall include the location of all emission units (clearly labeled), emission release points (stack and/or emission point locations, clearly labeled), the fence line, and the property boundary. [NAC 445B.295.8]
4. A USGS 7-1/2" or 15" map or other topographic map (with topographic lines clearly visible) indicating the following [NAC 445B.295.8]:
  - a. Exact location of entire source (also indicate all areas of surface disturbance).
  - b. Property boundary.
  - c. Location of fence or other physical barrier around source (NOTE: This is required.)
  - d. Scale of map.
  - e. UTMs, if other than a USGS 7-1/2" or 15" map is submitted.
  - f. Elevation contours and contour intervals, and contour values, clearly visible and in sufficient detail to determine elevations.

## **NARRATIVE DESCRIPTION**

Barrick Goldstrike Mines, Inc. (Goldstrike) currently adds sub-bituminous coal to the roasters as a fuel supplement to control bed temperatures. Due to cost, supply, and safety issues, the particle size of the coal currently delivered to the roaster coal system is fairly large ( $\frac{3}{4}$ " -  $\frac{1}{2}$ "). Transport of smaller sized coal carries with it an increased fire hazard risk. While the larger coal size supports safe transport, it also increases the percentage of uncombusted coal reaching the carbon in leach (CIL) circuit and negatively impacting gold recovery through preg-robbing in the CIL circuit. Using coal with a particle size of  $\frac{1}{4}$ " will ensure complete combustion of the coal and will reduce the preg-robbing caused by the addition of coal. Accordingly, Goldstrike proposes adding inline coal size reduction equipment to the existing Roaster Circuit: Roaster #1 and #2 Feed Process (S2.208) to achieve the desired reduced size of  $\frac{1}{4}$ ". The inline coal size reduction equipment will exhaust to the existing baghouse system. Because there will be no change to the baghouse grain loading or the permitted baghouse flow rate, no change to the existing permitted emission limits is requested. A flow diagram showing the existing Roaster Circuit: Roaster #1 and #2 Feed Process and the proposed additional inline coal size reduction equipment is provided as Figures 8.1 – 8.3.

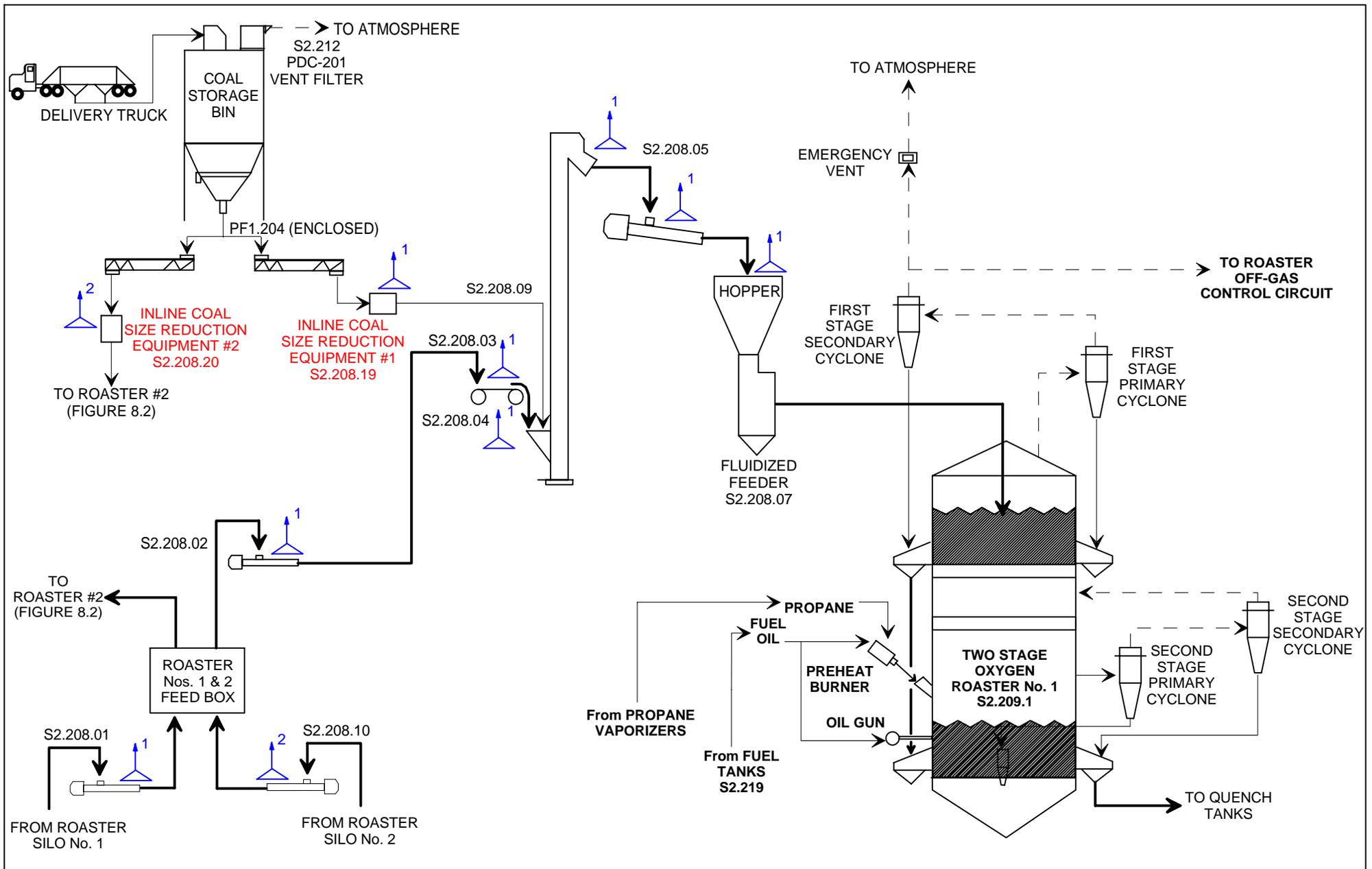
Goldstrike also proposes to add two additional crushers to the existing Metallurgical Laboratory Sample Preparation (S2.067) system, one jaw crusher and one roll crusher. The additional crushers will exhaust to the existing baghouse and no change to the existing permitted emission limits is requested. A flow diagram showing the existing Metallurgical Laboratory Sample Preparation system and proposed additional crushers is provided as Figure 8.4.

Additionally, Goldstrike proposes to update the current operating permit (AP1041-0739.02) to include the approved notifications of change for systems 75, 100, and 102.

No emission changes are associated with either the Roaster Circuit: Roaster #1 and #2 Feed Process or the Metallurgical Laboratory Sample Preparation revisions.

A facility plot plan and a facility location map are provided as Figures 8.5 and 8.6, respectively.

The current Fugitive Dust Control Plan is attached at the end of Appendix 8.



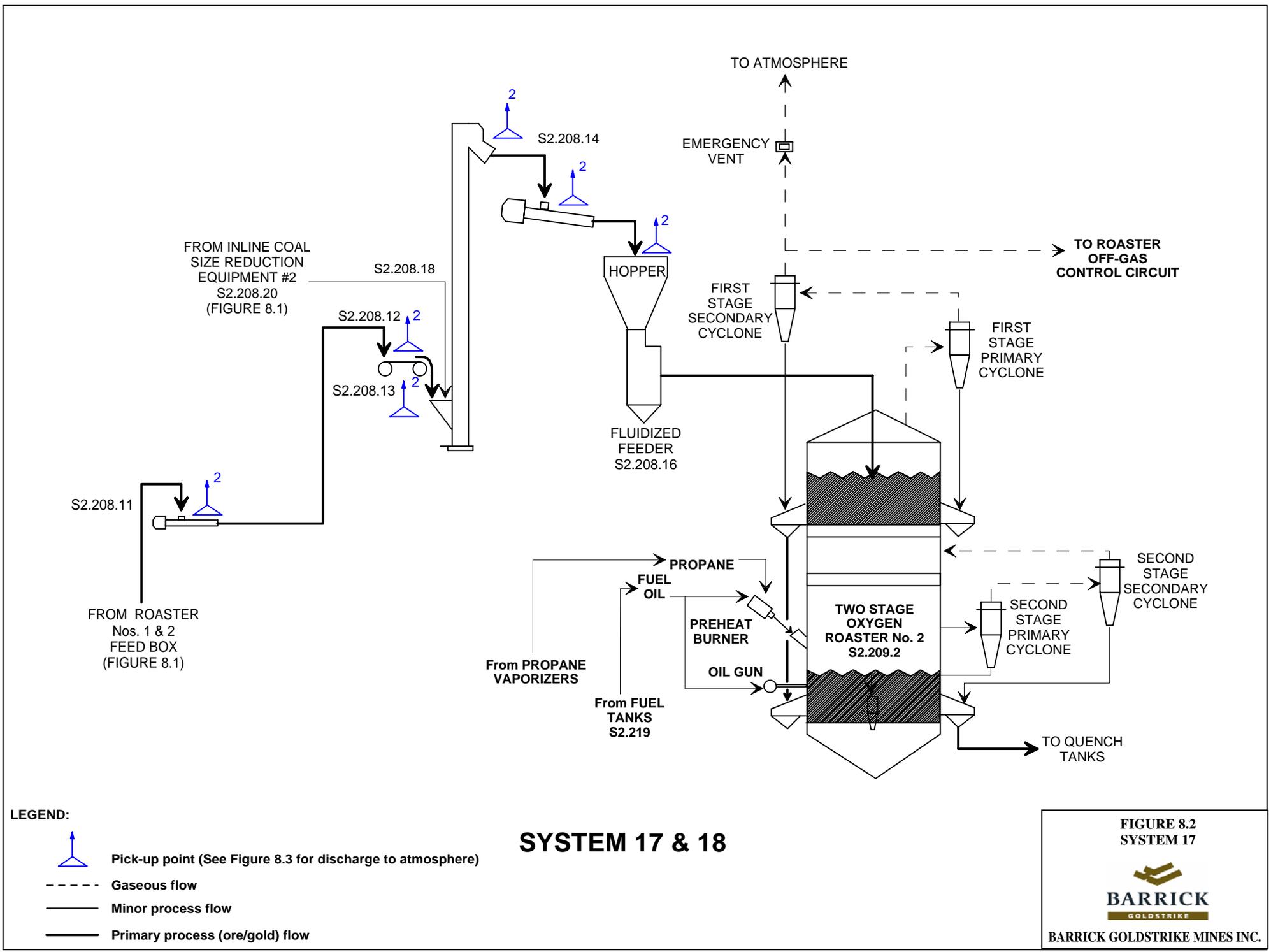
- LEGEND:**
-  Pick-up point (See Figure 8.3 for discharge to atmosphere)
  -  Gaseous flow
  -  Minor process flow
  -  Primary process (ore/gold) flow

### SYSTEM 17, 18, & 20

**FIGURE 8.1  
SYSTEM 17**



**BARRICK GOLDSTRIKE MINES INC.**



**LEGEND:**

-  Pick-up point (See Figure 8.3 for discharge to atmosphere)
-  Gaseous flow
-  Minor process flow
-  Primary process (ore/gold) flow

**SYSTEM 17 & 18**

**FIGURE 8.2**  
**SYSTEM 17**



**BARRICK GOLDSTRIKE MINES INC.**

TO ATMOSPHERE



EXHAUST STACK



ROASTER FEED  
CIRCUIT No. 1  
BAGHOUSE  
DC-208

ROASTER FEED  
CIRCUIT No. 2  
BAGHOUSE  
DC-209

FROM ROASTER  
No. 1 DUST  
PICK-UP  
POINTS



(FIGURE 8.1)

FROM INLINE  
COAL SIZE  
REDUCTION  
EQUIPMENT #1  
DUST PICK-UP  
POINT



(FIGURE 8.1)

FROM INLINE  
COAL SIZE  
REDUCTION  
EQUIPMENT #2  
DUST PICK-UP  
POINT

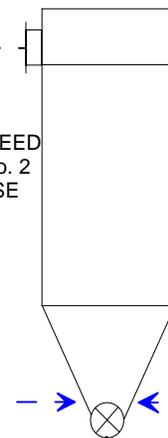
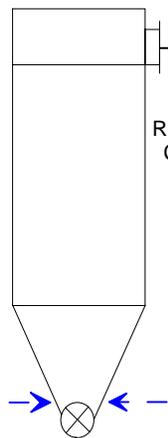


(FIGURE 8.1)

FROM ROASTER  
No. 2 DUST  
PICK-UP  
POINTS



(FIGURES 8.1 & 8.2)



S2.208.08

S2.208.17

TO ROASTER  
Nos. 1 & 2 FEED BOX  
(FIGURE 8.1)

TO ROASTER  
Nos. 1 & 2 FEED BOX  
(FIGURE 8.1)

# SYSTEM 17

LEGEND:



Pick-up point

----- Gaseous flow

----- Minor process flow

----- Primary process (ore/gold) flow

FIGURE 8.3  
SYSTEM 17



BARRICK GOLDSTRIKE MINES INC.

# SYSTEM 71

METALLURGICAL LABORATORY  
SAMPLE PREPARATION  
BAGHOUSE

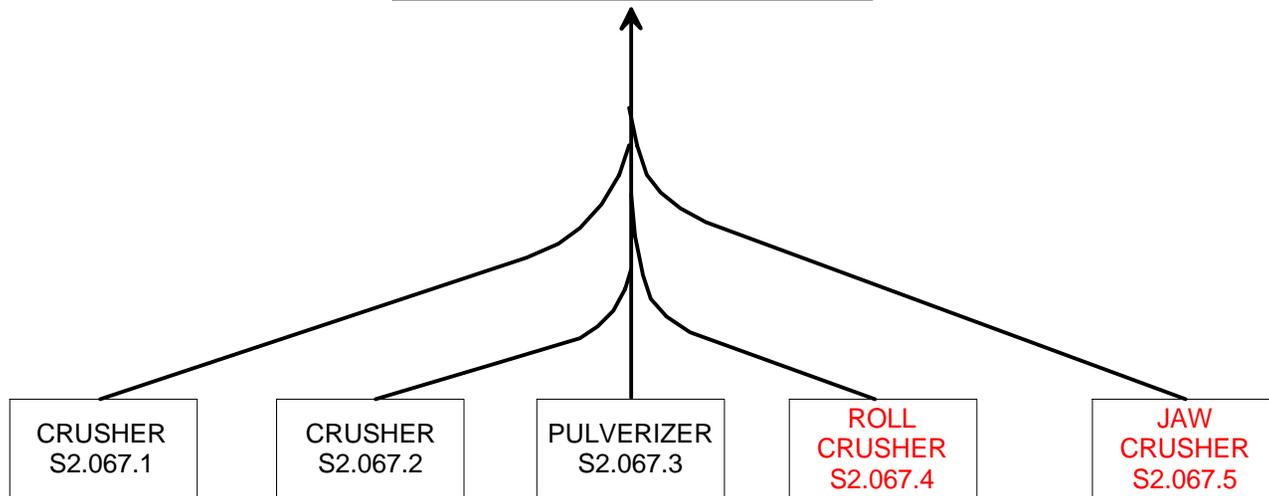
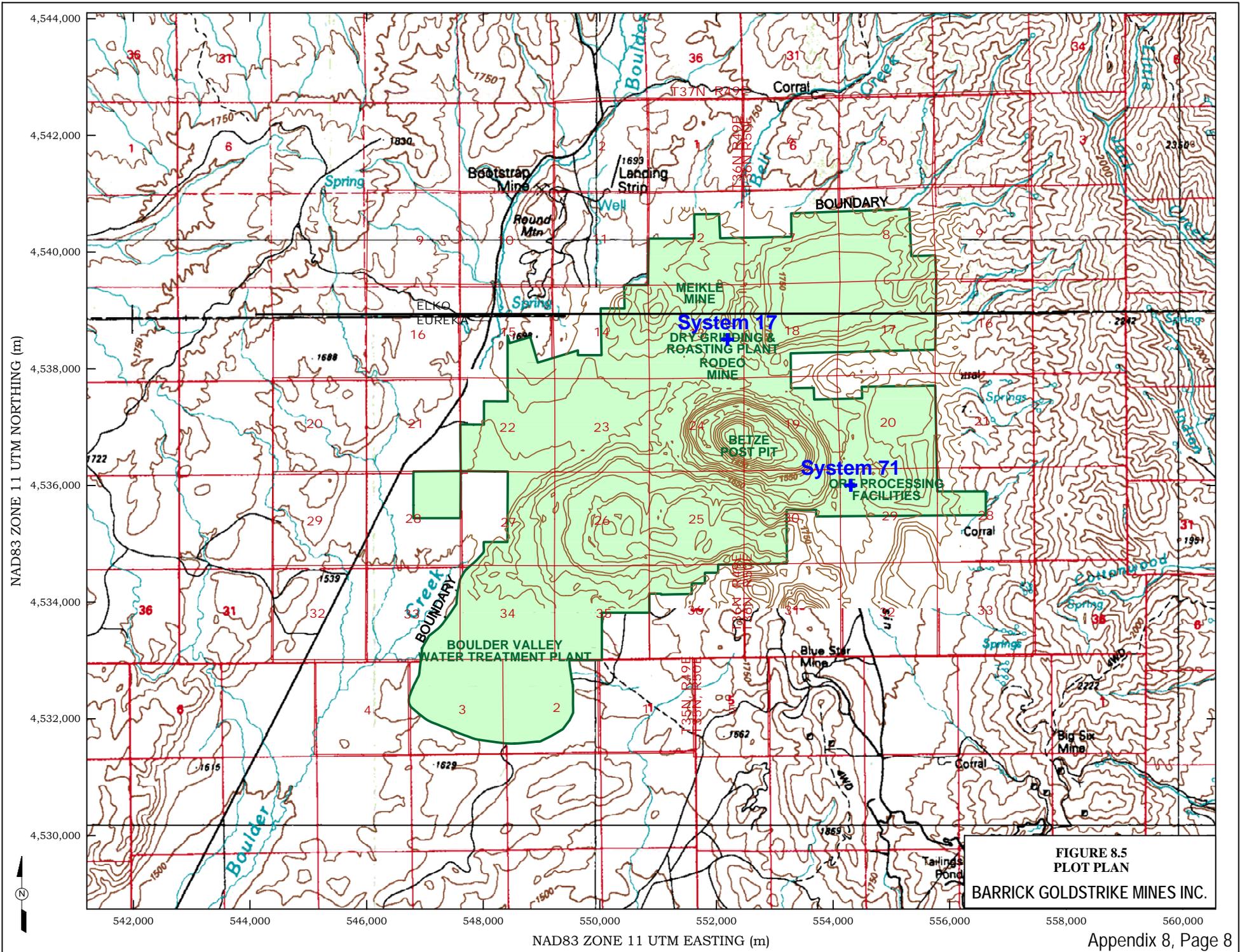


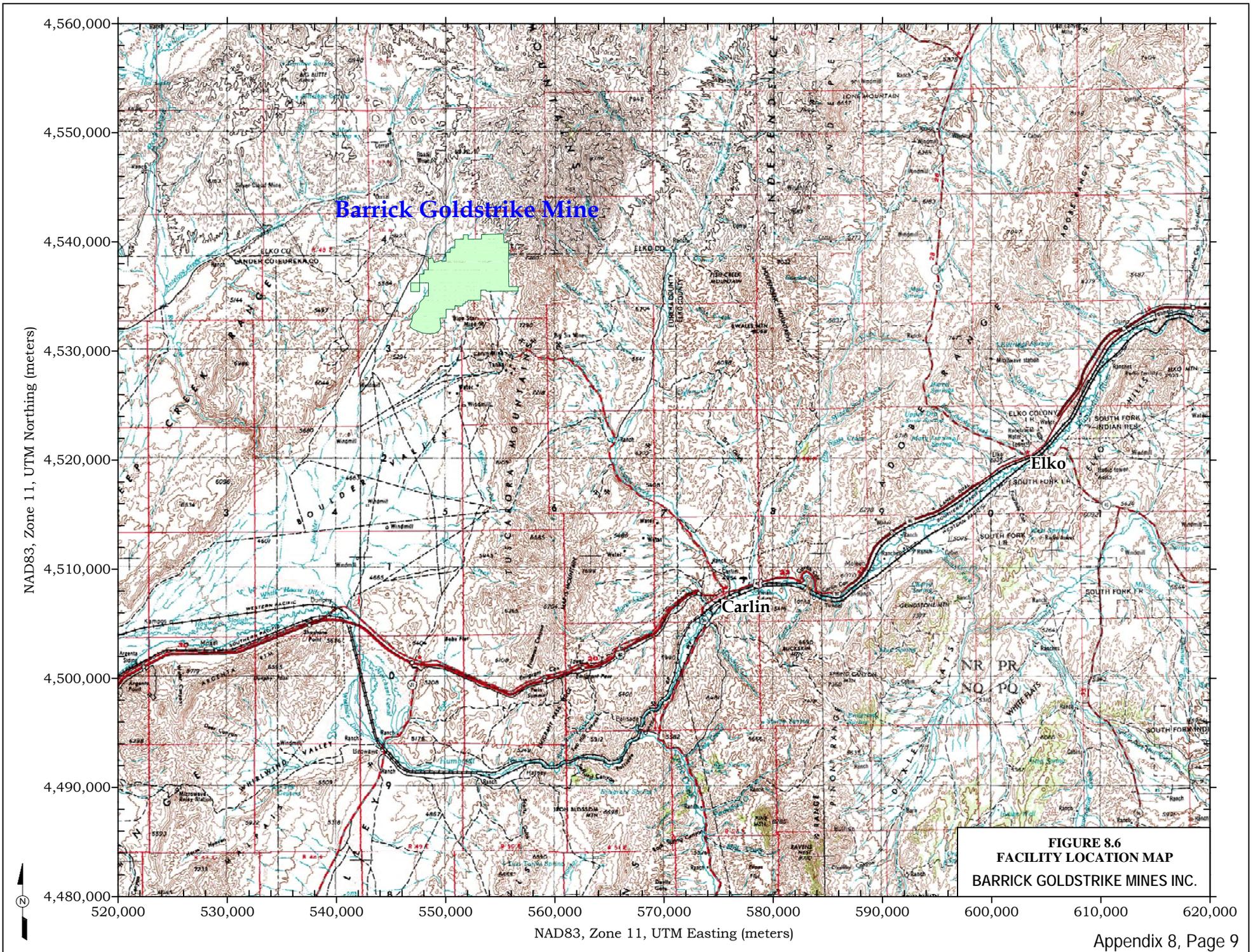
FIGURE 8.4  
METALLURGICAL LABORATORY  
SAMPLE PREPARATION



**BARRICK**  
GOLDSTRIKE  
BARRICK GOLDSTRIKE MINES INC.



**FIGURE 8.5**  
**PLOT PLAN**  
**BARRICK GOLDSTRIKE MINES INC.**



**FIGURE 8.6**  
**FACILITY LOCATION MAP**  
**BARRICK GOLDSTRIKE MINES INC.**

**SURFACE AREA DISTURBANCE PERMIT  
FUGITIVE DUST CONTROL PLAN**

I. COMPANY INFORMATION				
COMPANY NAME:	Barrick Goldstrike Mines Inc.	PERMIT NUMBER:	AP1041-0739.01	
BUSINESS ADDRESS:	27 miles north	Carlin	NV	Elko
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)
MAILING ADDRESS:	P.O. Box 29	Elko	NV	89801
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)
PHONE NUMBER:	(775) 778-3811	FAX NUMBER:	(775) 778-3840	

II. RESPONSIBLE OFFICIAL (R.O.)				
R.O. NAME	Vern Baker		TITLE	General Manager
BUSINESS ADDRESS:	P.O. Box 29	Elko	NV	Elko
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)
MAILING ADDRESS:	P.O. Box 29	Elko	NV	89801
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)
PHONE NUMBER:	(775) 778-8380	FAX NUMBER:	(775) 738-6543	

III. PHYSICAL PLANT					
PROJECT ADDRESS:	27 miles north	Carlin	NV	Elko	
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)	
MAILING ADDRESS:	P.O. Box 29	Elko	NV	89801	
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)	
PHONE NUMBER:	(775) 778-8380	FAX NUMBER:	(775) 738-6543		
MAJOR X- STREETS:	NA				
SECTION:	1-4, 12-15, 21-28, 33-36, 7-9, 16-21, 28-32	TOWNSHIP:	35 N, 36 N	RANGE:	49 E, 50 E
UTM:	North 4536.1 km, East 554.6 km, UTM (Zone 11)				
PROJECT MAPS: (MARK TYPE OF MAP ATTACHED)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(TRACT)	(SITE)	(TOPOGRAPHIC)	(OTHER - )	

IV. ACKNOWLEDGEMENT OF ENVIRONMENTAL CONTROL REQUIREMENTS BY R.O.	
<p>I, Vern Baker, the Responsible Official for Barrick Goldstrike Mines Inc., certify that, based on information and belief formed after reasonable inquiry, the statements contained in this dust control plan are true, accurate and complete.</p>	
<p>Signed <u>Vern Baker</u> (R.O. Signature)</p>	<p>Date <u>5/4/07</u></p>

**SURFACE AREA DISTURBANCE PERMIT  
FUGITIVE DUST CONTROL PLAN**

**V. PROJECT OPERATIONS**

**Description of Project Operations:**

The Barrick Goldstrike operation consists of the Betze/Post open pit mine, the Meikle and Rodeo underground mines, crushing and grinding units, autoclave and roasting gold recovery and refining facilities, support and maintenance facilities, and exploration facilities. Ore and overburden is removed from the mines by standard open pit and underground mining techniques. These mining methods generate a potential for fugitive dust, through the process of removal, transport and processing of the material.

**VI. FUGITIVE DUST CONTROL - BEST PRACTICAL METHODS**

**Best Practical Methods for controlling fugitive dust (Project Site):** The best practical methods (BPMs) to be used for controlling fugitive dust generated at this Project's disturbed areas are as follows. This is not an all inclusive list, other BPMs may also be appropriate for this section (check appropriate BPMs):\*

- Application of water and/or chemical dust suppressants on access roads and haul roads;
- Pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas);
- Application of water sprays on material storage piles if warranted;
- Subcontractors will be informed of their responsibilities for the control of fugitive dust while they are on the project site (including haul roads to and from the site);
- Training of heavy equipment and water truck operators to recognize fugitive dust generation;
- Equipment operators and water truck drivers will read the requirements in the Project's Surface Area Disturbance Permit and Plan as appropriate;
- Other Applicable BPM: Reclamation including revegetation as appropriate.

\*The BMPs are the primary methods that Barrick anticipates using to control fugitive dust, however, other methods may be utilized as appropriate. If climatological conditions warrant, routine dust control activities may be suspended or limited.

**VII. PROJECT FUGITIVE DUST/EMISSIONS RESOURCES INFORMATION**

**Water Trucks:** Water trucks may be owned or rented. Operable water truck (s) must be available on 7-day/week, 24-hour/day basis.

**Number of Water Trucks: 5**

<b>Water Truck # ME401</b>	Owned	<b>Capacity Gallons:</b>	10,000 gal
<b>Water Truck # ME495-498</b>	Owned	<b>Capacity Gallons:</b>	50,000 gal each

**Location of water supply for control of fugitive dust:** Dewatering water

Water trucks will be utilized on an as needed basis. The size and number of water trucks may change depending on need and availability.

- **Water Truck Operational Log:** Records of water truck operations and/or dispatches will be maintained at the mine site or with the water trucks.

**SURFACE AREA DISTURBANCE PERMIT  
FUGITIVE DUST CONTROL PLAN**

**VIII. TRAINING**

**Training Requirements:** The following training requirements are recommended as an aid in maintaining compliance with permit terms and conditions and are not mandatory. Equipment operators may be given USEPA Method 9 visual emission training (or equivalent, as determined by NDEP) to recognize when the facility's permit's opacity limits are being exceeded. Method 9 certifications will be maintained with the Environmental Division and the certified person.

**IX. PLAN REVISION**

**Plan Revision Requirements:** In the event there are changes in the operation of Goldstrike, modifications made to Goldstrike's Air Quality Operating Permit or changes to the Nevada Administrative Code affecting this plan, the plan shall be revised to reflect those changes and modifications and resubmitted to the Nevada Division of Environmental Protection for review and evaluation.

**Plan Date:**

April, 2007

# **Appendix 9**

## **ENVIRONMENTAL EVALUATION AND DISPERSION MODELING FILES**

**Please Attach Modeling Files and Supporting Information**

**N/A - The proposed revision will not result in emission increases greater than 10 tons per year per pollutant. Thus, modeling is not required.**

## **Instructions**

### **Environmental Evaluation [NAC 445B.3363.3]:**

An applicant for a minor revision to a Class I operating permit must submit, in Appendix 9, an environmental evaluation for:

1. A modification to an existing stationary source that meets the following criteria [NAC 445B.310.2]:
  - a. The existing stationary source has the potential to emit greater than 25 tons of a regulated air pollutant per year; and
  - b. The proposed modification has the potential to emit greater than 10 tons of a regulated air pollutant per year.
2. The environmental evaluation shall contain all information required in NAC 445B.311.
3. The environmental evaluation includes of dispersion models used to determine the location and estimated value of the highest concentration of regulated air pollutants [NAC 445B.311.4].

### **Modelling Analyses:** [NAC 445B.311.1(f); NAC 445B.311.3; NAC 445B.311.4]

The modelling analyses must utilize the latest USEPA approved or equivalent air dispersion models. The analysis must clearly identify the following information at a minimum.

1. Model
  - Name and type used.
  - Default options used.
2. Emissions Data
  - Source parameters (stack/source height, location, dimensions)
  - Building dimensions
  - Background pollutant concentrations
3. Meteorological Data
  - Location of data set utilized
  - Year of data record utilized
  - Quality of data utilized
  - Method for treating missing data
4. Receptors
  - Grid spacing
  - Excluded receptors from within fence line/property boundary
  - Identify simple or complex terrain

The modeling analysis must be provided in digital format and must consist of both the input and output data files. One hard copy of the input and output files must be provided. All meteorological data utilized that has not been provided by the Bureau of Air Pollution Control must also be submitted in digital format. Please include all modeling files in Appendix 9.

# **Appendix 10**

# **OPERATING PERMIT TEMPLATE**

Please provide a draft operating permit with appropriate conditions.

An electronic copy of the operating permit template is available upon request.

# Appendix 11

## APPLICATION CERTIFICATION

Please complete the certification checklist for all forms and information provided in your application submittal. The responsible official must sign and date the application certification found in Appendix 9. *If the application is signed by a person other than the responsible official, as defined in NAC 445B.156, the application will be returned as incomplete.*

**Note:** According to NAC 445B.156, **Responsible Official** means:

1. For a corporation:
  - (a) A president;
  - (b) A vice president in charge of a principal business function;
  - (c) A secretary;
  - (d) A treasurer; or
  - (e) An authorized representative of such a person who is responsible for the overall operation of the facility and who is designated in writing by the officer of the corporation and approved in advance by the director.
2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
3. For a municipality or a state, federal or other public agency: a ranking elected official or a principal executive officer, including, for a federal agency, a chief executive officer who has responsibility for the overall operations of a principal geographic unit of the agency.
4. For an affected source: the designated representative or his alternate, as defined in 42 U.S. C. § 7651 a (26).

## APPLICATION CERTIFICATION

### Certification of application content consisting of the following:

(Please check each of the appropriate boxes to indicate the information provided in your application submittal)

#### General Company Information

General Company Information Form

#### Emission Unit Application Forms (Appendix 1)

- Industrial Process Application Form(s)  
 Combustion Equipment Application Form(s)  
 Storage Silos Application Form(s)  
 Liquid Storage Tank Application Form(s)  
 Surface Area Disturbance Form(s)

#### Insignificant Emissions Unit Information (Appendix 2)

Insignificant Emissions Unit Information Form(s)

#### Facility-Wide Applicable Requirements (Appendix 3)

Table 1 - Facility-Wide Applicable Requirements

#### Streamlining and Shield Allowance (Appendix 4)

Streamlining Demonstration

#### Facility-Wide Potential To Emit Tables (Appendix 5)

- Table 1 - Facility-Wide Potential To Emit  
 Table 2 - Insignificant Activities Potential To Emit

#### Detailed Emissions Calculations (Appendix 6)

Detailed Emissions Calculations Provided

#### Emissions Cap Information (Appendix 7)

Emissions Cap Information Provided – **The proposed revision does not request an emissions cap.**

#### Process Narrative, Process Flow Diagram, Plot Plan, Map, Dust Control Plan (Appendix 8)

- Process Narrative Provided  
 Flow Diagram Provided  
 Plot Plan Provided  
 Map Provided  
 Dust Control Plan Provided

#### Dispersion Modelling Files (Appendix 9)

Dispersion Modeling Provided – **The proposed revision will not result in emission increases greater than 10 tpy per pollutant. Thus, modeling is not required.**

#### Draft Operating Permit (Appendix 10)

Draft Operating Permit Provided

#### Application Certification (Appendix 11)

Application Certification

#### Additional Information Requested by the Director

Any Additional Information Required by the Director

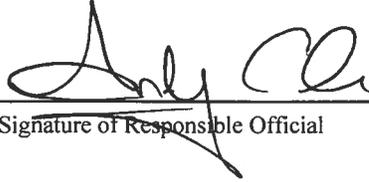
### PLEASE NOTE THE FOLLOWING REQUIREMENTS WHICH APPLY TO PERMIT APPLICANTS DURING THE APPLICATION PROCESS:

- A. A permit applicant must submit supplementary facts or corrected information upon discovery [NAC 445B.297.1(b)].
- B. A permit applicant is required to provide any additional information which the Director requests in writing within the time specified in the Director's request [NAC 445B.297.1(c)].
- C. Submission of fraudulent data or other information may result in prosecution for an alleged criminal offense (NRS 445B.470).

**APPLICATION CERTIFICATION (continued)**

**CERTIFICATION:** I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this application are true, accurate and complete.

**CERTIFICATION:** I certify that the proposed modification complies with the criteria for a minor revision set forth in Section 14 of General Company Information of this application.



\_\_\_\_\_  
Signature of Responsible Official

Andy Cole, Environmental Manager

\_\_\_\_\_  
Print or Type Name and Title

Sept 17, 2009

\_\_\_\_\_  
Date



BARRICK GOLDSTRIKE MINES INC. Tel: (775) 738-8043  
P.O. Box 29  
Elko, Nevada 89803

February 29, 2008

Mr. Greg Remer, Chief  
Nevada Division of Environmental Protection  
Bureau of Air Pollution Control  
901 South Stewart Street, Suite 4001  
Carson City, Nevada 89701-5249

**Delivered Via Facsimile**

Mr. Gerardo Rios  
Chief, Permits Office  
United States Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

Dear Mr. Remer & Mr. Rios:

Barrick Goldstrike Mines Inc., submits this notification of a change pursuant to NAC 445B.342. The change pertains to several permit terms that relate to two diesel storage tanks (System 75, S2.080, S2.081) included on Air Quality Operating Permit No. AP1041-0739.02.

***Current Permit Description and Proposed Revisions***

Condition VI. BW. of the permit contains permit terms associated with two fuel oil storage tanks designated as S2.080 and S2.081, System 75. (System 75 also includes two other tanks, S2.082 and S2.083, which are not affected by this notification.) In order to accommodate current operational needs, Barrick proposes to respecify the UTM coordinates and the nominal tank sizes specified for these tanks; effectively exchanging those specified for the respective tanks. This is summarized in the following table:

Emission Unit No.	S2.080		S2.081	
	<i>Current Permit Term</i>	<i>Revised Permit Term</i>	<i>Current Permit Term</i>	<i>Revised Permit Term</i>
<b>UTM Coordinates</b>	North 4,536.2 km, East 554.7 km, UTM (Zone 11)	North 4,536.9 km, East 552.4 km, UTM (Zone 11)	North 4,536.9 km, East 552.4 km, UTM (Zone 11)	North 4,536.2 km, East 554.7 km, UTM (Zone 11)
<b>Nominal Tank Capacity (gallons)</b>	150,000	250,000	250,000	150,000
<b>Fuel Type</b>	#2 Fuel Oil	N/C	#2 Fuel Oil	N/C
<b>Throughput (gal/yr)</b>	25,000,000	N/C	5,600,000	N/C
<b>VOC Limit (tpy)</b>	0.28	N/C	0.085	N/C

Where "N/C" means no change.

As shown, no changes are specified for any other permit term, including the allowable VOC emissions. A calculation of the potential VOC emissions based on the change in tank size utilizing EPA's Tanks 4.0.9d demonstrates compliance with the applicable emission limits. The calculations are attached for reference.

***Qualification for Change Pursuant NAC § 445B.342***

NAC § 445B.342 provides that the holder of an operating permit may make changes that contravene an express term of the operating permit without a revision of the operating permit if the changes do not:

- (a) Constitute modifications pursuant to any provision of 42 U.S.C. §§ 7401 to 7515, inclusive, or constitute a modification as that term is defined in NAC 445B.099. *Annual potential emissions of both tanks combined are less than one ton per year and are well below the applicable significant threshold.*
- (b) Violate any applicable requirement or any provision of NAC 445B.001 to 445B.3689, inclusive. *The revisions do not violate any of these provisions.*

Mr. Remer and Mr. Rios  
February 29, 2008  
Page 3

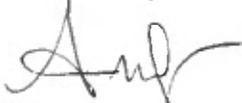
(c) Exceed the allowable emissions set forth in the operating permit for any emission unit. *As noted, calculations demonstrate compliance with the VOC emission limit set forth in the operating permit.*

Additionally, pursuant to NAC 445B.342.2, the change does not involve a change to “any conditions of an operating permit that are requirements for monitoring, methods of testing, recordkeeping, reporting, or compliance certification.”

Pursuant to NAC 445B.342.3, this change will become effective seven days following your receipt of this notification.

We appreciate your assistance in this matter. Should you have any question, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Cole", written in a cursive style.

Andy Cole  
Environmental Manager



**Air Sciences Inc.**

**ENGINEERING CALCULATIONS**

<b>PROJECT TITLE:</b> Barrick		<b>BY:</b> Elizabeth Steen		
<b>PROJECT NO:</b> 59-43-47		<b>PAGE:</b> 1	<b>OF:</b> 1	<b>SHEET:</b> 1
<b>SUBJECT:</b> Tank Emissions		<b>DATE:</b> February 29, 2008		

**Revised S2.080 Tank**

Height	24.00 ft	Shell Color	Gray/Light
Diameter	42.00 ft	Shell Condition	Good
Max Liquid Height	24 ft	Roof Color	Gray/Light
Average Liquid Height	12 ft	Roof Condition	Good
Working Volume	250,000 gal	Type	Dome
Turnovers	100.00	Height	1.31
Net Throughput	25,000,000 gal/yr	Radius	42

Location Elko, Nevada  
 Tank Contents Distillate Fuel Oil #2

**VOC Emissions**

working	193.0 lbs/yr
breathing	66.1 lbs/yr
<b>TOTAL</b>	<b>259.1 lbs/yr</b>
	<b>0.13 ton/yr</b>

**Revised S2.081 Tank**

Height	30.00 ft	Shell Color	Gray/Light
Diameter	30.00 ft	Shell Condition	Good
Max Liquid Height	30 ft	Roof Color	Gray/Light
Average Liquid Height	15 ft	Roof Condition	Good
Working Volume	150,000 gal	Type	Dome
Turnovers	37.33	Height	0.94
Net Throughput	5,600,000 gal/yr	Radius	30

Location Elko, Nevada  
 Tank Contents Distillate Fuel Oil #2

**VOC Emissions**

working	89.9 lbs/yr
breathing	41.19 lbs/yr
<b>TOTAL</b>	<b>131.1 lbs/yr</b>
	<b>0.066 ton/yr</b>



BUREAU OF AIR POLLUTION CONTROL

CLASS I NON-PERMIT EQUIPMENT LIST

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

Section VI. Specific Operating Conditions (continued)

- BW. Emission Unit **S2.080** Location North ~~4,536.9 km, East 552.4 km, UTM (Zone 11)~~
- Emission Unit **S2.081** Location North ~~4,536.2 km, East 554.7 km, UTM (Zone 11)~~
- Emission Unit **S2.082** Location North 4,536.9 km, East 552.4 km, UTM (Zone 11)
- Emission Unit **S2.083** Location North 4,536.2 km, East 554.7 km, UTM (Zone 11)

Deleted: 4,536.2 km, East 554.7 km, UTM (Zone 11)

Deleted: 4,536.9 km, East 552.4 km, UTM (Zone 11)

BW. System 75 - Fuel Storage Tanks

- S 2.080 Fuel oil storage tank, ~~450,000 gallons~~ 250,000 gallons
- S 2.081 Fuel oil storage tank, ~~250,000 gallons~~ 150,000 gallons
- S 2.082 Gasoline storage tank, 12,000 gallons
- S 2.083 Fuel oil storage tank, 34,200 gallons

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Air Pollution Equipment

**S2.080 through S2.083** each are fixed roof tanks equipped for submerged filling.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Emission Limits

- a. On and after the date of startup of **S2.080**, Permittee will not discharge or cause the discharge into the atmosphere from **S2.080**, the following pollutants in excess of the following specified limits:
  - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed **0.28** ton per year, based on a 12-month rolling period.
  - (2) NAC 445B.22017 (*State Only Requirement*) - The opacity from **S2.080** will not equal or exceed **20%** in accordance with NAC 445B.22017.
  - (3) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from **S2.080** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
- b. On and after the date of startup of **S2.081**, Permittee will not discharge or cause the discharge into the atmosphere from **S2.081**, the following pollutants in excess of the following specified limits:
  - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed **0.085** ton per year, based on a 12-month rolling period.
  - (2) NAC 445B.22017 (*State Only Requirement*) - The opacity from **S2.081** will not equal or exceed **20%** in accordance with NAC 445B.22017.
  - (3) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from **S2.081** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
- c. On and after the date of startup of **S2.082**, Permittee will not discharge or cause the discharge into the atmosphere from **S2.082**, the following pollutants in excess of the following specified limits:
  - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed **3.19** tons per year, based on a 12-month rolling period.
  - (2) NAC 445B.22017 (*State Only Requirement*) - The opacity from **S2.082** will not equal or exceed **20%** in accordance with NAC 445B.22017.
  - (3) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from **S2.082** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
- d. On and after the date of startup of **S2.083**, Permittee will not discharge or cause the discharge into the atmosphere from **S2.083**, the following pollutants in excess of the following specified limits:
  - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed **0.018** ton per year, based on a 12-month rolling period.
  - (2) NAC 445B.22017 (*State Only Requirement*) - The opacity from **S2.083** will not equal or exceed **20%** in accordance with NAC 445B.22017.
  - (3) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from **S2.083** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.



**BUREAU OF AIR POLLUTION CONTROL**

**CLASS I NON-PERMIT EQUIPMENT LIST**

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

**Section VI. Specific Operating Conditions (continued)**

**BW. Emission Units S2.080 through S2.083 (continued)**

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Operating Parameters
  - a. **S2.080, S2.081 and S2.083** each may store fuel oil only.
  - b. **S2.082** may store gasoline only.
  - c. The maximum allowable throughput for **S2.080** will not exceed **25,000,000** gallons of #2 fuel oil per year, based on a 12-month rolling period.
  - d. The maximum allowable throughput for **S2.081** will not exceed **5,600,000** gallons of #2 fuel oil per year, based on a 12-month rolling period.
  - e. The maximum allowable throughput for **S2.082** will not exceed **530,000** gallons of gasoline per year, based on a 12-month rolling period.
  - f. The maximum allowable throughput for **S2.083** will not exceed **3,000,000** gallons of #2 fuel oil per year, based on a 12-month rolling period.
  - g. **S2.080 through S2.083** each may operate **8,760** hours per year.
  
4. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Monitoring, Recordkeeping, Reporting and Compliance

On and after the date of initial startup, Permittee will:

  - (1) Monitor and record the amount of fuel loaded in **S2.080 through S2.083** each, on a monthly basis. At the end of each calendar month, record the total fuel throughput for the previous 12 months.
  - (2) Maintain records of the tank dimensions and capacity for the life of **S2.080 through S2.083** each in accordance with 40 CFR, Part 60, Subpart Kb.
  - (3) Maintain records of monitoring data, compliance tests and supporting information for a minimum of 5 years following the date of such measurements, reports or records pursuant to Section V.A of this permit. The most recent 2 years will be retained on site and made available for inspection upon request.
  
5. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Shielded Requirements

N/A



BARRICK GOLDSTRIKE MINES INC.  
P.O. Box 29  
Elko, Nevada 89803

Tel: (775) 738-8043

October 15, 2008

Mr. Matthew DeBurle (mdeburle@ndep.nv.gov)  
Supervisor, Permitting Branch  
Bureau of Air Pollution Control  
901 South Stewart Street Suite 4001  
Carson City, NV 89701-5249

**sent via e-mail**

Mr. Gerardo Rios (rios.gerardo@epa.gov)  
Chief, Permits Office  
USEPA  
Region IX  
75 Hawthorn Street  
San Francisco, CA 94105-3901

**RE: Barrick Goldstrike Mines Inc. OP AP1041-0739.02, Notification of Change**

Dear Mr. DeBurle and Mr. Rios:

Barrick Goldstrike Mines Inc. (Goldstrike), submits this notification of a change pursuant to NAC 445B.342. The change pertains to permit descriptions that relate to the Meikle Backfill/Cement Feed Plant Silo #3 (System 100, PF1.477, and PF1.478) included on Air Quality Operating Permit No. AP1041-0739.02.

***Current Permit Description and Proposed Changes***

Condition VI.BW. of the permit contains permit terms associated with PF1.477, and PF1.478 of System 100. In order to accommodate current operational needs, Goldstrike proposes to revise the source descriptions as follows.

The current permit description of the Meikle Backfill/Cement Feed Plant (System 100) equipment is:

PF1.477	Silo #3 Transfer to Silo #3 Conveyor
PF1.478	Silo #3 Conveyor Discharge

This list of equipment is proposed to be changed as follows:

PF1.477      Silo #3 Transfer to Weigh Hopper  
PF1.478      Weigh Hopper Discharge

The description changes are shown on the attached Figure 1. No changes are requested for any other permit terms, including the allowable particulate emissions. As discussed in the following two paragraphs, the emission factors used to derive the allowable particulate emission limits are applicable to the operational changes proposed herein.

**PF1.477 – Silo #3 Transfer to Weigh Hopper**

Emissions for PF1.477, Silo #3 Transfer to Weigh Hopper, were calculated using the AP-42 Chapter 11.12 Concrete Batching, revised October 2001, weigh hopper loading emission factor.

**PF1.478 – Weigh Hopper Discharge**

PF1.478, Weigh Hopper Discharge, will discharge cement<sup>1</sup> into a mixer truck pre-filled with water. Emissions were calculated using the AP-42 Chapter 11.12 Concrete Batching, revised October 2001, weigh hopper loading emission factor.<sup>2</sup> AP-42 Chapter 11.12 Concrete Batching, revised October 2001, also provides an emission factor for truck loading (truck mix). The truck loading emission factor is derived for concrete batching where sand, aggregate, cement, and water are mixed during loading. This mixing is prone to create a significant amount of dust. In contrast, the proposed process will discharge cement into a truck which is pre-filled with water and no sand or aggregate is added. Therefore, the weigh hopper loading emission factor is more appropriate for PF1.478 because it is simply a drop point similar to PF1.477.

***Qualification for Change Pursuant NAC § 445B.342***

NAC § 445B.342 provides that the holder of an operating permit may make changes that contravene an express term of the operating permit without a revision of the operating permit if the changes do not:

- (a) Constitute modifications pursuant to any provision of 42 U.S.C. §§ 7401 to 7515, inclusive, or constitute a modification as that term is defined in NAC 445B.099.
- (b) Violate any provision of NAC 445B.001 to 445B.3689, inclusive, or any other applicable requirement; or
- (c) Exceed the allowable emissions set forth in the operating permit for any emission unit.

---

<sup>1</sup> Cement is defined as cement, fly ash, or shotcrete, or a mixture of these materials.

<sup>2</sup> Emissions were calculated using the uncontrolled weigh hopper loading emission factor; however, the PF1.478 drop point will be controlled with an enclosure so that actual emissions will in fact decrease, although no credit is taken for this control.

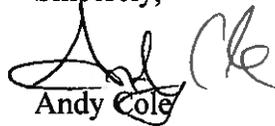
Additionally, pursuant to NAC 445B.342.2, the change does not involve a change to “any conditions of an operating permit that are requirements for monitoring, methods of testing, recordkeeping, reporting, or compliance certification.”

Pursuant to NAC 445B.342.3, this change will become effective seven days following your receipt of this notification.

A draft permit (redline/strikeout) showing these changes is attached.

We appreciate your assistance in this matter. Should you have any questions, please feel free to contact Katie Laird at (775) 778-8426.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Cole', with a large, stylized flourish extending to the right.

Andy Cole  
Environmental Manager  
Barrick Goldstrike Mines Inc.

Attachments



## BUREAU OF AIR POLLUTION CONTROL

### CLASS I NON-PERMIT EQUIPMENT LIST

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

## Section VI. Specific Operating Conditions (continued)

**CZ. Emission Units S2.087, PF1.477, and PF1.478** Location North 4,539.3 km, East 552.0 km, UTM (Zone 11)

**CZ. System 100 - Meikle Backfill/Cement Feed Plant Silo #3**

S	2.087	Silo #3 Loading
PF	1.477	Silo #3 transfer to <del>Silo #3 Conveyor</del> Weigh Hopper
PF	1.478	<del>Silo #3 Conveyor</del> Weigh Hopper Discharge

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Air Pollution Equipment
  - a. Emissions from **S2.087** will be ducted to a vent filter with 100% capture.
  - b. Emissions from **PF1.477** and **PF1.478** will be controlled by best operating practices.
2. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Emission Limits
  - a. On and after the date of startup of **S2.087**, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust vent of **S2.087**, the following pollutants in excess of the following specified limits:
    - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM<sub>10</sub> (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed **0.03** pound per hour, nor exceed **0.01** ton per year, based on a 12-month rolling period.
    - (2) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM (particulate matter) to the atmosphere will not exceed **0.08** pound per hour, nor exceed **0.03** ton per year, based on a 12-month rolling period.
    - (3) NAC 445B.22017 (*State Only Requirement*) - The opacity from the exhaust vent of **S2.087** will not equal or exceed **20%** in accordance with NAC 445B.22017.
    - (4) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from the exhaust vent of **S2.087** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
  - b. On and after the date of startup of **PF1.477** and **PF1.478**, Permittee will not discharge or cause the discharge into the atmosphere from **PF1.477** and **PF1.478**, the following pollutants in excess of the following specified limits:
    - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM<sub>10</sub> (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed **0.19** pound per hour, each, nor exceed **0.08** ton per year, each, based on a 12-month rolling period.
    - (2) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM (particulate matter) to the atmosphere will not exceed **0.41** pound per hour, each, nor exceed **0.17** ton per year, each, based on a 12-month rolling period.
    - (3) NAC 445B.22017 (*State Only Requirement*) - The opacity from **PF1.477** and **PF1.478**, each, will not equal or exceed **20 percent** in accordance with NAC 445B.22017.
    - (4) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from **PF1.477** and **PF1.478**, each, will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
3. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Operating Parameters
  - a. The maximum allowable loading rate for **S2.087** will not exceed **80.0** tons of cement/fly ash/shotcrete per any one-hour period, nor more than **65,000** tons of cement/fly ash/shotcrete per year, based on a 12-month rolling period.
  - b. The maximum allowable throughput rate for **PF1.477** and **PF1.478**, each, will not exceed **80.0** tons of cement/fly ash/shotcrete per any one-hour period, nor more than **65,000** tons of cement/fly ash/shotcrete per year, based on a 12-month rolling period.
  - c. **S2.087**, **PF1.477**, and **PF1.478** may operate **8,760** hours per year, each.



## BUREAU OF AIR POLLUTION CONTROL

### CLASS I NON-PERMIT EQUIPMENT LIST

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

## Section VI. Specific Operating Conditions (continued)

### CZ. Emission Units S2.087, PF1.477, and PF1.478 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

a. Monitoring, Recordkeeping, Reporting and Compliance

On and after the date of initial startup, Permittee will:

- (1) Monitor and record the amount of cement/fly ash/shotcrete loaded into S2.087 and the duration of the loading each day loading occurs. At the end of each calendar month, record the total monthly cement/fly ash/shotcrete throughput and the total cement/fly ash/shotcrete throughput for the previous 12 months.
- (2) Monitor and record the amount of cement/fly ash/shotcrete discharged from PF1.477 and PF1.478, each, on a monthly basis. The amount of cement/fly ash/shotcrete will be based on purchasing receipts and measurements of the level of cement/fly ash/shotcrete in the silo at the beginning and end of the month. At the end of each calendar month, record the total cement/fly ash/shotcrete throughput for the previous 12 months.
- (3) Conduct and record an inspection of the vent filter on S2.087 on a quarterly basis noting the condition of the filter material and housing. Record any corrective actions taken.
- (4) Monitor and record the hours of operation of PF1.477 and PF1.478, each, on a monthly basis.
- (5) Install, calibrate, operate and maintain a device for the measurement of the level of cement/fly ash/shotcrete in the silos.
- (6) Conduct and record an assessment of the visible emissions (excluding water vapor) from the exhaust vent of S2.087 and from PF1.477 and PF1.478, each, on a monthly basis. If the visible emission survey detects any visible emissions, the Permittee will conduct and record a Method 9 (or an alternative EPA reference method approved by the Director) visible emissions test. Each visible emissions assessment and Method 9 visible emissions test must be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, and while S2.087, PF1.477, and PF1.478, each, is operating and has the potential to create visible emissions. It will be noted in a contemporaneous log if a visual emissions assessment could not be conducted due to S2.087, PF1.477 and PF1.478, each, not operating or due to poor weather conditions.
- (7) Maintain records of monitoring data, compliance tests and supporting information for a minimum of 5 years following the date of such measurements, reports or records pursuant to Section V.A of this permit. The most recent 2 years will be retained on site and made available for inspection upon request.
- (8) The hourly loading rate in tons per hour for S2.087 will be determined from the total daily throughput and the total daily hours of operation recorded above.
- (9) The hourly throughput rate in tons per hour for PF1.477 and PF1.478, each, will be determined from the total monthly throughput and the total monthly hours of operation recorded above.
- (10) The required monitoring established in (1) through (9) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that S2.087, PF1.477, and PF1.478, each, is operating:
  - (i) The calendar date of any required monitoring.
  - (ii) The total daily and monthly throughput rate of cement/fly ash/shotcrete, in tons, for the corresponding date.
  - (iii) The total daily and monthly hours of operation for the corresponding date.
  - (iv) The corresponding average hourly throughput rate of cement/fly ash/shotcrete, in tons per hour. The average hourly throughput rate will be determined from the daily and monthly throughput rate and the total daily and monthly hours of operation recorded in (1), (2), and (3) above.
  - (v) Results and condition of the quarterly inspection of the vent filter on S2.087 and any corrective actions taken.
  - (vi) Results and verification of the monthly visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Shielded Requirements

Compliance with conditions CZ.1 through CZ.4 of this Section will be deemed compliance with the applicable requirements specified below, as of the issuance date of this operating permit.

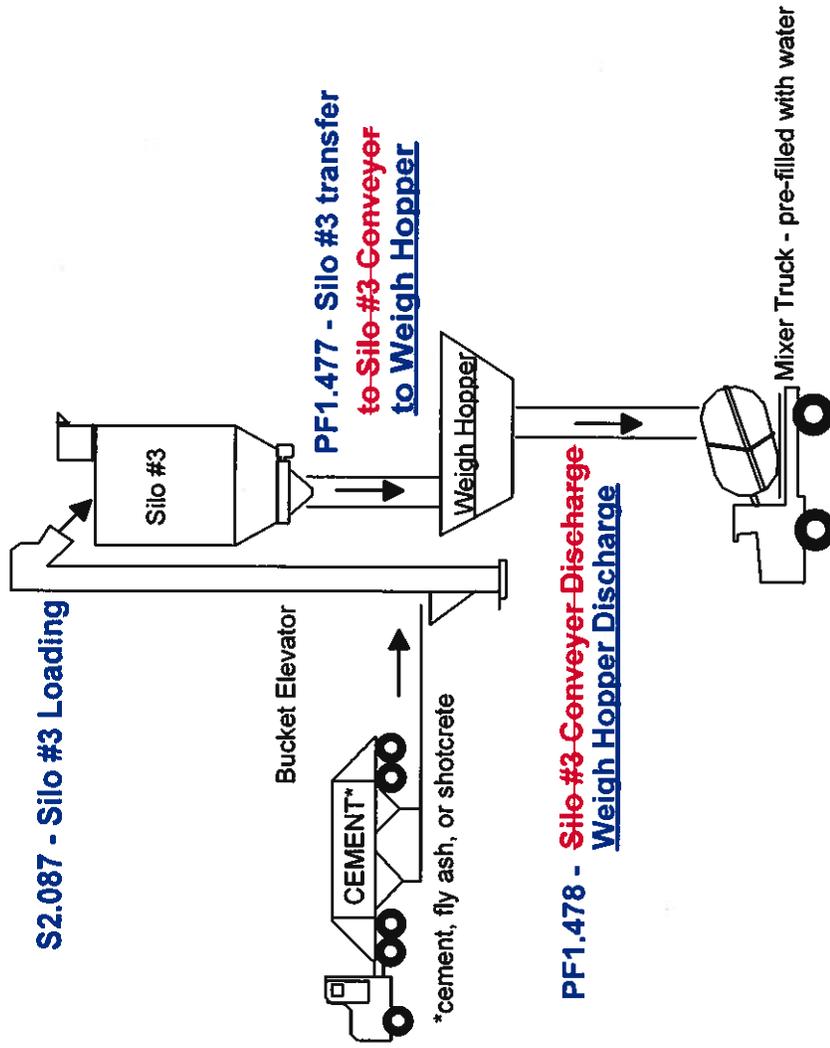
Applicable SIP Requirements:

NAC 445.732 (Industrial Sources) - see streamline analysis provided in Appendix 4 of operating permit renewal application, received September 20, 2006 (Case #07AP0121).

NAC Requirements:

445B.22033 (Sources not Otherwise Limited) - see streamline analysis provided in Appendix 4 of operating permit renewal application, received September 20, 2006 (Case #07AP0121).

**System 100  
Meikle Backfill/Cement Feed Plant Silo**





BARRICK GOLDSTRIKE MINES INC. Tel: (775) 738-8043  
P.O. Box 29  
Elko, Nevada 89803

December 3, 2008

Mr. Matthew DeBurle (mdeburle@ndep.nv.gov)  
Supervisor, Permitting Branch  
Bureau of Air Pollution Control  
901 South Stewart Street Suite 4001  
Carson City, NV 89701-5249

sent via e-mail

Mr. Gerardo Rios (rios.gerardo@epa.gov)  
Chief, Permits Office  
USEPA  
Region IX  
75 Hawthorn Street  
San Francisco, CA 94105-3901

**RE: Barrick Goldstrike Mines Inc. OP AP1041-0739.02, Notification of Change**

Dear Mr. DeBurle and Mr. Rios:

Barrick Goldstrike Mines Inc. (Goldstrike), submits this notification of a change pursuant to NAC 445B.342. The change pertains to permit descriptions that relate to the Rodeo Shotcrete Loadout Station Silo #1 (System 102, S2.088, PF1.481, and PF1.482) included on Air Quality Operating Permit No. AP1041-0739.02.

***Current Permit Description and Proposed Changes***

Condition VI.DB. of the permit contains permit terms associated with PF1.481 and PF1.482 of System 102. In order to accommodate current operational needs, Goldstrike proposes to revise the source descriptions as follows.

The current permit description of the Rodeo Shotcrete Loadout Station (System 102) equipment is:

PF1.481	Silo #1 Transfer to Silo #1 Conveyor
PF1.482	Silo #1 Conveyor Discharge

This list of equipment is proposed to be changed as follows:

PF1.481 Silo #1 Transfer to Weigh Hopper  
PF1.482 Weigh Hopper Discharge

In addition, Barrick proposes to revise the location of System 102 as follows:

System No.	Current Location	Revised Location
System 102	North 4,538.1 km, East 552.1 km, UTM (Zone 11)	North 4,539.3 km, East 552.0 km, UTM (Zone 11)

The description changes are shown on the attached Figure 1. No changes are requested for any other permit terms, including the allowable particulate emissions. As discussed in the following two paragraphs, the emission factors used to derive the allowable particulate emission limits are applicable to the operational changes proposed herein.

**PF1.481 – Silo #1 Transfer to Weigh Hopper**

Emissions for PF1.481, Silo #1 Transfer to Weigh Hopper, were calculated using the AP-42 Chapter 11.12 Concrete Batching, revised October 2001, weigh hopper loading emission factor.

**PF1.482 – Weigh Hopper Discharge**

PF1.482, Weigh Hopper Discharge, will discharge cement<sup>1</sup> into a mixer truck pre-filled with water. Emissions were calculated using the AP-42 Chapter 11.12 Concrete Batching, revised October 2001, weigh hopper loading emission factor.<sup>2</sup> AP-42 Chapter 11.12 Concrete Batching, revised October 2001, also provides an emission factor for truck loading (truck mix). The truck loading emission factor is derived for concrete batching where sand, aggregate, cement, and water are mixed during loading. This mixing is prone to create a significant amount of dust. In contrast, the proposed process will discharge cement into a truck which is pre-filled with water and no sand or aggregate is added. Therefore, the weigh hopper loading emission factor is more appropriate for PF1.482 because it is simply a drop point similar to PF1.481.

***Qualification for Change Pursuant NAC § 445B.342***

NAC § 445B.342 provides that the holder of an operating permit may make changes that contravene an express term of the operating permit without a revision of the operating permit if the changes do not:

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<sup>1</sup> Cement is defined as cement, fly ash, or shotcrete, or a mixture of these materials.

<sup>2</sup> Emissions were calculated using the uncontrolled weigh hopper loading emission factor; however, the PF1.482 drop point will be controlled with an enclosure so that actual emissions will in fact decrease, although no credit is taken for this control.

- (a) Constitute modifications pursuant to any provision of 42 U.S.C. §§ 7401 to 7515, inclusive, or constitute a modification as that term is defined in NAC 445B.099.
- (b) Violate any provision of NAC 445B.001 to 445B.3689, inclusive, or any other applicable requirement; or
- (c) Exceed the allowable emissions set forth in the operating permit for any emission unit.

Additionally, pursuant to NAC 445B.342.2, the change does not involve a change to “any conditions of an operating permit that are requirements for monitoring, methods of testing, recordkeeping, reporting, or compliance certification.”

Pursuant to NAC 445B.342.3, this change will become effective seven days following your receipt of this notification.

A draft permit (redline/strikeout) showing these changes is attached.

We appreciate your assistance in this matter. Should you have any questions, please feel free to contact Katie Laird at (775) 778- 8426.

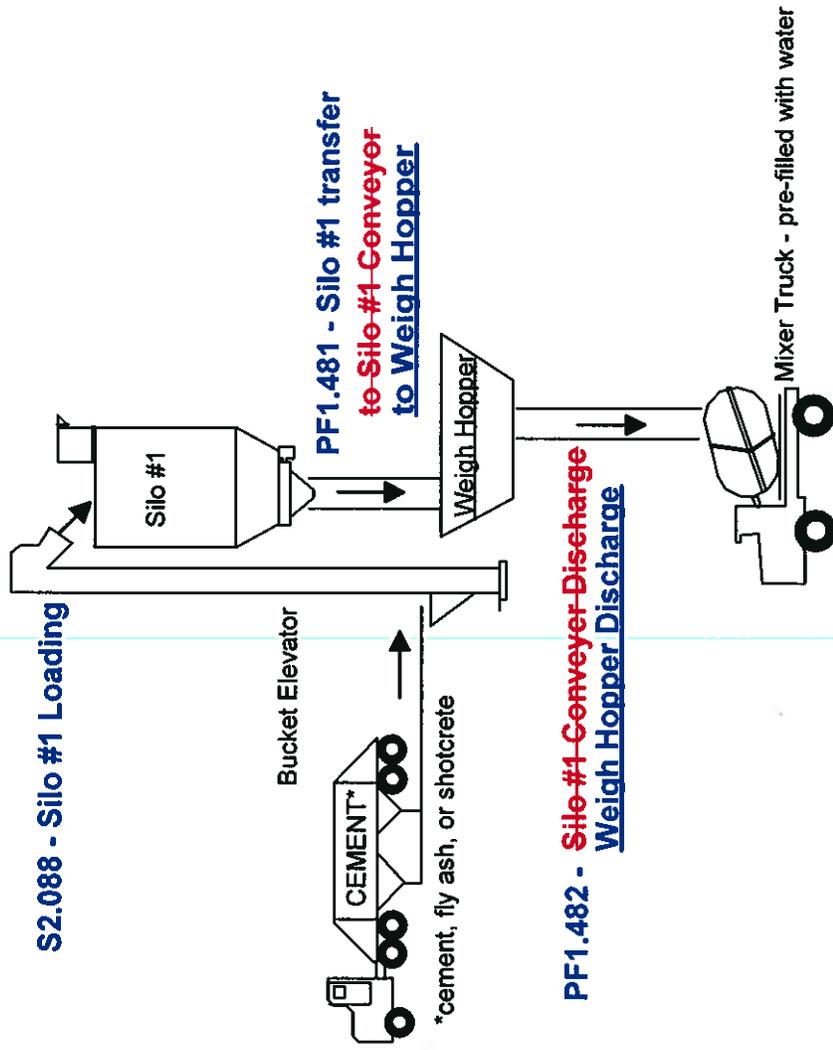
Sincerely,



Andy Cole  
Environmental Manager  
Barrick Goldstrike Mines Inc.

Attachments

**System 102**  
**Rodeo Shotcrete Loadout Station Silo #1**





## BUREAU OF AIR POLLUTION CONTROL

### CLASS I NON-PERMIT EQUIPMENT LIST

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

## Section VI. Specific Operating Conditions (continued)

DB. Emission Units S2.088, PF1.481, and PF1.482 Location North 4,539.38-1 km, East 552.04 km, UTM (Zone 11)

#### DB. System 102 – Rodeo Shotcrete Loadout Station Silo #1

S	2.088	Silo #1 Loading
PF	1.481	Silo #1 transfer to <u>Silo #1-ConveyorWeigh Hopper</u>
PF	1.482	<u>Silo #1 ConveyorWeigh Hopper</u> Discharge

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Air Pollution Equipment
  - a. Emissions from S2.088 will be ducted to a vent filter with 100% capture.
  - b. Emissions from PF1.481 and PF1.482 will be controlled by best operating practices.
2. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Emission Limits
  - a. On and after the date of startup of S2.088, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust vent of S2.088, the following pollutants in excess of the following specified limits:
    - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM<sub>10</sub> (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.03 pound per hour, nor exceed 0.01 ton per year, based on a 12-month rolling period.
    - (2) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.08 pound per hour, nor exceed 0.03 ton per year, based on a 12-month rolling period.
    - (3) NAC 445B.22017 (*State Only Requirement*) - The opacity from the exhaust vent of S2.088 will not equal or exceed 20% in accordance with NAC 445B.22017.
    - (4) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from the exhaust vent of S2.088 will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
  - b. On and after the date of startup of PF1.481 and PF1.482, Permittee will not discharge or cause the discharge into the atmosphere from PF1.481 and PF1.482, the following pollutants in excess of the following specified limits:
    - (1) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM<sub>10</sub> (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.19 pound per hour, each, nor exceed 0.07 ton per year, each, based on a 12-month rolling period.
    - (2) NAC 445B.305 (*Federally Enforceable Part 70 Program*) - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.41 pound per hour, each, nor exceed 0.15 ton per year, each, based on a 12-month rolling period.
    - (3) NAC 445B.22017 (*State Only Requirement*) - The opacity from PF1.481 and PF1.482, each, will not equal or exceed 20% in accordance with NAC 445B.22017.
    - (4) NAC 445.721 (*Federally Enforceable SIP Requirement*) - The opacity from PF1.481 and PF1.482, each, will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any 1 hour, in accordance with NAC 445.721.
3. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
Operating Parameters
  - a. The maximum allowable loading rate for S2.088 will not exceed 80.0 tons of cement/fly ash/shotcrete per any one-hour period, nor more than 60,000 tons of cement/fly ash/shotcrete per year, based on a 12-month rolling period.
  - b. The maximum allowable throughput rate for PF1.481 and PF1.482, each, will not exceed 80.0 tons of cement/fly ash/shotcrete per any one-hour period, nor more than 60,000 tons of cement/fly ash/shotcrete per year, based on a 12-month rolling period.
  - c. S2.088, PF1.481, and PF1.482 may operate 8,760 hours per year, each.



## BUREAU OF AIR POLLUTION CONTROL

### CLASS I NON-PERMIT EQUIPMENT LIST

Appended to *Barrick Goldstrike Mines, Inc. Facility #A0005 Permit #AP1041-0739.02*

## Section VI. Specific Operating Conditions (continued)

### DB. Emission Units S2.088, PF1.481, and PF1.482 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
  - a. Monitoring, Recordkeeping, Reporting and Compliance

On and after the date of initial startup, Permittee will:

    - (1) Monitor and record the amount of cement/fly ash/shotcrete loaded into S2.088 and the duration of the loading each day loading occurs. At the end of each calendar month, record the total monthly cement/fly ash/shotcrete throughput and the total cement/fly ash/shotcrete throughput for the previous 12 months.
    - (2) Monitor and record the amount of cement/fly ash/shotcrete discharged from PF1.481 and PF1.482, each, on a monthly basis. The amount of cement/fly ash/shotcrete will be based on purchasing receipts and measurements of the level of cement/fly ash/shotcrete in the silo at the beginning and end of the month. At the end of each calendar month, record the total cement/fly ash/shotcrete throughput for the previous 12 months.
    - (3) Conduct and record an inspection of the vent filter on S2.088 on a quarterly basis noting the condition of the filter material and housing. Record any corrective actions taken.
    - (4) Monitor and record the hours of operation of PF1.481 and PF1.482, each, on a monthly basis.
    - (5) Install, calibrate, operate and maintain a device for the measurement of the level of cement/fly ash/shotcrete in the silos.
    - (6) Conduct and record an assessment of the visible emissions (excluding water vapor) from the exhaust vent of S2.088 and from PF1.481 and PF1.482, each, on a monthly basis. If the visible emission survey detects any visible emissions, the Permittee will conduct and record a Method 9 (or an alternative EPA reference method approved by the Director) visible emissions test. Each visible emissions assessment and Method 9 visible emissions test must be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, and while S2.088, PF1.481 and PF1.482, each, is operating and has the potential to create visible emissions. It will be noted in a contemporaneous log if a visual emissions assessment could not be conducted due to S2.088, PF1.481 and PF1.482, each, not operating or due to poor weather conditions.
    - (7) Maintain records of monitoring data, compliance tests and supporting information for a minimum of 5 years following the date of such measurements, reports or records pursuant to Section V.A of this permit. The most recent 2 years will be retained on site and made available for inspection upon request.
    - (8) The hourly loading rate in tons per hour for S2.088 will be determined from the total daily throughput and the total daily hours of operation recorded above.
    - (9) The hourly throughput rate in tons per hour for PF1.481 and PF1.482, each, will be determined from the total monthly throughput and the total monthly hours of operation recorded above.
    - (10) The required monitoring established in (1) through (9) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that S2.088, PF1.481, and PF1.482, each, is operating:
      - (i) The calendar date of any required monitoring.
      - (ii) The total daily and monthly throughput rate of cement/fly ash/shotcrete, in tons, for the corresponding date.
      - (iii) The total daily and monthly hours of operation for the corresponding date.
      - (iv) The corresponding average hourly throughput rate of cement/fly ash/shotcrete, in tons per hour. The average hourly throughput rate will be determined from the daily and monthly throughput rate and the total daily and monthly hours of operation recorded in (1), (2), and (4) above.
      - (v) Results and condition of the quarterly inspection of the vent filter on S2.088 and any corrective actions taken.
      - (vi) Results and verification of the monthly visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Shielded Requirements

Compliance with conditions DB.1 through DB.4 of this Section will be deemed compliance with the applicable requirements specified below, as of the issuance date of this operating permit.

Applicable SIP Requirements:

NAC 445.732 (Industrial Sources) - see streamline analysis provided in Appendix 4 of operating permit renewal application, received September 20, 2006 (Case #07AP0121).

NAC Requirements:

445B.22033 (Sources not Otherwise Limited) - see streamline analysis provided in Appendix 4 of operating permit renewal application, received September 20, 2006 (Case #07AP0121).