Scanning Routing Slip

FIN:_____ Permit #_____ Aircase #_____

Company Name: See Air Case Tracking Slip

Facility Name:_____

Address: (physical or Mailing) 2215 N. 5TH STREET

ELKO, NV 89801

Class: (check one) 1 ☐ 2 ☑ 3 ☐ 4 ☐ COLA ☐ NMCP ☐ NPSS ☐ SAD ☐

Document Type: (check one)

Permit	Permit Application and Correspondence
Permit ☐	Applications ☑ Correspondence ☐ Public Notice/EPA Review/Hearing ☐ Technical Review ☐

Compliance	Enforcement
Compliance Reports ☐ CEMS Reports ☐ Correspondence ☐ Inspections/Investigations ☐ Notifications ☐ Orders ☐ Source Testing ☐	Correspondence ☐ Notice of Alleged Violation ☐ Settlement Agreement ☐ Stop Order ☐ Supplemental Environmental Project ☐

Return working Copy to: Carley Crosby Destroy ☐

Email Searchable PDF to: _____

Name PDF:_____

Large scanned files will be placed on the P:drive, you'll be emailed as to where

Does this need to be mailed YES ☐ NO ☐ Certified ☐ (Items to be mailed go to front desk)

Name: Nicholas Schlafer Extension: 687-9354

_

Edit: Application Tracking

Air Case ID: 13255 Permit Id: 3731

FIN No.: A2005

Company Name: MCEWEN MINING, INC.

HA Basin No: 139 **Increment Tracked** ☐

Permit No: AP10413799.01 * Select a Permit No

Date App. Received: 10/09/2026 *

Permit Writer: Not Assigned (NA) *

Case Type: Class 2 Revision w/o Public Notice *

Default ODS Date: 10/23/2026 *

Actual ODS Date:

Date App. to be Closed: 12/22/2026 *

Stop Days: **Actual Date App. to be Closed:** 12/22/2026

App. Incomplete? ☐

Date App. Closed:

Fee Paid ($): 2500 *

Case Description:

Comments:

Flag (For Class 4) : None

Update Cancel

RECEIVED
OCT 09 2026
ENVIRONMENTAL PROTECTION

October 5, 2026

Ms. Tanya Soleta
Supervisor, Minor Source Permitting
Nevada Division of Environmental Protection (NDEP)
Bureau of Air Pollution Control
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

RECEIVED
OCT 09 2026
BAPC/BAQP

RE: McEwen Mining Inc., Gold Bar – Class II Air Quality Operating Permit No. AP1041-3799.01 Revision Application

Dear Ms. Soleta:

McEwen Mining Inc. (McEwen) is submitting this application to revise Class II Air Quality Operating Permit No. AP1041-3799.01 for the Gold Bar facility. The revision trues up the permit with the as-built primary and backup power generation equipment, increases the permitted gasoline throughput for the facility's fuel dispensing system, and adds two new generator engines. No change in ore production rates, process equipment, or control technology is requested.

The proposed revisions comprise the following:

1. Systems 10 and 11 (S2.009, S2.010, S2.011): Source naming conventions are revised to match the facility's internal identifications, with no physical or operational change. McEwen also requests that the 40 CFR 60, Subpart JJJJ applicability analysis in Sections G.5 and H.5 recognize the installed engines as non-certified units subject to the performance testing requirements of 40 CFR 60.4243(b).
2. System 13 (S2.013): The permitted 437 horsepower backup diesel generator engine is replaced with a 569 horsepower engine serving the same backup function at the same location, with no change in operating scenario, fuel, or control configuration.
3. System 14 (S2.014): The gasoline throughput limit is increased to 20,000 gallons per month and 240,000 gallons per year, from the current 9,900 gallons per month and 118,800 gallons per year. The revised monthly limit brings the gasoline dispensing facility under 40 CFR 63.11117 rather than 40 CFR 63.11116, including the submerged filling requirement, and a corresponding revision to the Section K.5 applicability determination is requested.
4. New portable diesel-fired generator: Added to supply power for ongoing construction and auxiliary activities and to cover other permitted generators during

breakdowns and maintenance. Because it will operate during scheduled work as well as unplanned outages, it is proposed as a non-emergency compression ignition engine without operating-hour limitations. This engine was previously permitted as S2.013.

5. New propane-fired emergency generator: Added to back up administrative services at the facility office and related support buildings, with operation limited to power outages and periodic readiness testing and maintenance.

Applicable engine specifications and estimated emissions for each affected unit are provided in the application forms and supporting calculations in Appendix 1.

The attached package includes a facility-wide environmental evaluation that demonstrates compliance with the applicable ambient air quality standards. The electronic modeling files are available for download at the following link:

https://drive.google.com/drive/folders/1tazk05e8H4OZWQkAiPmJ7ubB2jaG0Hft?usp=sharing

The application processing fee of $2,500 (≤10 units revised) was paid electronically on September 21, 2026, under confirmation number 790030745352675290305O.

Should you have any questions or require additional information, please do not hesitate to contact Ejaz Memon (Air Sciences Inc.) at 720-389-4216 or ememon@airsci.com.

Sincerely,

Brendan Musselman

Brendan Musselman
Environmental Manager
McEwen Mining Inc., Gold Bar Project

Enclosure: *Class II Revision Application and associated appendices*

ePayment

User Id: lpeters **Company Name:** Mcewen Mining Nevada, Inc.

Payment Type: Invoice or Recurring Fee **Payment Amount:** $2,500.00

Thank you for using the NDEP ePayment System.

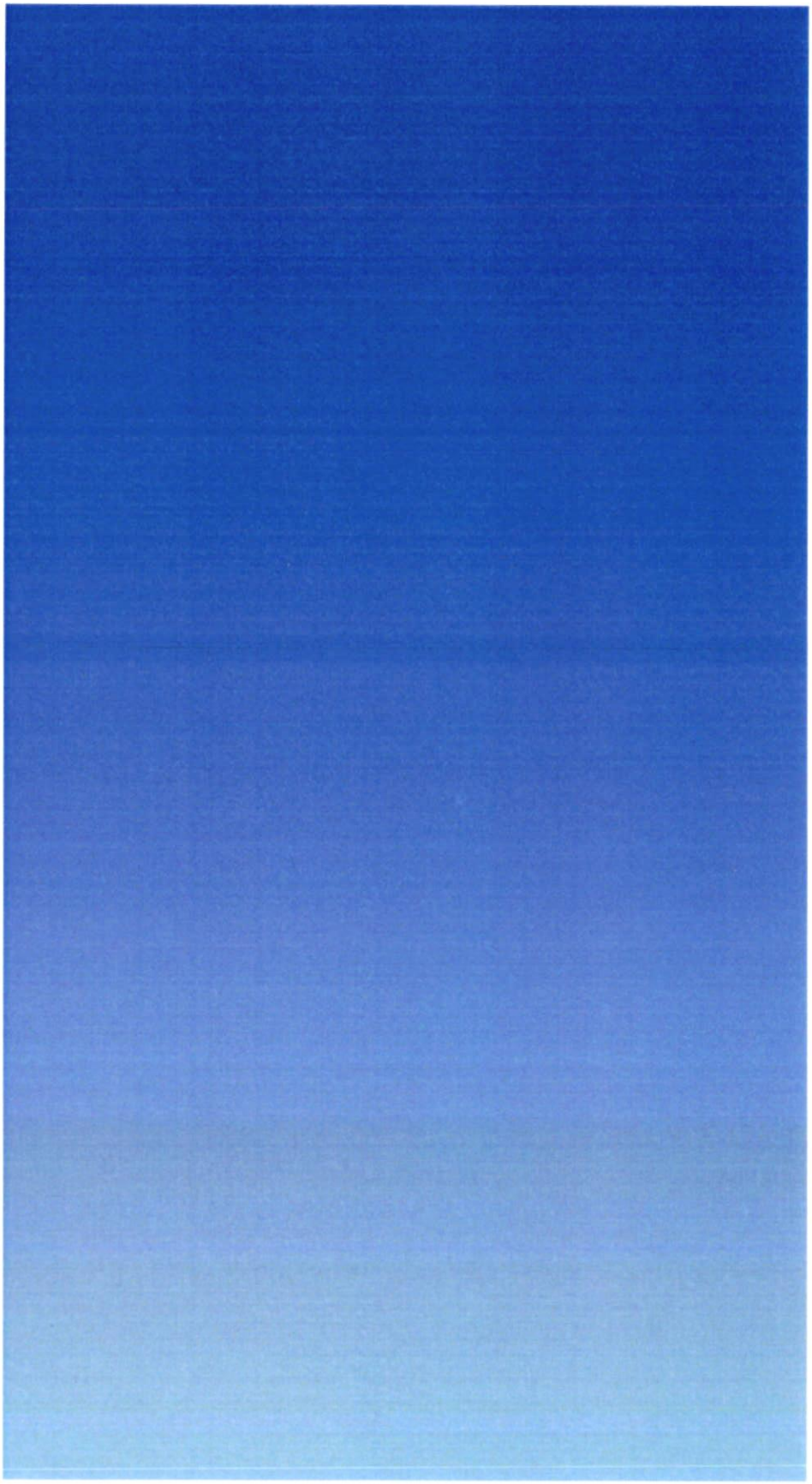
Your Invoice or Recurring Fee payment has been successfully processed!

PLEASE PRINT AND RETAIN THIS CONFIRMATION FOR YOUR RECORDS!

Company Name:	**Mcewen Mining Nevada, Inc.**
Company Address:	**2215 North 5th St.** **Elko NV 89801**
Contact First Name:	**Janelle**
Contact Last Name:	**Creamer**
Telephone:	**(775) 299-4063**
Payment Type:	**Invoice or Recurring Fee**
Permit No:	**AP-1041-3799.01**
Site ID:	**GOLD BAR**
Application Type:	**Air Pollution Control**
Confirmation E-mail:	**nevadapayable@mcewenmining.com**
Payment Amount:	**$2,500.00**
Today's Date:	**9/21/2026**
Confirmation Number:	**790030745352675290305O**
Settlement Date:	**9/21/2026**
Total Amount:	**$2,500.00**

Main Menu

Payment Instructions



AIR SCIENCES INC.

DENVER • PORTLAND

McEwen Mining Inc. Gold Bar Project

Class II Air Quality Operating Permit No. AP1041-3799.01 Revision Application

PREPARED FOR:
MCEWEN MINING INC.

PROJECT NO. 320-26A-1
OCTOBER 1, 2026

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Class II Air Quality Operating Permit Application Form

Facility Name: McEwen Mining Inc. Gold Bar Project

Existing Facility ID: A2005

Existing Class II AQOP: AP1041-3799

Type of Facility: Gold Mine

Number of Units (including IA's) in Facility: 116

If a Revision, Number of Units (including IA's) Affected in Action: 07

Application Type:

☐ **New AQOP**

☒ **Revision of Existing AQOP**

☐ **Renewal of Existing AQOP**

NDEP

Please Submit Application to:

Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class II Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Phone (775) 687-9349

August 2026
(Ver. 7)

IMPORTANT INFORMATION

- The Application packet contains:
  - General Company Information Form
  - Industrial Process Form
  - Combustion Equipment Form
  - Storage Silo Form
  - Liquid Storage Tanks Form
  - Insignificant Activities Form
  - Facility-Wide Potential to Emit Table
  - Surface Area Disturbance Form
  - Plant Boundary Coordinates Form
  - Plant Building Parameters Form
  - Application Certification Document with Required Attachments

- Please see the Guidance Document for additional instructions on how to complete the application.
- A printed copy of the application must be submitted (mailed or hand delivered), along with an electronic version.
- The application filing fee required by Nevada Administrative Code (NAC) 445B.327 must be submitted with the completed application. Checks must be made payable to the "Nevada State Treasurer, Environmental Protection" with "BAPC" noted in the memo line. Fees may also be submitted electronically at https://epayments.ndep.nv.gov/.
- This application shall be used for new Class II sources, revisions to existing Class II Air Quality Operating Permits, and the renewal of Class II Air Quality Operating Permits. This application packet is not for use for an Administrative Renewal, Administrative Amendment, a general permit, a stand-alone Surface Area Disturbance (SAD) permit, nor for a Request for Change of Location Approval permit for a temporary source.
- An application for a Class II Air Quality Operating Permit must be signed by the Responsible Official, as defined in NAC 445B.156. The certification/signature page is the last page of the application and the original "wet" signature must be provided.
- 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 10 working days of receipt of the application.
- For the renewal of a Class II Operating Permit, a complete application and corresponding processing fee must be submitted in accordance with NAC 445B.3473, prior to the expiration date of the current permit. The BAPC suggests that the application be submitted well in advance of the timeline outlined in NAC 445B.3473 to ensure the application is deemed complete.
- If the facility applies for a permit that has not previously held a Class I of Class II operating permit, is located within 1,000 feet of a school, hospital, or residential area, or the Director determines that the change to the stationary source results in an increase in allowable emissions that exceeds the thresholds in NAC 445B.3457, the BAPC shall establish a 30-day period for public participation.

GENERAL COMPANY INFORMATION FORM

1. **Briefly describe the permitted facility's process and include the Standard Industrial Classification (SIC) number and North American Industry Classification System (NAICS). Add details in the attached Process Narrative.**

   The McEwen Mining Inc. Gold Bar Project is an open-pit gold mining, processing, recovery, and refining facility. The primary operation at the facility can be classified by SIC code 1041 (establishments primarily engaged in mining gold ores), NAICS code 212221 (Gold Ore Mining).

2. **Company Name and Address that are to appear on the operating permit [NAC 445B.295(1)]:**

Name:	**McEwen Mining Inc. Gold Bar Project**		
Address:	**2215 N. 5th Street**		
City:	**Elko**		
State:	**NV**	Zip Code:	**89801**

3. **Owner's Name and Address [NAC 445B.295(1)]:**

Name:	**McEwen Mining Inc.**		
Address:	**2215 N. 5th Street**		
City:	**Elko**		
State:	**NV**	Zip Code:	**89801**

4. **Facility Name and Address, if different from #2 [NAC 445B.295(1)]:**

Name:	**McEwen Gold Bar Mine**		
Address:	**PO Box 633**		
City:	**Eureka**		
State:	**NV**	Zip Code:	**89316**

5. **If records are required under the operating permit will be kept at a location other than the facility, specify that location [NAC 445B.295(7)]:**

Name:	**N/A**		
Address:			
City:			
State:		Zip Code:	

GENERAL COMPANY INFORMATION FORM (continued)

6. Responsible Official Name, Title and Mailing Address [NAC 445B.295(1)]:

Name: **Brendan Musselman**
Title: **Environmental Manager**
Address: **2215 N. 5th Street**
City: **Elko**
State: **NV** Zip Code: **89801**
Phone Number: **(775) 346-0530**
Fax Number: **N/A**
E-mail Address: **bmusselman@mcewenmining.com**

Is this a new Responsible Official? ☐ Yes ☒ No

If yes, and the Responsible Official (RO) does not meet the definition under NAC 445B.156 then please fill out the "Responsible Official Identification/Designation/Change Request Form" and mail it in. (https://ndep.nv.gov/air/permitting/air-permit-forms-and-resources)

7. Plant Manager or other appropriate Contact Name, Title and Address [NAC 445B.295(1)]:

Name: **Brendan Musselman**
Title: **Environmental Manager**
Address: **2215 N. 5th Street**
City: **Elko**
State: **NV** Zip Code: **89801**
Phone Number: **(775) 346-0530**
Fax Number: **N/A**
E-mail Address: **bmusselman@mcewenmining.com**

8. Location and Driving Directions to the Facility (For Example: From Elko, Nevada, 4 miles south of I-80 at xx Interchange) [NAC 445B.295(8)]:

Hydrographic Basin (HA) Number: **139**
HA Basin Name: **N. Kobeh Valley**

Township(s): * N; Range(s): * E; Section(s): *

UTM Coordinates for the Front Gate of the Facility (NAD 83, Zone 11):
4,402,300 m North; **559,610** m East;
Nearest City: **Eureka**
County: **Eureka**

Driving Directions from nearest city to the Facility: **Approximately 30 miles northwest of Eureka, NV. Primary access to the site is from U.S. 50 by traveling north on 3-Bars Road for approximately 16 miles, and then east for 1.5 miles on General County Road G-215 to the Old Atlas Mill site.**

* **See Surface Area Disturbance Form, Attachment A**

GENERAL COMPANY INFORMATION FORM (continued)

9. **Emission Cap Requested [NAC 445B.070 and NAC 445B.296(2)]:**

☐ Yes ☒ No (If yes, provide details in the attached Process Narrative)

10. **Important note** for completing the Industrial Process, Combustion Equipment, Storage Silo, and Liquid Storage Tank Application forms: forms need to be included for permitted emission units and insignificant activities. Provide additional forms as needed. All items in the application must be addressed. If an item does not apply then "N/A" or similar notation must be entered in the appropriate blank (TBD, unknown, etc.).

11. **Is the Facility located within 1,000 feet of a school, hospital, or residential area?**
☐ Yes ☒ No

12. **Does the Facility require controls or other limit restrictions to remain a Class II source?**
☒ Yes ☐ No

13. **Has the facility provided modeling for each non-combustion baghouse individually? (See Testing Determination System for Baghouses Guidance Document)**
☐ Yes ☒ No

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 10: Mine Site Power Generation**

Emission Unit Description: **LNG Generator #2 (Caterpillar G3516C; 2018)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.009**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-002-02**
	Manufacturer		**Caterpillar**
	Date Manufactured		**≥2018**
	Model and Serial Number		**G3516C**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**SI4SLB**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**4.31**
	EPA Tier #		**N/A**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,099**
	UTM Easting (NAD 83, Zone 11)	m	**558,913**
Operating Parameters /Fuel Usage	Fuel Type		**LNG**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0**
	Heat Content	Btu/gal	**82,600**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**14.0**
	Stack Inside Diameter	feet	**1.5**
	Stack Temperature	°F	**858**
	Stack Exit Velocity	feet/second	**110.4**
	Actual Gas Volume Flow Rate	acfm	**11,701**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**3,648**
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **LNG Generator #2 (Caterpillar G3516C; 2018)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 10: Mine Site Power Generation**
Emission Unit Description: **LNG Generator #3 (Caterpillar G3516C; 2018)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.010**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-002-02**
	Manufacturer		**Caterpillar**
	Date Manufactured		**≥2018**
	Model and Serial Number		**G3516C**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**SI4SLB**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**4.31**
	EPA Tier #		**N/A**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,091**
	UTM Easting (NAD 83, Zone 11)	m	**558,906**
Operating Parameters /Fuel Usage	Fuel Type		**LNG**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0**
	Heat Content	Btu/gal	**82,600**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**14.0**
	Stack Inside Diameter	feet	**1.5**
	Stack Temperature	°F	**858**
	Stack Exit Velocity	feet/second	**110.4**
	Actual Gas Volume Flow Rate	acfm	**11,701**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**3,648**
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **LNG Generator #3 (Caterpillar G3516C; 2018)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 11: Mine Site Power Generation**

Emission Unit Description: **LNG Generator #1 (Caterpillar G3512; 2018)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.011**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-002-02**
	Manufacturer		**Caterpillar**
	Date Manufactured		**≥2018**
	Model and Serial Number		**G3512**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**SI4SLB**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**4.33**
	EPA Tier #		**N/A**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,084**
	UTM Easting (NAD 83, Zone 11)	m	**558,899**
Operating Parameters /Fuel Usage	Fuel Type		**LNG**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0**
	Heat Content	Btu/gal	**82,600**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**14.0**
	Stack Inside Diameter	feet	**1.5**
	Stack Temperature	°F	**988**
	Stack Exit Velocity	feet/second	**102.4**
	Actual Gas Volume Flow Rate	acfm	**10,853**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**3,079**
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **LNG Generator #1 (Caterpillar G3512; 2018)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 13: Backup Generator**

Emission Unit Description: **Backup Generator Engine (Caterpillar C13, 2013)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.013**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-001-02**
	Manufacturer		**Caterpillar**
	Date Manufactured		**≥2013**
	Model and Serial Number		**C13**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**ECI**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**2.08**
	EPA Tier #		**3**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,087**
	UTM Easting (NAD 83, Zone 11)	m	**558,920**
Operating Parameters /Fuel Usage	Fuel Type		**Diesel**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0015**
	Heat Content	Btu/gal	**140,000**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**9.0**
	Stack Inside Diameter	feet	**0.75**
	Stack Temperature	°F	**985**
	Stack Exit Velocity	feet/second	**83.6**
	Actual Gas Volume Flow Rate	acfm	**2,216**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**630**
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Backup Generator Engine (Caterpillar C13, 2013)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 17: Mine Site Portable Generator**

Emission Unit Description: **Portable Generator Engine (John Deere 6090HFG06, 2017)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.017**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-001-02**
	Manufacturer		**John Deere**
	Date Manufactured		**≥2017**
	Model and Serial Number		**6090HFG06**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**NECI**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**1.50**
	EPA Tier #		**4**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,233**
	UTM Easting (NAD 83, Zone 11)	m	**558,724**
Operating Parameters /Fuel Usage	Fuel Type		**Diesel**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0015**
	Heat Content	Btu/gal	**140,000**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**11.0**
	Stack Inside Diameter	feet	**0.42**
	Stack Temperature	°F	**831**
	Stack Exit Velocity	feet/second	**177.0**
	Actual Gas Volume Flow Rate	acfm	**1,448**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**461**
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Portable Generator Engine (John Deere 6090HFG06, 2017)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 18: Administrative Backup Generator**

Emission Unit Description: **Administrative Backup Generator Engine (Generac 800 Series or similar, 2024+)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☒ **Yes** ☐ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	**S2.018**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-010-01**
	Manufacturer		**Generac**
	Date Manufactured		**≥2024**
	Model and Serial Number		**G-Force 800 or Similar**
	Emissions Released Inside building?	yes/no	**No**
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		**E-SI**
	Date Constructed	month/day/yr	**Not Specified**
	Cylinder Displacement	liter/cylinder	**0.23**
	EPA Tier #		**N/A**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,214**
	UTM Easting (NAD 83, Zone 11)	m	**558,690**
Operating Parameters /Fuel Usage	Fuel Type		**Propane**
	Fuel Flow Meter Installed?	yes/no/NA	**N/A**
	Sulfur Content	%	**0.0019**
	Heat Content	Btu/gal	**91,500**
	Start Time *if operating less than 24 hours/day*	hour:minute	**N/A**
	End Time *if operating less than 24 hours/day*	hour:minute	**N/A**
Control Equipment	Manufacturer		**N/A**
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**
Stack Parameters	Stack Height	feet	**2.6**
	Stack Inside Diameter	feet	**0.33**
	Stack Temperature	°F	**1,200**
	Stack Exit Velocity	feet/second	**36.5**
	Actual Gas Volume Flow Rate	acfm	**191**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**40**
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Administrative Backup Generator Engine (Generac 800 Series or similar, 2024+)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate multiplied by hours of operation.

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

LIQUID STORAGE TANK APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **System 14: Gasoline Storage Tank**

Emission Unit Description: **3,000 Gallon Gasoline Storage Tank**

Alternative Operating Scenario: ☐ **Yes** ☐ **No**

Insignificant Activity: ☐**Yes** ☒**No** If yes, identify exemption regulation: **N/A**

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID and System Number *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001 System Number: 5	**S2.014**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**250-10-000-20**
	Manufacturer		**Not Specified**
	Date Manufactured		**Not Specified**
	Model Number		**Not Specified**
	Heated Tank	yes/no	**No**
	Shell Height	feet	**19.0**
	Shell Diameter	feet	**6.5**
	Maximum Liquid Height	feet	**6.5**
	Average Liquid Height	feet	**3.25**
	Capacity of Tank	gallons	**3,000**
	Shell Color		**White**
	Roof Condition	good/poor	**Good**
	Roof Type (Cone, Dome, External, or Internal Floating Roof)		**Not Specified**
	Roof Height	feet	**Not Specified**
	Cone Roof Slope		**Not Specified**
	Dome Roof Radius	feet	**Not Specified**
	True Vapor Pressure of Liquid	psig	**3.99**
	Reid Vapor Pressure of Liquid	psig	**Not Specified**
	Orientation of Tank	Horizontal/Vertical	**Horizontal**
	Submerged Fill [NAC 445B.22093(3)]	yes/no	**Yes**
	Equipment Dimensions (LxWxH)	feet	**19×6.5×6.5**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,402,128**
	UTM Easting (NAD 83, Zone 11)	m	**558,732**

LIQUID STORAGE TANK APPLICATION FORM
CLASS II OPERATING PERMIT (CONTINUED)

Emission Unit Description: **3,000 Gallon Gasoline Storage Tank**

Description			Data
Operating Parameters	Material Type		**Gasoline**
	Operating Time per Year	hour/year	**8,760**
	Maximum Throughput	gallon/month	**20,000**
	Maximum Throughput	gallon/year	**240,000**
Control Equipment	Type of Control		**N/A**
	Control Efficiency	%	**N/A**
	Pollutant(s) Controlled		**N/A**
	Manufacturer		**N/A**
	Manufacturer's Guarantee Included?	yes/N/A	**N/A**
Volatile Organic Compounds (VOC) Emissions	Emission Limit	ton/year	**0.92**
Other Pollutants	Emission Factor (with units)	*(insert unit)*	**N/A**
	Emission Factor Reference		**N/A**
	Emission Limit	pound/hour	**N/A**
	Emission Limit	ton/year	**N/A**

FACILITY-WIDE POTENTIAL TO EMIT TABLE
(FOR ALL SOURCES INCLUDING INSIGNIFICANT ACTIVITIES)
(POUND/HOUR AND TON/YEAR)

Pollutant	Facility-Wide Potential to Emit (pound/hour)	Facility-Wide Potential to Emit (ton/year)
Total Particulate Matter (PM)	**27.12**	**102.15**
Total PM_{10}	**11.23**	**43.04**
Total $PM_{2.5}$	**3.51**	**14.03**
Total Sulfur Dioxide (SO_2)	**0.05**	**0.20**
Total Carbon Monoxide (CO)	**42.23**	**77.64**
Total Oxides of Nitrogen (NO_X)	**15.90**	**69.70**
Total Volatile Organic Compounds (VOC)	**12.13**	**35.73**
Total Lead (Pb)		
Total Hydrogen Sulfide (H_2S)		
Total Sulfuric Acid Mist (H_2SO_4)		
Total Hazardous Air Pollutants (HAPs)		**12.48**
Total Greenhouse Gases (CO_{2e})		**37,182**
Other Regulated Pollutants (Specify)		

REVISION TABLE

Please complete the table below if this application is for a **Revision** of an existing Class II Air Quality Operating Permit. Add more columns if needed for any other applicable regulated pollutants. All Potential To Emit (PTE) must be in tons per year (TPY) [NAC 445B.3457(5)(b)]

Description	Pollutants									
	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	CO	VOC	HAPs	CO_{2e}	Other
Permitted Facility-Wide PTE (TPY)	102.09	42.98	13.96	0.19	68.25	65.51	34.92	12.44	35,499	
Proposed Facility-Wide PTE (TPY)	102.15	43.04	14.03	0.20	69.70	77.64	35.73	12.48	37,182	
Change in Facility-Wide PTE (TPY)	0.06	0.06	0.06	0.01	1.45	12.13	0.80	0.04	1,683	

SURFACE AREA DISTURBANCE FORM

1. Total Acres of the Facility Site: **7,792**
2. Total Acres Disturbed: **7,792**
3. Add Surface Area Disturbance location as Township(s), Range(s) and Section
   See Attachment A on the following page.
4. NAC 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 spray 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 soils.
5. If the Surface Area Disturbance is greater than 5 acres, please check each box that applies for Best Management Practices (BMPs) used for controlling dust on project's disturbed areas:
   - ☒ Water trucks
   - ☐ Graveling/paving of roadway storage areas and staging areas
   - ☐ Dust palliatives
   - ☐ Posting and limiting vehicle speeds to 10-15 miles per hour
   - ☐ Ceasing operations during high wind events
   - ☐ Fencing or berming to prevent unauthorized access to disturbed areas
   - ☐ Application of water sprays on material storage piles on a regular basis
   - ☐ Covering material storage piles with tarpaulin or geo-textiles; tenting
   - ☐ Use of overhead water spray racks or water hoses
   - ☐ Track-out controls (graveled entranced, exit area, and street sweeping)
   - ☐ Landscape preservation and impact avoidance
   - ☐ Wind fence
   - ☒ Pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas)
   - ☒ Inform all subcontractors (including truck drivers) of their responsibilities for the control of fugitive dust while they are on the project site
   - ☒ Training of equipment operators to recognize fugitive dust generation and having the authority to shut down operations until water truck arrives and sprays water on the disturbed areas
   - ☒ Other Applicable BMPs: **May use dust control agent in water trucks**
   - ☒ Other Applicable BMPs: **May use road binding agent**
   - ☒ If using water trucks, list how many water trucks are used and their capacity in gallons: **3 trucks**

Attachment A: Surface Disturbance Area Legal Description

Township	Range	Sections
T19N	R50E	6-8, 17
T20N	R49E	3, 10, 11, 14, 23-25, 36
T20N	R50E	31
T20N	R51E	3, 10, 15, 22, 23, 26, 35
T21N	R49E	4, 9, 16, 21, 22, 27, 34
T21N	R51E	5, 8, 9, 16, 21, 27, 28, 34
T22N	R49E	25-28, 33
T22N	R50E	1-4, 8-16, 21-25, 28-30
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T23N	R50E	33-35
T22N	R50E	13
T22N	R51E	17-21, 28-30

PLANT BOUNDARY COORDINATES FORM *if applicable*

N/A - See Appendix 3

Corner Number	UTM Easting	UTM Northing

PLANT BUILDING PARAMETERS FORM *if applicable*

N/A - See Appendix 3

Building Parameters
Building Name: _____ **Building Tier :** _____
Roof Height (ft): _____ **Building Diameter (ft):** _____

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing

Building Parameters
Building Name: **Building Tier :** _____
Roof Height (ft): **Building Diameter[4] (ft):**

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing

APPLICATION CERTIFICATION DOCUMENT

(With Required Attachments)

Please check all applicable boxes below to indicate the information provided in your application submittal:

- ☒ General Company Information Form
- ☐ Industrial Process Application Form(s)
- ☒ Combustion Equipment Application Form(s)
- ☐ Storage Silos Application Form(s)
- ☒ Liquid Storage Tank Application Form(s)
- ☐ Manufacturer's Guarantee
- ☒ Facility-Wide Potential to Emit Table
- ☒ Surface Area Disturbance Form
- ☐ Plant Boundary Coordinates Form *if applicable*
- ☐ Plant Building Parameters Form *if applicable*
- ☒ Detailed Emission Calculations (for all emission units including IA units)
- ☐ Source Testing Data (if referenced in calculations)
- ☒ Process Narrative
- ☒ Process Flow Diagram(s)
- ☒ Site Plan(s) showing the locations (UTM coordinates), dimensions, and heights of buildings on the site
- ☒ Maps:
  - ☒ Vicinity Map of where the facility is located in the State
  - ☒ Area Map of the Facility (including location of all emission units, building locations (with UTMs), location of front gate, and fence line/site boundary (with UTMs))
- ☒ Environmental Evaluation (AERMOD Air Dispersion Modeling) *if applicable* [NAC 445B.310]
- ☒ Manufacturer's Guarantee *if applicable*
- ☒ Equipment Specifications *if applicable*
- ☒ TANKs Modeling Output *if applicable*
- ☒ Application Fee Attached or Electronically Submitted
- ☒ Digital Copy of Application on CD or Thumb Drive
- ☒ Application Certification Document with Original Responsible Official Signature

APPLICATION CERTIFICATION DOCUMENT (CONTINUED)

(With Required Attachments)

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].

CERTIFICATION:

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

Brendan Musselman

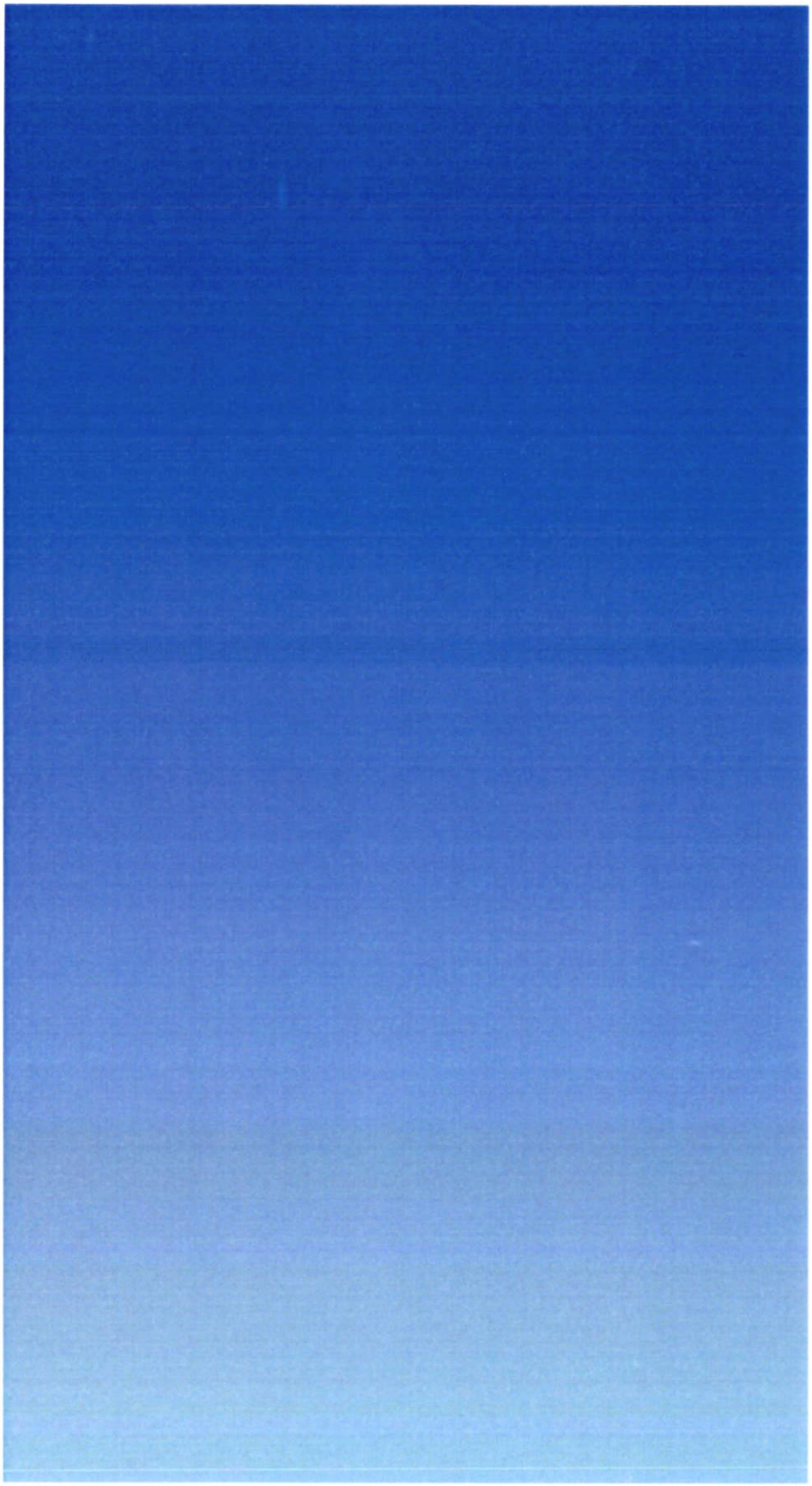
Signature of Responsible Official

Brendan Musselman, Environmental Manager

Print or Type Name and Title

10-5-26

Date



AIR SCIENCES INC.

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Appendix 1: Detailed Emission Calculations and Support Documents

McEwen Mining Inc. Gold Bar Project

Class II Air Quality Operating Permit No. AP1041-3799.01 Revision Application

PREPARED FOR:
MCEWEN MINING INC.

PROJECT NO. 320-26A-1
OCTOBER 1, 2026

Detailed Emission Calculations
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N/A	Insignificant Activity	IA1.003-IA1.019	ADR Building Heaters (0.4 MMBtu/hr, 16	65
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N/A	Insignificant Activity	IA1.077	15,000 - gallon Diesel Tank	85

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		01A
System Name		Primary Crusher Circuit
Unit No.		PF1.001
Unit Description		Ore Transfer through Vibrating Grizzly to Primary Crusher/Bypass (CV01)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Water Sprays
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.675	2.957	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.248	1.084	
$PM_{2.5}$	0.0001666	lb/ton	0.037	0.164	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		01B
System Name		Primary Crusher Circuit
Unit No.		PF1.002
Unit Description		Primary Crushing and Associated Transfers (In from Vibrating Grizzly, Out to Primary Discharge Conveyor (CV01))
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Water Sprays
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0054	lb/ton	1.215	5.322	AP-42 Table 11.19.2-2 (08/04) tert. crush unctrl. (NDEP 2017)
PM_{10}	0.0024	lb/ton	0.54	2.365	
$PM_{2.5}$	0.0003634	lb/ton	0.082	0.358	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		02
System Name		Ore Transfers
Unit No.		PF1.003
Unit Description		Ore Transfer from Primary Discharge Conveyor (CV01) to Overland Conveyor (CV02)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Water Sprays
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.675	2.957	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.248	1.084	
$PM_{2.5}$	0.0001666	lb/ton	0.037	0.164	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		03
System Name		Ore Screening
Unit No.		PF1.005
Unit Description		Screening and Associated Transfers (In from Overland Conveyor (CV02), Out to Screen Undersize Conveyor (CV03) or Leach Pad Feed Conveyor (CV05))
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Water Sprays
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.025	lb/ton	5.625	24.638	AP-42 Table 11.19.2-2 (08/04) screen. unctrl. (NDEP 2017)
PM_{10}	0.0087	lb/ton	1.958	8.574	
$PM_{2.5}$	0.0013174	lb/ton	0.296	1.298	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		04
System Name		Cement/Lime Silo - Loading
Unit No.		S2.001
Unit Description		Cement/Lime Silo (Including Guppies) Loading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	80.0 ton
	Annual	109,500
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Bin Vent
	dscfm	0
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.00099	lb/ton	0.079	0.054	AP-42 Table 11.12.2-2 (06/06) cement unload. ctrl. (NDEP 2017)
PM_{10}	0.00034	lb/ton	0.027	0.019	
$PM_{2.5}$	0.0000515	lb/ton	0.004	0.003	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		04
System Name		Cement/Lime Silo - Discharge
Unit No.		PF1.006
Unit Description		Cement/Lime Silo Discharge
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	12.5 ton
	Annual	109,500
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0048	lb/ton	0.062	0.263	AP-42 Table 11.12-2 (06/06) hopper loading unctrl. (NDEP 2017)
PM_{10}	0.0028	lb/ton	0.036	0.153	
$PM_{2.5}$	0.000424	lb/ton	0.006	0.023	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		15
System Name		Portable Silo - Loading
Unit No.		S2.015
Unit Description		Portable Silo (Including Guppies) Loading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	80.0 ton
	Annual	109,500
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Bin Vent
	dscfm	0
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.00099	lb/ton	0.079	0.054	AP-42 Table 11.12.2-2 (06/06) cement unload. ctrl. (NDEP 2017)
PM_{10}	0.00034	lb/ton	0.027	0.019	
$PM_{2.5}$	0.0000515	lb/ton	0.004	0.003	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		Storage Silo			
System No.		15			
System Name		Portable Silo - Discharge			
Unit No.		PF1.031			
Unit Description		Portable Silo Discharge			
Operating Hours	Daily	24			
	Annual	8,760			
Throughput	Hourly	12.5 ton			
	Annual	109,500			
Heat (MMBtu)	Hourly	N/A			
	Annual	N/A			
Fuel Usage	Type	N/A			
	Hourly	N/A			
	Annual	N/A			
	Units	N/A			
Controls	Type	None			
	dscfm	N/A			
No. of Units	count	1			
Criteria Pollutant Emissions					
Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0048	lb/ton	0.062	0.263	AP-42 Table 11.12-2 (06/06) hopper loading unctrl. (NDEP 2017)
PM_{10}	0.0028	lb/ton	0.036	0.153	
$PM_{2.5}$	0.000424	lb/ton	0.006	0.023	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		05A
System Name		Agglomeration
Unit No.		PF1.007
Unit Description		Ore Transfer from Conveyor (CV03) to Agglomerator
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Solution Spray
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	2.7	11.826	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.99	4.336	
$PM_{2.5}$	0.0001666	lb/ton	0.15	0.657	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		05B
System Name		Agglomeration
Unit No.		PF1.008
Unit Description		Agglomerator (Wet Process)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	Wet Process
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	--	--	--	--	(Class II Permit 2019)
PM_{10}	--	--	--	--	
$PM_{2.5}$	--	--	--	--	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.009
Unit Description		Agglomerator Discharge to Agglomerator Product Conveyor (CV04)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.010
Unit Description		Conveyor Transfers #1 (CV04 to CV05)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.011
Unit Description		Conveyor Transfers #2
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.012
Unit Description		Conveyor Transfers #3
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.013
Unit Description		Conveyor Transfers #4
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.014
Unit Description		Conveyor Transfers #5
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.015
Unit Description		Conveyor Transfers #6
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		Industrial Process
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.016
Unit Description		Conveyor Transfers #7
Operating Hours	Daily	24
	Annual	8,760
Throughput	Hourly	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	Hourly	N/A
	Annual	N/A
Fuel Usage	Type	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	Type	High Moisture
	dscfm	N/A
No. of Units	count	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.017
Unit Description		Conveyor Transfers #8
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.018
Unit Description		Conveyor Transfers #9
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.019
Unit Description		Conveyor Transfers #10
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.020
Unit Description		Conveyor Transfers #11
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.021
Unit Description		Conveyor Transfers #12
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.022
Unit Description		Conveyor Transfers #13
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**			
System No.		06			
System Name		Ore Transfer to Leach Pad			
Unit No.		PF1.023			
Unit Description		Conveyor Transfers #14			
Operating Hours	**Daily**	24			
	Annual	8,760			
Throughput	**Hourly**	900.0 ton			
	Annual	7,884,000			
Heat (MMBtu)	**Hourly**	N/A			
	Annual	N/A			
Fuel Usage	**Type**	N/A			
	Hourly	N/A			
	Annual	N/A			
	Units	N/A			
Controls	**Type**	High Moisture			
	dscfm	N/A			
No. of Units	**count**	1			
Criteria Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.024
Unit Description		Conveyor Transfers #15
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.025
Unit Description		Conveyor Transfers #16
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.026
Unit Description		Conveyor Transfers #17
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.027
Unit Description		Conveyor Transfers #18
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.028
Unit Description		Conveyor Transfers #19
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.029
Unit Description		Conveyor Transfers #20
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		06
System Name		Ore Transfer to Leach Pad
Unit No.		PF1.030
Unit Description		Conveyor Transfers #21
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	900.0 ton
	Annual	7,884,000
Heat (MMBtu)	**Hourly**	N/A
	Annual	N/A
Fuel Usage	**Type**	N/A
	Hourly	N/A
	Annual	N/A
	Units	N/A
Controls	**Type**	High Moisture
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.003	lb/ton	0.405	1.774	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0011	lb/ton	0.149	0.65	
$PM_{2.5}$	0.0001666	lb/ton	0.022	0.098	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		10
System Name		Mine Site Power Generation
Unit No.		S2.009
Unit Description		LNG Generator #2 (Caterpillar G3516C; 2018)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	2,175 hp
	Annual	19,053,000
Heat (MMBtu)	**Hourly**	16.04
	Annual	140,525
Fuel Usage	**Type**	LNG
	Hourly	16
	Annual	140,525
	Units	gallons
Controls	**Type**	Oxidation Cat. (CO, HCHO)
	dscfm	3,648
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0000737	lb/hp-hr	0.16	0.702	PM & SO2 - (AP-42 Tab. 3.2-7) CO (75%), NOx (100%), VOC (50%) - Manufacturer Specs.
PM_{10}	0.0000737	lb/hp-hr	0.16	0.702	
$PM_{2.5}$	0.0000737	lb/hp-hr	0.16	0.702	
SO_2	0.0000043	lb/hp-hr	0.009	0.041	
NO_X	0.0022046	lb/hp-hr	4.785	21.002	
CO	0.0060848	lb/hp-hr	3.309	14.492	
VOC	0.0012566	lb/hp-hr	2.733	11.971	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
1,1,2,2-Tetrachloroethane	4.00E-5	lb/MMBtu	6.42E-4	2.81E-3	AP-42, Table 3.2-2 (7/00) Natural Gas-fired 4-Stroke Lean-Burn Engines, Formaldehyde (Manufacturer) - Oxidation Catalyst - 75% Control Efficiency
1,1,2-Trichloroethane	3.18E-5	lb/MMBtu	5.10E-4	2.23E-3	
1,1-Dichloroethane	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
1,2-Dichloroethane	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
1,2-Dichloropropane	2.69E-5	lb/MMBtu	4.32E-4	1.89E-3	
1,3-Butadiene	2.67E-4	lb/MMBtu	4.28E-3	1.88E-2	
1,3-Dichloropropene	2.64E-5	lb/MMBtu	4.24E-4	1.85E-3	
2-Methylnaphthalene	3.32E-5	lb/MMBtu	5.33E-4	2.33E-3	
2,2,4-Trimethylpentane	2.50E-4	lb/MMBtu	4.01E-3	1.76E-2	
Acenaphthene	1.25E-6	lb/MMBtu	2.01E-5	8.78E-5	
Acenaphthylene	5.53E-6	lb/MMBtu	8.87E-5	3.89E-4	
Acetaldehyde	8.36E-3	lb/MMBtu	1.34E-1	5.87E-1	
Acrolein	5.14E-3	lb/MMBtu	8.25E-2	3.61E-1	
Benzene	4.40E-4	lb/MMBtu	7.06E-3	3.09E-2	
Benzo(b)fluoranthene	1.66E-7	lb/MMBtu	2.66E-6	1.17E-5	
Benzo(e)pyrene	4.15E-7	lb/MMBtu	6.66E-6	2.92E-5	
Benzo(g,h,i)perylene	4.14E-7	lb/MMBtu	6.64E-6	2.91E-5	
Biphenyl	2.12E-4	lb/MMBtu	3.40E-3	1.49E-2	
Carbon Tetrachloride	3.67E-5	lb/MMBtu	5.89E-4	2.58E-3	
Chlorobenzene	3.04E-5	lb/MMBtu	4.88E-4	2.14E-3	
Chloroethane	1.87E-6	lb/MMBtu	3.00E-5	1.31E-4	
Chloroform	2.85E-5	lb/MMBtu	4.57E-4	2.00E-3	
Chrysene	6.93E-7	lb/MMBtu	1.11E-5	4.87E-5	
Ethylbenzene	3.97E-5	lb/MMBtu	6.37E-4	2.79E-3	
Ethylene Dibromide	4.43E-5	lb/MMBtu	7.11E-4	3.11E-3	
Fluoranthene	1.11E-6	lb/MMBtu	1.78E-5	7.80E-5	
Fluorene	5.67E-6	lb/MMBtu	9.10E-5	3.98E-4	
Formaldehyde	4.18E-2	lb/MMBtu	6.71E-1	2.94E+0	
Methanol	2.50E-3	lb/MMBtu	4.01E-2	1.76E-1	
Methylene Chloride	2.00E-5	lb/MMBtu	3.21E-4	1.41E-3	
n-Hexane	1.11E-3	lb/MMBtu	1.78E-2	7.80E-2	
Naphthalene	7.44E-5	lb/MMBtu	1.19E-3	5.23E-3	
PAH	2.69E-5	lb/MMBtu	4.32E-4	1.89E-3	
Phenanthrene	1.04E-5	lb/MMBtu	1.67E-4	7.31E-4	
Phenol	2.40E-5	lb/MMBtu	3.85E-4	1.69E-3	
Pyrene	1.36E-6	lb/MMBtu	2.18E-5	9.56E-5	
Styrene	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
Toluene	4.08E-4	lb/MMBtu	6.55E-3	2.87E-2	
Vinyl Chloride	1.49E-5	lb/MMBtu	2.39E-4	1.05E-3	
Xylenes	1.84E-4	lb/MMBtu	2.95E-3	1.29E-2	
Total			**9.84E-1**	**4.31E+0**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	1,877	8,219	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	1	4.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	1	4.1	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**1,878**	**8,228**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		10
System Name		Mine Site Power Generation
Unit No.		S2.010
Unit Description		LNG Generator #3 (Caterpillar G3516C; 2018)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	2,175 hp
	Annual	19,053,000
Heat (MMBtu)	**Hourly**	16.04
	Annual	140,525
Fuel Usage	**Type**	LNG
	Hourly	16
	Annual	140,525
	Units	gallons
Controls	**Type**	Oxidation Cat. (CO, HCHO)
	dscfm	3,648
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0000737	lb/hp-hr	0.16	0.702	PM & SO2 - (AP-42 Tab. 3.2-7) CO (75%), NOx (100%), VOC (50%) - Manufacturer Specs.
PM_{10}	0.0000737	lb/hp-hr	0.16	0.702	
$PM_{2.5}$	0.0000737	lb/hp-hr	0.16	0.702	
SO_2	0.0000043	lb/hp-hr	0.009	0.041	
NO_X	0.0022046	lb/hp-hr	4.785	21.002	
CO	0.0060848	lb/hp-hr	3.309	14.492	
VOC	0.0012566	lb/hp-hr	2.733	11.971	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
1,1,2,2-Tetrachloroethane	4.00E-5	lb/MMBtu	6.42E-4	2.81E-3	AP-42, Table 3.2-2 (7/00) Natural Gas-fired 4-Stroke Lean-Burn Engines, Formaldehyde (Manufacturer) - Oxidation Catalyst - 75% Control Efficiency
1,1,2-Trichloroethane	3.18E-5	lb/MMBtu	5.10E-4	2.23E-3	
1,1-Dichloroethane	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
1,2-Dichloroethane	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
1,2-Dichloropropane	2.69E-5	lb/MMBtu	4.32E-4	1.89E-3	
1,3-Butadiene	2.67E-4	lb/MMBtu	4.28E-3	1.88E-2	
1,3-Dichloropropene	2.64E-5	lb/MMBtu	4.24E-4	1.85E-3	
2-Methylnaphthalene	3.32E-5	lb/MMBtu	5.33E-4	2.33E-3	
2,2,4-Trimethylpentane	2.50E-4	lb/MMBtu	4.01E-3	1.76E-2	
Acenaphthene	1.25E-6	lb/MMBtu	2.01E-5	8.78E-5	
Acenaphthylene	5.53E-6	lb/MMBtu	8.87E-5	3.89E-4	
Acetaldehyde	8.36E-3	lb/MMBtu	1.34E-1	5.87E-1	
Acrolein	5.14E-3	lb/MMBtu	8.25E-2	3.61E-1	
Benzene	4.40E-4	lb/MMBtu	7.06E-3	3.09E-2	
Benzo(b)fluoranthene	1.66E-7	lb/MMBtu	2.66E-6	1.17E-5	
Benzo(e)pyrene	4.15E-7	lb/MMBtu	6.66E-6	2.92E-5	
Benzo(g,h,i)perylene	4.14E-7	lb/MMBtu	6.64E-6	2.91E-5	
Biphenyl	2.12E-4	lb/MMBtu	3.40E-3	1.49E-2	
Carbon Tetrachloride	3.67E-5	lb/MMBtu	5.89E-4	2.58E-3	
Chlorobenzene	3.04E-5	lb/MMBtu	4.88E-4	2.14E-3	
Chloroethane	1.87E-6	lb/MMBtu	3.00E-5	1.31E-4	
Chloroform	2.85E-5	lb/MMBtu	4.57E-4	2.00E-3	
Chrysene	6.93E-7	lb/MMBtu	1.11E-5	4.87E-5	
Ethylbenzene	3.97E-5	lb/MMBtu	6.37E-4	2.79E-3	
Ethylene Dibromide	4.43E-5	lb/MMBtu	7.11E-4	3.11E-3	
Fluoranthene	1.11E-6	lb/MMBtu	1.78E-5	7.80E-5	
Fluorene	5.67E-6	lb/MMBtu	9.10E-5	3.98E-4	
Formaldehyde	4.18E-2	lb/MMBtu	6.71E-1	2.94E+0	
Methanol	2.50E-3	lb/MMBtu	4.01E-2	1.76E-1	
Methylene Chloride	2.00E-5	lb/MMBtu	3.21E-4	1.41E-3	
n-Hexane	1.11E-3	lb/MMBtu	1.78E-2	7.80E-2	
Naphthalene	7.44E-5	lb/MMBtu	1.19E-3	5.23E-3	
PAH	2.69E-5	lb/MMBtu	4.32E-4	1.89E-3	
Phenanthrene	1.04E-5	lb/MMBtu	1.67E-4	7.31E-4	
Phenol	2.40E-5	lb/MMBtu	3.85E-4	1.69E-3	
Pyrene	1.36E-6	lb/MMBtu	2.18E-5	9.56E-5	
Styrene	2.36E-5	lb/MMBtu	3.79E-4	1.66E-3	
Toluene	4.08E-4	lb/MMBtu	6.55E-3	2.87E-2	
Vinyl Chloride	1.49E-5	lb/MMBtu	2.39E-4	1.05E-3	
Xylenes	1.84E-4	lb/MMBtu	2.95E-3	1.29E-2	
Total			**9.84E-1**	**4.31E+0**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	1,877	8,219	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	1	4.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	1	4.1	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**1,878**	**8,228**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		11
System Name		Mine Site Power Generation
Unit No.		S2.011
Unit Description		LNG Generator #1 (Caterpillar G3512; 2018)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	1,716 hp
	Annual	15,032,160
Heat (MMBtu)	**Hourly**	13.45
	Annual	117,831
Fuel Usage	**Type**	LNG
	Hourly	13
	Annual	117,831
	Units	gallons
Controls	**Type**	Oxidation Cat. (CO, HCHO)
	dscfm	3,079
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0000783	lb/hp-hr	0.134	0.584	PM & SO2 - (AP-42 Tab. 3.2-7) CO (50%), NOx (100%), VOC (50%) - Manufacturer Specs.
PM_{10}	0.0000783	lb/hp-hr	0.134	0.584	
$PM_{2.5}$	0.0000783	lb/hp-hr	0.134	0.584	
SO_2	0.0000046	lb/hp-hr	0.008	0.035	
NO_X	0.0022046	lb/hp-hr	3.783	16.55	
CO	0.0069225	lb/hp-hr	2.97	13.004	
VOC	0.0011674	lb/hp-hr	2.003	8.774	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
1,1,2,2-Tetrachloroethane	4.00E-5	lb/MMBtu	5.38E-4	2.36E-3	AP-42, Table 3.2-2 (7/00) Natural Gas-fired 4-Stroke Lean-Burn Engines, Formaldehyde (Manufacturer) - Oxidation Catalyst - 75% Control Efficiency
1,1,2-Trichloroethane	3.18E-5	lb/MMBtu	4.28E-4	1.87E-3	
1,1-Dichloroethane	2.36E-5	lb/MMBtu	3.17E-4	1.39E-3	
1,2-Dichloroethane	2.36E-5	lb/MMBtu	3.17E-4	1.39E-3	
1,2-Dichloropropane	2.69E-5	lb/MMBtu	3.62E-4	1.58E-3	
1,3-Butadiene	2.67E-4	lb/MMBtu	3.59E-3	1.57E-2	
1,3-Dichloropropene	2.64E-5	lb/MMBtu	3.55E-4	1.56E-3	
2-Methylnaphthalene	3.32E-5	lb/MMBtu	4.47E-4	1.96E-3	
2,2,4-Trimethylpentane	2.50E-4	lb/MMBtu	3.36E-3	1.47E-2	
Acenaphthene	1.25E-6	lb/MMBtu	1.68E-5	7.36E-5	
Acenaphthylene	5.53E-6	lb/MMBtu	7.44E-5	3.26E-4	
Acetaldehyde	8.36E-3	lb/MMBtu	1.12E-1	4.93E-1	
Acrolein	5.14E-3	lb/MMBtu	6.91E-2	3.03E-1	
Benzene	4.40E-4	lb/MMBtu	5.92E-3	2.59E-2	
Benzo(b)fluoranthene	1.66E-7	lb/MMBtu	2.23E-6	9.78E-6	
Benzo(e)pyrene	4.15E-7	lb/MMBtu	5.58E-6	2.44E-5	
Benzo(g,h,i)perylene	4.14E-7	lb/MMBtu	5.57E-6	2.44E-5	
Biphenyl	2.12E-4	lb/MMBtu	2.85E-3	1.25E-2	
Carbon Tetrachloride	3.67E-5	lb/MMBtu	4.94E-4	2.16E-3	
Chlorobenzene	3.04E-5	lb/MMBtu	4.09E-4	1.79E-3	
Chloroethane	1.87E-6	lb/MMBtu	2.52E-5	1.10E-4	
Chloroform	2.85E-5	lb/MMBtu	3.83E-4	1.68E-3	
Chrysene	6.93E-7	lb/MMBtu	9.32E-6	4.08E-5	
Ethylbenzene	3.97E-5	lb/MMBtu	5.34E-4	2.34E-3	
Ethylene Dibromide	4.43E-5	lb/MMBtu	5.96E-4	2.61E-3	
Fluoranthene	1.11E-6	lb/MMBtu	1.49E-5	6.54E-5	
Fluorene	5.67E-6	lb/MMBtu	7.63E-5	3.34E-4	
Formaldehyde	4.18E-2	lb/MMBtu	5.63E-1	2.47E+0	
Methanol	2.50E-3	lb/MMBtu	3.36E-2	1.47E-1	
Methylene Chloride	2.00E-5	lb/MMBtu	2.69E-4	1.18E-3	
n-Hexane	1.11E-3	lb/MMBtu	1.49E-2	6.54E-2	
Naphthalene	7.44E-5	lb/MMBtu	1.00E-3	4.38E-3	
PAH	2.69E-5	lb/MMBtu	3.62E-4	1.58E-3	
Phenanthrene	1.04E-5	lb/MMBtu	1.40E-4	6.13E-4	
Phenol	2.40E-5	lb/MMBtu	3.23E-4	1.41E-3	
Pyrene	1.36E-6	lb/MMBtu	1.83E-5	8.01E-5	
Styrene	2.36E-5	lb/MMBtu	3.17E-4	1.39E-3	
Toluene	4.08E-4	lb/MMBtu	5.49E-3	2.40E-2	
Vinyl Chloride	1.49E-5	lb/MMBtu	2.00E-4	8.78E-4	
Xylenes	1.84E-4	lb/MMBtu	2.47E-3	1.08E-2	
Total			**8.25E-1**	**3.61E+0**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	1,573	6,892	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	1	3.6	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	1	3.4	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**1,575**	**6,899**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		12
System Name		Well Site Power Generation
Unit No.		S2.012
Unit Description		Diesel Generator #4 (Well Site Power, Isuzu BQ-6WGIX, 2018)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	512 hp
	Annual	4,487,415
Heat (MMBtu)	**Hourly**	3.15
	Annual	27,594
Fuel Usage	**Type**	Diesel
	Hourly	3
	Annual	27,594
	Units	gallons
Controls	**Type**	None
	dscfm	470
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0000329	lb/hp-hr	0.017	0.074	40 CFR 60.4204(b), 60.4201(a), and 1039.101, Table 1; SO2: mass balance w/ 15 ppm S (ULSD)
PM_{10}	0.0000329	lb/hp-hr	0.017	0.074	
$PM_{2.5}$	0.0000329	lb/hp-hr	0.017	0.074	
SO_2	0.0000093	lb/hp-hr	0.005	0.021	
NO_X	0.0006576	lb/hp-hr	0.337	1.473	
CO	0.0057541	lb/hp-hr	2.943	12.91	
VOC	0.0003121	lb/hp-hr	0.16	0.7	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
Benzene	9.33E-4	lb/MMBtu	2.94E-3	1.29E-2	AP-42 Table 3.3-2 (10/96), Diesel Industrial Engines
Toluene	4.09E-4	lb/MMBtu	1.29E-3	5.64E-3	
Xylenes	2.85E-4	lb/MMBtu	8.98E-4	3.93E-3	
1,3-Butadiene	3.91E-5	lb/MMBtu	1.23E-4	5.39E-4	
Formaldehyde	1.18E-3	lb/MMBtu	3.72E-3	1.63E-2	
Acetaldehyde	7.67E-4	lb/MMBtu	2.42E-3	1.06E-2	
Acrolein	9.25E-5	lb/MMBtu	2.91E-4	1.28E-3	
Naphthalene	8.48E-5	lb/MMBtu	2.67E-4	1.17E-3	
Acenaphthylene	5.06E-6	lb/MMBtu	1.59E-5	6.98E-5	
Acenaphthene	1.42E-6	lb/MMBtu	4.47E-6	1.96E-5	
Fluorene	2.92E-5	lb/MMBtu	9.20E-5	4.03E-4	
Phenanthrene	2.94E-5	lb/MMBtu	9.26E-5	4.06E-4	
Anthracene	1.87E-6	lb/MMBtu	5.89E-6	2.58E-5	
Fluoranthene	7.61E-6	lb/MMBtu	2.40E-5	1.05E-4	
Pyrene	4.78E-6	lb/MMBtu	1.51E-5	6.59E-5	
Benz(a)anthracene	1.68E-6	lb/MMBtu	5.29E-6	2.32E-5	
Chrysene	3.53E-7	lb/MMBtu	1.11E-6	4.87E-6	
Benzo(b)fluoranthene	9.91E-8	lb/MMBtu	3.12E-7	1.37E-6	
Benzo(k)fluoranthene	1.55E-7	lb/MMBtu	4.88E-7	2.14E-6	
Benzo(a)pyrene	1.88E-7	lb/MMBtu	5.92E-7	2.59E-6	
Indeno(1,2,3-cd)pyrene	3.75E-7	lb/MMBtu	1.18E-6	5.17E-6	
Dibenz(a,h)anthracene	5.83E-7	lb/MMBtu	1.84E-6	8.04E-6	
Benzo(g,h,i)perylene	4.89E-7	lb/MMBtu	1.54E-6	6.75E-6	
Total			**1.22E-2**	**5.34E-2**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	73.96	1	514	2,250	40 CFR Part 98, Table C-1 to Subpart C, Distillate Fuel Oil #2
CH_4	0.003	28	1	2.6	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
N_2O	0.0006	265	1	4.8	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
Total CO_2e			**515**	**2,257**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		13
System Name		Backup Generator
Unit No.		S2.013
Unit Description		Backup Generator Engine (Caterpillar C13, 2013)
Operating Hours	**Daily**	24
	Annual	100
Throughput	**Hourly**	569 hp
	Annual	56,900
Heat (MMBtu)	**Hourly**	3.08
	Annual	308
Fuel Usage	**Type**	Diesel
	Hourly	3
	Annual	308
	Units	gallons
Controls	**Type**	None
	dscfm	630
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.01	g/kW-hr	0.009	0.	PM=PM10=PM2.5: EPA DCPXL12.5HPA-003; CO, NOX=HC=NOX+HC: 40 CFR 60.4205(b), 60.4202(a)(2), and 1039, App I, Tab 3; SO2: mass balance w/ 15 ppm S (ULSD)
PM_{10}	0.01	g/kW-hr	0.009	0.	
$PM_{2.5}$	0.01	g/kW-hr	0.009	0.	
SO_2	0.0050047	g/kW-hr	0.	0.	
NO_X	4.00	g/kW-hr	0.043	0.187	
CO	3.50	g/kW-hr	3.274	0.164	
VOC	4.00	g/kW-hr	3.742	0.187	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
Benzene	9.33E-4	lb/MMBtu	2.87E-3	1.44E-4	AP-42 Table 3.3-2 (10/96), Diesel Industrial Engines
Toluene	4.09E-4	lb/MMBtu	1.26E-3	6.30E-5	
Xylenes	2.85E-4	lb/MMBtu	8.78E-4	4.39E-5	
1,3-Butadiene	3.91E-5	lb/MMBtu	1.20E-4	6.02E-6	
Formaldehyde	1.18E-3	lb/MMBtu	3.63E-3	1.82E-4	
Acetaldehyde	7.67E-4	lb/MMBtu	2.36E-3	1.18E-4	
Acrolein	9.25E-5	lb/MMBtu	2.85E-4	1.42E-5	
Naphthalene	8.48E-5	lb/MMBtu	2.61E-4	1.31E-5	
Acenaphthylene	5.06E-6	lb/MMBtu	1.56E-5	7.79E-7	
Acenaphthene	1.42E-6	lb/MMBtu	4.37E-6	2.19E-7	
Fluorene	2.92E-5	lb/MMBtu	8.99E-5	4.50E-6	
Phenanthrene	2.94E-5	lb/MMBtu	9.06E-5	4.53E-6	
Anthracene	1.87E-6	lb/MMBtu	5.76E-6	2.88E-7	
Fluoranthene	7.61E-6	lb/MMBtu	2.34E-5	1.17E-6	
Pyrene	4.78E-6	lb/MMBtu	1.47E-5	7.36E-7	
Benz(a)anthracene	1.68E-6	lb/MMBtu	5.17E-6	2.59E-7	
Chrysene	3.53E-7	lb/MMBtu	1.09E-6	5.44E-8	
Benzo(b)fluoranthene	9.91E-8	lb/MMBtu	3.05E-7	1.53E-8	
Benzo(k)fluoranthene	1.55E-7	lb/MMBtu	4.77E-7	2.39E-8	
Benzo(a)pyrene	1.88E-7	lb/MMBtu	5.79E-7	2.90E-8	
Indeno(1,2,3-cd)pyrene	3.75E-7	lb/MMBtu	1.16E-6	5.78E-8	
Dibenz(a,h)anthracene	5.83E-7	lb/MMBtu	1.80E-6	8.98E-8	
Benzo(g,h,i)perylene	4.89E-7	lb/MMBtu	1.51E-6	7.53E-8	
Total			**1.19E-2**	**5.97E-4**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	73.96	1	502	25	40 CFR Part 98, Table C-1 to Subpart C, Distillate Fuel Oil #2
CH_4	0.003	28	1	0.0	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
N_2O	0.0006	265	1	0.1	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
Total CO_2e			**504**	**25**	

DETAILED EMISSION CALCULATIONS

Category		Combustion Equipment
System No.		16
System Name		Portable Generator
Unit No.		S2.016
Unit Description		Portable Generator Engine (John Deere 4045HFG, 2014)
Operating Hours	Daily	24
	Annual	8,760
Throughput	Hourly	107 hp
	Annual	937,320
Heat (MMBtu)	Hourly	0.6
	Annual	5,274
Fuel Usage	Type	Diesel
	Hourly	1
	Annual	5,274
	Units	gallons
Controls	Type	None
	dscfm	127
No. of Units	count	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0000329	lb/hp-hr	0.004	0.015	40 CFR 60.4205(b), 60.4202(a)(2), and 1039, Appendix I, Table 3, Tier 3; SO2: mass balance w/ 15 ppm S (ULSD)
PM_{10}	0.0000329	lb/hp-hr	0.004	0.015	
$PM_{2.5}$	0.0000329	lb/hp-hr	0.004	0.015	
SO_2	0.0000083	lb/hp-hr	0.001	0.004	
NO_X	0.0006576	lb/hp-hr	0.07	0.308	
CO	0.0082201	lb/hp-hr	0.88	3.852	
VOC	0.0003121	lb/hp-hr	0.033	0.146	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
Benzene	9.33E-4	lb/MMBtu	5.62E-4	2.46E-3	AP-42 Table 3.3-2 (10/96), Diesel Industrial Engines
Toluene	4.09E-4	lb/MMBtu	2.46E-4	1.08E-3	
Xylenes	2.85E-4	lb/MMBtu	1.72E-4	7.51E-4	
1,3-Butadiene	3.91E-5	lb/MMBtu	2.35E-5	1.03E-4	
Formaldehyde	1.18E-3	lb/MMBtu	7.10E-4	3.11E-3	
Acetaldehyde	7.67E-4	lb/MMBtu	4.62E-4	2.02E-3	
Acrolein	9.25E-5	lb/MMBtu	5.57E-5	2.44E-4	
Naphthalene	8.48E-5	lb/MMBtu	5.10E-5	2.24E-4	
Acenaphthylene	5.06E-6	lb/MMBtu	3.05E-6	1.33E-5	
Acenaphthene	1.42E-6	lb/MMBtu	8.55E-7	3.74E-6	
Fluorene	2.92E-5	lb/MMBtu	1.76E-5	7.70E-5	
Phenanthrene	2.94E-5	lb/MMBtu	1.77E-5	7.75E-5	
Anthracene	1.87E-6	lb/MMBtu	1.13E-6	4.93E-6	
Fluoranthene	7.61E-6	lb/MMBtu	4.58E-6	2.01E-5	
Pyrene	4.78E-6	lb/MMBtu	2.88E-6	1.26E-5	
Benz(a)anthracene	1.68E-6	lb/MMBtu	1.01E-6	4.43E-6	
Chrysene	3.53E-7	lb/MMBtu	2.13E-7	9.31E-7	
Benzo(b)fluoranthene	9.91E-8	lb/MMBtu	5.97E-8	2.61E-7	
Benzo(k)fluoranthene	1.55E-7	lb/MMBtu	9.33E-8	4.09E-7	
Benzo(a)pyrene	1.88E-7	lb/MMBtu	1.13E-7	4.96E-7	
Indeno(1,2,3-cd)pyrene	3.75E-7	lb/MMBtu	2.26E-7	9.89E-7	
Dibenz(a,h)anthracene	5.83E-7	lb/MMBtu	3.51E-7	1.54E-6	
Benzo(g,h,i)perylene	4.89E-7	lb/MMBtu	2.94E-7	1.29E-6	
Total			**2.33E-3**	**1.02E-2**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	73.96	1	98	430	40 CFR Part 98, Table C-1 to Subpart C, Distillate Fuel Oil #2
CH_4	0.003	28	0	0.5	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
N_2O	0.0006	265	0	0.9	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
Total CO_2e			**98**	**431**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		17
System Name		Mine Site Portable Generator
Unit No.		S2.017
Unit Description		Portable Generator Engine (John Deere 6090HFG06, 2017)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	437 hp
	Annual	3,829,574
Heat (MMBtu)	**Hourly**	2.34
	Annual	20,481
Fuel Usage	**Type**	Diesel
	Hourly	2
	Annual	20,481
	Units	gallons
Controls	**Type**	None
	dscfm	461
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	g/kW-hr	0.014	0.063	40 CFR 60.4204(b), 60.4201(a), and 1039.101, Table 1; SO2: mass balance w/ 15 ppm S (ULSD)
PM_{10}	0.02	g/kW-hr	0.014	0.063	
$PM_{2.5}$	0.02	g/kW-hr	0.014	0.063	
SO_2	0.003799	g/kW-hr	0.003	0.012	
NO_X	0.40	g/kW-hr	0.287	1.259	
CO	3.50	g/kW-hr	2.515	11.018	
VOC	0.19	g/kW-hr	0.137	0.598	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
Benzene	9.33E-4	lb/MMBtu	2.18E-3	9.55E-3	AP-42 Table 3.3-2 (10/96), Diesel Industrial Engines
Toluene	4.09E-4	lb/MMBtu	9.56E-4	4.19E-3	
Xylenes	2.85E-4	lb/MMBtu	6.66E-4	2.92E-3	
1,3-Butadiene	3.91E-5	lb/MMBtu	9.14E-5	4.00E-4	
Formaldehyde	1.18E-3	lb/MMBtu	2.76E-3	1.21E-2	
Acetaldehyde	7.67E-4	lb/MMBtu	1.79E-3	7.85E-3	
Acrolein	9.25E-5	lb/MMBtu	2.16E-4	9.47E-4	
Naphthalene	8.48E-5	lb/MMBtu	1.98E-4	8.68E-4	
Acenaphthylene	5.06E-6	lb/MMBtu	1.18E-5	5.18E-5	
Acenaphthene	1.42E-6	lb/MMBtu	3.32E-6	1.45E-5	
Fluorene	2.92E-5	lb/MMBtu	6.83E-5	2.99E-4	
Phenanthrene	2.94E-5	lb/MMBtu	6.87E-5	3.01E-4	
Anthracene	1.87E-6	lb/MMBtu	4.37E-6	1.91E-5	
Fluoranthene	7.61E-6	lb/MMBtu	1.78E-5	7.79E-5	
Pyrene	4.78E-6	lb/MMBtu	1.12E-5	4.89E-5	
Benz(a)anthracene	1.68E-6	lb/MMBtu	3.93E-6	1.72E-5	
Chrysene	3.53E-7	lb/MMBtu	8.25E-7	3.61E-6	
Benzo(b)fluoranthene	9.91E-8	lb/MMBtu	2.32E-7	1.01E-6	
Benzo(k)fluoranthene	1.55E-7	lb/MMBtu	3.62E-7	1.59E-6	
Benzo(a)pyrene	1.88E-7	lb/MMBtu	4.40E-7	1.93E-6	
Indeno(1,2,3-cd)pyrene	3.75E-7	lb/MMBtu	8.77E-7	3.84E-6	
Dibenz(a,h)anthracene	5.83E-7	lb/MMBtu	1.36E-6	5.97E-6	
Benzo(g,h,i)perylene	4.89E-7	lb/MMBtu	1.14E-6	5.01E-6	
Total			**9.06E-3**	**3.97E-2**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	73.96	1	381	1,670	40 CFR Part 98, Table C-1 to Subpart C, Distillate Fuel Oil #2
CH_4	0.003	28	0	1.9	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
N_2O	0.0006	265	1	3.6	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
Total CO_2e			**382**	**1,675**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		18
System Name		Administrative Backup Generator
Unit No.		S2.018
Unit Description		Administrative Backup Generator Engine (Generac 800 Series or similar, 2024+)
Operating Hours	**Daily**	24
	Annual	100
Throughput	**Hourly**	16 kW
	Annual	1,600
Heat (MMBtu)	**Hourly**	0.27
	Annual	27
Fuel Usage	**Type**	Propane
	Hourly	0
	Annual	27
	Units	gallons
Controls	**Type**	None
	dscfm	40
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.4139027	g/kW-hr	0.015	0.001	CO, NOX=VOC=HC+NOX (40 CFR 60.4233(a), 60.4231(a), and 1054.105, Table 1); PM=PM10=PM2.5=5 lb/kgal, SO2=0.35 lb/kgal (CARB, NDEP Engine Guidance)
PM_{10}	0.4139027	g/kW-hr	0.015	0.001	
$PM_{2.5}$	0.4139027	g/kW-hr	0.015	0.001	
SO_2	0.0289732	g/kW-hr	0.	0.	
NO_X	8.00	g/kW-hr	0.003	0.014	
CO	610.00	g/kW-hr	21.517	1.076	
VOC	8.00	g/kW-hr	0.282	0.014	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
1,1,2,2-Tetrachloroethane	2.53E-5	lb/MMBtu	6.76E-6	3.38E-7	AP-42, Table 3.2-3 (7/00) Natural Gas-fired 4-Stroke Rich-Burn Engines
1,1,2-Trichloroethane	1.53E-5	lb/MMBtu	4.09E-6	2.04E-7	
1,1-Dichloroethane	1.13E-5	lb/MMBtu	3.02E-6	1.51E-7	
1,2-Dichloroethane	1.13E-5	lb/MMBtu	3.02E-6	1.51E-7	
1,2-Dichloropropane	1.30E-5	lb/MMBtu	3.47E-6	1.74E-7	
1,3-Butadiene	6.63E-4	lb/MMBtu	1.77E-4	8.86E-6	
1,3-Dichloropropene	1.27E-5	lb/MMBtu	3.39E-6	1.70E-7	
Acetaldehyde	2.79E-3	lb/MMBtu	7.45E-4	3.73E-5	
Acrolein	2.63E-3	lb/MMBtu	7.03E-4	3.51E-5	
Benzene	1.58E-3	lb/MMBtu	4.22E-4	2.11E-5	
Carbon Tetrachloride	1.77E-5	lb/MMBtu	4.73E-6	2.36E-7	
Chlorobenzene	1.29E-5	lb/MMBtu	3.45E-6	1.72E-7	
Chloroform	1.37E-5	lb/MMBtu	3.66E-6	1.83E-7	
Ethylbenzene	2.48E-5	lb/MMBtu	6.63E-6	3.31E-7	
Ethylene Dibromide	2.13E-5	lb/MMBtu	5.69E-6	2.85E-7	
Formaldehyde	2.05E-2	lb/MMBtu	5.48E-3	2.74E-4	
Methanol	3.06E-3	lb/MMBtu	8.18E-4	4.09E-5	
Methylene Chloride	4.12E-5	lb/MMBtu	1.10E-5	5.50E-7	
Naphthalene	9.71E-5	lb/MMBtu	2.59E-5	1.30E-6	
PAH	1.41E-4	lb/MMBtu	3.77E-5	1.88E-6	
Styrene	1.19E-5	lb/MMBtu	3.18E-6	1.59E-7	
Toluene	5.58E-4	lb/MMBtu	1.49E-4	7.45E-6	
Vinyl Chloride	7.18E-6	lb/MMBtu	1.92E-6	9.59E-8	
Xylenes	1.95E-4	lb/MMBtu	5.21E-5	2.61E-6	
Total			**8.67E-3**	**4.34E-4**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	62.87	1	37	2	40 CFR Part 98, Table C-1 to Subpart C, Propane
CH_4	0.003	28	0	0.0	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
N_2O	0.0006	265	0	0.0	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
Total CO_2e			**37**	**2**	

DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**			
System No.		14			
System Name		Gasoline Storage Tank			
Unit No.		S2.014			
Unit Description		3,000 Gallon Gasoline Storage Tank			
Operating Hours	**Daily**	24			
	Annual	8,760			
Throughput	**Hourly**	N/A			
	Annual	240,000 Gal			
Criteria Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
VOC	0.2098194	lb/hr	0.21	0.919	EPA TANKS5.2

Accumulated Annual Routine Losses for All Tanks

all losses in pounds per year (lb/yr)

Tank ID	Standing Losses	Working Losses	Total Losses
McEwen-Gasoline-3kgal-240kgalpy	682.6500	1,155.3677	1,838.0177
Total	**682.6500**	**1,155.3677**	**1,838.0177**

Tank Characteristics and Meteorological Location by Tank

Identification

Tank ID	McEwen-Gasoline-3kgal-240kgalpy
Tank Type	Horizontal Fixed Roof Tank
Tank Description	System 14, S2.014, Gasoline Storage Tank
City	Eureka
State	Nevada
Company	McEwen Gold Bar

Tank Characteristics

Shell Length (ft)	19
Shell Diameter (ft)	6.500
Maximum Liquid Height (ft)	6
Minimum Liquid Height (ft)	1
Vapor Space Pressure at Normal Operating Conditions (psig)	0
Is Tank Insulated or Underground?	Not Insulated and Not Underground
Liquid Bulk Temperature Calculation Method	AP-42 Calculation

Shell Characteristics

Shell Color/Shade	White
Shell Condition	Good

Breather Vent Settings

Vacuum Setting (psig)	-0.030
Pressure Setting (psig)	0.030

Control Device Settings

Is Tank Equipped with a Control Device?	No Control Device

Meteorological Location

Name	Ely, NV
Atmospheric Pressure (psia)	11.720

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.051
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 1 Loading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.052
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 1 Unloading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.053-IA1.055
Unit Description		Electric Cress Furnace (3 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.003 ton
	Annual	17
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	Fume Hood
	dscfm	N/A
No. of Units	**count**	3

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	60.00	lb/ton	0.198	0.497	AP-42 Tab. 12.7-2, Zinc smelting, Electric retort furnace
PM_{10}	60.00	lb/ton	0.198	0.497	
$PM_{2.5}$	60.00	lb/ton	0.198	0.497	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.056-IA1.061
Unit Description		Sample Laboratory Splitter (or other transfer points) (6 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.474 ton
	Annual	4,152
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	Fume Hood
	dscfm	N/A
No. of Units	**count**	6

Criteria Pollutant Emissions (Combined)

Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
PM	0.018	lb/ton	0.009	0.037	AP-42 Table 11.19.2-2 (08/04) conv. unctrl. (NDEP 2017)
PM_{10}	0.0066	lb/ton	0.003	0.014	
$PM_{2.5}$	0.0009994	lb/ton	0.	0.002	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.062-IA1.064
Unit Description		Sample Laboratory Crushers (3 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.474 ton
	Annual	4,152
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	Fume Hood
	dscfm	N/A
No. of Units	**count**	3

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.0162	lb/ton	0.008	0.034	AP-42 Table 11.19.2-2 (08/04) tert. crush unctrl. (NDEP 2017)
PM_{10}	0.0072	lb/ton	0.003	0.015	
$PM_{2.5}$	0.0010903	lb/ton	0.001	0.002	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.065-IA1.067
Unit Description		Sample Laboratory Screens (3 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.474 ton
	Annual	4,152
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	Fume Hood
	dscfm	N/A
No. of Units	**count**	3

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.075	lb/ton	0.036	0.156	AP-42 Table 11.19.2-2 (08/04) screen. unctrl. (NDEP 2017)
PM_{10}	0.0261	lb/ton	0.012	0.054	
$PM_{2.5}$	0.0039523	lb/ton	0.002	0.008	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Industrial Process**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.068-IA1.070
Unit Description		Sample Laboratory Pulverizers (3 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.474 ton
	Annual	4,152
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	Fume Hood
	dscfm	N/A
No. of Units	**count**	3

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.117	lb/ton	0.055	0.243	AP-42 Tab. 11.19.2-2, fines crush unctrl. (NDEP 2017)
PM_{10}	0.045	lb/ton	0.021	0.093	
$PM_{2.5}$	0.0068143	lb/ton	0.003	0.014	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.072
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 2 Loading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.073
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 2 Unloading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.074
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 3 Loading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Storage Silo**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.075
Unit Description		≤125-Ton Ammonium Nitrate Prill Silo 3 Unloading
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	40.0 ton
	Annual	91,250
Heat (MMBtu)	**Hourly**	0
	Annual	0
Fuel Usage	**Type**	N/A
	Hourly	0
	Annual	0
	Units	0
Controls	**Type**	None
	dscfm	N/A
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.02	lb/ton	0.8	0.913	AP-42 Table 8.3-2 (07/93) bulk load unctrl. (NDEP 2017)
PM_{10}	0.007	lb/ton	0.28	0.319	
$PM_{2.5}$	0.00106	lb/ton	0.042	0.048	
SO_2	--	--			
NO_X	--	--			
CO	--	--			
VOC	--	--			

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**			
System No.		IA			
System Name		Insignificant Activity			
Unit No.		IA1.001			
Unit Description		Carbon Regeneration Kiln Heater (1 MMBtu/hr)			
Operating Hours	**Daily**	24			
	Annual	8,760			
Throughput	**Hourly**	1.0 MMBtu			
	Annual	8,760			
Heat (MMBtu)	**Hourly**	1.0			
	Annual	8,760			
Fuel Usage	**Type**	LNG			
	Hourly	1			
	Annual	8,760			
	Units	gallons			
Controls	**Type**	None			
	dscfm	166			
No. of Units	**count**	1			
Criteria Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
PM	0.007451	lb/MMBtu	0.007	0.033	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.007	0.033	
$PM_{2.5}$	0.007451	lb/MMBtu	0.007	0.033	
SO_2	0.0005882	lb/MMBtu	0.001	0.003	
NO_X	0.0980392	lb/MMBtu	0.098	0.429	
CO	0.0823529	lb/MMBtu	0.082	0.361	
VOC	0.0053922	lb/MMBtu	0.005	0.024	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	2.35E-8	1.03E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	1.57E-8	6.87E-8	
Acenaphthene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Acenaphthylene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Anthracene	2.35E-9	lb/MMBtu	2.35E-9	1.03E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Benzene	2.06E-6	lb/MMBtu	2.06E-6	9.02E-6	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	1.18E-9	5.15E-9	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	1.18E-9	5.15E-9	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Chrysene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	1.18E-9	5.15E-9	
Dichlorobenzene	1.18E-6	lb/MMBtu	1.18E-6	5.15E-6	
Fluoranthene	2.94E-9	lb/MMBtu	2.94E-9	1.29E-8	
Fluorene	2.75E-9	lb/MMBtu	2.75E-9	1.20E-8	
Formaldehyde	7.35E-5	lb/MMBtu	7.35E-5	3.22E-4	
Hexane	1.76E-3	lb/MMBtu	1.76E-3	7.73E-3	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	1.76E-9	7.73E-9	
Naphthalene	5.98E-7	lb/MMBtu	5.98E-7	2.62E-6	
Phenanthrene	1.67E-8	lb/MMBtu	1.67E-8	7.30E-8	
Pyrene	4.90E-9	lb/MMBtu	4.90E-9	2.15E-8	
Toluene	3.33E-6	lb/MMBtu	3.33E-6	1.46E-5	
Lead	4.90E-7	lb/MMBtu	4.90E-7	2.15E-6	
Arsenic	1.96E-7	lb/MMBtu	1.96E-7	8.59E-7	
Beryllium	1.18E-8	lb/MMBtu	1.18E-8	5.15E-8	
Cadmium	1.08E-6	lb/MMBtu	1.08E-6	4.72E-6	
Chromium	1.37E-6	lb/MMBtu	1.37E-6	6.01E-6	
Cobalt	8.24E-8	lb/MMBtu	8.24E-8	3.61E-7	
Manganese	3.73E-7	lb/MMBtu	3.73E-7	1.63E-6	
Mercury	2.55E-7	lb/MMBtu	2.55E-7	1.12E-6	
Nickel	2.06E-6	lb/MMBtu	2.06E-6	9.02E-6	
Selenium	2.35E-8	lb/MMBtu	2.35E-8	1.03E-7	
Total			**1.85E-3**	**8.11E-3**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	117	512	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	0.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	0.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**117**	**513**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.002
Unit Description		Solution Heater (3 MMBtu/hr)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	3.0 MMBtu
	Annual	26,280
Heat (MMBtu)	**Hourly**	3.0
	Annual	26,280
Fuel Usage	**Type**	LNG
	Hourly	3
	Annual	26,280
	Units	gallons
Controls	**Type**	None
	dscfm	498
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
PM	0.007451	lb/MMBtu	0.022	0.098	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.022	0.098	
$PM_{2.5}$	0.007451	lb/MMBtu	0.022	0.098	
SO_2	0.0005882	lb/MMBtu	0.002	0.008	
NO_X	0.0980392	lb/MMBtu	0.294	1.288	
CO	0.0823529	lb/MMBtu	0.247	1.082	
VOC	0.0053922	lb/MMBtu	0.016	0.071	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	7.06E-8	3.09E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	4.71E-8	2.06E-7	
Acenaphthene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Acenaphthylene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Anthracene	2.35E-9	lb/MMBtu	7.06E-9	3.09E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Benzene	2.06E-6	lb/MMBtu	6.18E-6	2.71E-5	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	3.53E-9	1.55E-8	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	3.53E-9	1.55E-8	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Chrysene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	3.53E-9	1.55E-8	
Dichlorobenzene	1.18E-6	lb/MMBtu	3.53E-6	1.55E-5	
Fluoranthene	2.94E-9	lb/MMBtu	8.82E-9	3.86E-8	
Fluorene	2.75E-9	lb/MMBtu	8.24E-9	3.61E-8	
Formaldehyde	7.35E-5	lb/MMBtu	2.21E-4	9.66E-4	
Hexane	1.76E-3	lb/MMBtu	5.29E-3	2.32E-2	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	5.29E-9	2.32E-8	
Naphthalene	5.98E-7	lb/MMBtu	1.79E-6	7.86E-6	
Phenanthrene	1.67E-8	lb/MMBtu	5.00E-8	2.19E-7	
Pyrene	4.90E-9	lb/MMBtu	1.47E-8	6.44E-8	
Toluene	3.33E-6	lb/MMBtu	1.00E-5	4.38E-5	
Lead	4.90E-7	lb/MMBtu	1.47E-6	6.44E-6	
Arsenic	1.96E-7	lb/MMBtu	5.88E-7	2.58E-6	
Beryllium	1.18E-8	lb/MMBtu	3.53E-8	1.55E-7	
Cadmium	1.08E-6	lb/MMBtu	3.24E-6	1.42E-5	
Chromium	1.37E-6	lb/MMBtu	4.12E-6	1.80E-5	
Cobalt	8.24E-8	lb/MMBtu	2.47E-7	1.08E-6	
Manganese	3.73E-7	lb/MMBtu	1.12E-6	4.90E-6	
Mercury	2.55E-7	lb/MMBtu	7.65E-7	3.35E-6	
Nickel	2.06E-6	lb/MMBtu	6.18E-6	2.71E-5	
Selenium	2.35E-8	lb/MMBtu	7.06E-8	3.09E-7	
Total			**5.55E-3**	**2.43E-2**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	351	1,537	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	0.8	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	0.8	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**351**	**1,539**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.003-IA1.019
Unit Description		ADR Building Heaters (0.4 MMBtu/hr, 16 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.4 MMBtu
	Annual	3,504
Heat (MMBtu)	**Hourly**	0.4
	Annual	3,504
Fuel Usage	**Type**	LNG
	Hourly	0
	Annual	3,504
	Units	gallons
Controls	**Type**	None
	dscfm	66
No. of Units	**count**	16

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.007451	lb/MMBtu	0.048	0.209	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.048	0.209	
$PM_{2.5}$	0.007451	lb/MMBtu	0.048	0.209	
SO_2	0.0005882	lb/MMBtu	0.004	0.016	
NO_X	0.0980392	lb/MMBtu	0.627	2.748	
CO	0.0823529	lb/MMBtu	0.527	2.309	
VOC	0.0053922	lb/MMBtu	0.035	0.151	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	1.51E-7	6.60E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	1.00E-7	4.40E-7	
Acenaphthene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Acenaphthylene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Anthracene	2.35E-9	lb/MMBtu	1.51E-8	6.60E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Benzene	2.06E-6	lb/MMBtu	1.32E-5	5.77E-5	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	7.53E-9	3.30E-8	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	7.53E-9	3.30E-8	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Chrysene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	7.53E-9	3.30E-8	
Dichlorobenzene	1.18E-6	lb/MMBtu	7.53E-6	3.30E-5	
Fluoranthene	2.94E-9	lb/MMBtu	1.88E-8	8.24E-8	
Fluorene	2.75E-9	lb/MMBtu	1.76E-8	7.70E-8	
Formaldehyde	7.35E-5	lb/MMBtu	4.71E-4	2.06E-3	
Hexane	1.76E-3	lb/MMBtu	1.13E-2	4.95E-2	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	1.13E-8	4.95E-8	
Naphthalene	5.98E-7	lb/MMBtu	3.83E-6	1.68E-5	
Phenanthrene	1.67E-8	lb/MMBtu	1.07E-7	4.67E-7	
Pyrene	4.90E-9	lb/MMBtu	3.14E-8	1.37E-7	
Toluene	3.33E-6	lb/MMBtu	2.13E-5	9.34E-5	
Lead	4.90E-7	lb/MMBtu	3.14E-6	1.37E-5	
Arsenic	1.96E-7	lb/MMBtu	1.25E-6	5.50E-6	
Beryllium	1.18E-8	lb/MMBtu	7.53E-8	3.30E-7	
Cadmium	1.08E-6	lb/MMBtu	6.90E-6	3.02E-5	
Chromium	1.37E-6	lb/MMBtu	8.78E-6	3.85E-5	
Cobalt	8.24E-8	lb/MMBtu	5.27E-7	2.31E-6	
Manganese	3.73E-7	lb/MMBtu	2.38E-6	1.04E-5	
Mercury	2.55E-7	lb/MMBtu	1.63E-6	7.15E-6	
Nickel	2.06E-6	lb/MMBtu	1.32E-5	5.77E-5	
Selenium	2.35E-8	lb/MMBtu	1.51E-7	6.60E-7	
Total			**1.18E-2**	**5.19E-2**	

Greenhouse Gas Emissions(Combined)					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	749	3,279	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	1.7	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	1.6	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**749**	**3,282**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.020-IA1.030
Unit Description		Truckshop Building Heaters (0.4 MMBtu/hr, 10 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.4 MMBtu
	Annual	3,504
Heat (MMBtu)	**Hourly**	0.4
	Annual	3,504
Fuel Usage	**Type**	LNG
	Hourly	0
	Annual	3,504
	Units	gallons
Controls	**Type**	None
	dscfm	66
No. of Units	**count**	10

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.007451	lb/MMBtu	0.03	0.131	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.03	0.131	
$PM_{2.5}$	0.007451	lb/MMBtu	0.03	0.131	
SO_2	0.0005882	lb/MMBtu	0.002	0.01	
NO_X	0.0980392	lb/MMBtu	0.392	1.718	
CO	0.0823529	lb/MMBtu	0.329	1.443	
VOC	0.0053922	lb/MMBtu	0.022	0.094	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	9.41E-8	4.12E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	6.27E-8	2.75E-7	
Acenaphthene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Acenaphthylene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Anthracene	2.35E-9	lb/MMBtu	9.41E-9	4.12E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Benzene	2.06E-6	lb/MMBtu	8.24E-6	3.61E-5	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	4.71E-9	2.06E-8	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	4.71E-9	2.06E-8	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Chrysene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	4.71E-9	2.06E-8	
Dichlorobenzene	1.18E-6	lb/MMBtu	4.71E-6	2.06E-5	
Fluoranthene	2.94E-9	lb/MMBtu	1.18E-8	5.15E-8	
Fluorene	2.75E-9	lb/MMBtu	1.10E-8	4.81E-8	
Formaldehyde	7.35E-5	lb/MMBtu	2.94E-4	1.29E-3	
Hexane	1.76E-3	lb/MMBtu	7.06E-3	3.09E-2	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	7.06E-9	3.09E-8	
Naphthalene	5.98E-7	lb/MMBtu	2.39E-6	1.05E-5	
Phenanthrene	1.67E-8	lb/MMBtu	6.67E-8	2.92E-7	
Pyrene	4.90E-9	lb/MMBtu	1.96E-8	8.59E-8	
Toluene	3.33E-6	lb/MMBtu	1.33E-5	5.84E-5	
Lead	4.90E-7	lb/MMBtu	1.96E-6	8.59E-6	
Arsenic	1.96E-7	lb/MMBtu	7.84E-7	3.44E-6	
Beryllium	1.18E-8	lb/MMBtu	4.71E-8	2.06E-7	
Cadmium	1.08E-6	lb/MMBtu	4.31E-6	1.89E-5	
Chromium	1.37E-6	lb/MMBtu	5.49E-6	2.40E-5	
Cobalt	8.24E-8	lb/MMBtu	3.29E-7	1.44E-6	
Manganese	3.73E-7	lb/MMBtu	1.49E-6	6.53E-6	
Mercury	2.55E-7	lb/MMBtu	1.02E-6	4.47E-6	
Nickel	2.06E-6	lb/MMBtu	8.24E-6	3.61E-5	
Selenium	2.35E-8	lb/MMBtu	9.41E-8	4.12E-7	
Total			**7.41E-3**	**3.24E-2**	

Greenhouse Gas Emissions(Combined)					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	468	2,049	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	1.1	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	1.0	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**468**	**2,052**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.031-IA1.034
Unit Description		Warehouse/Maintenance Building Heaters (0.4 MMBtu/hr, 3 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.4 MMBtu
	Annual	3,504
Heat (MMBtu)	**Hourly**	0.4
	Annual	3,504
Fuel Usage	**Type**	LNG
	Hourly	0
	Annual	3,504
	Units	gallons
Controls	**Type**	None
	dscfm	66
No. of Units	**count**	3

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.007451	lb/MMBtu	0.009	0.039	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.009	0.039	
$PM_{2.5}$	0.007451	lb/MMBtu	0.009	0.039	
SO_2	0.0005882	lb/MMBtu	0.001	0.003	
NO_X	0.0980392	lb/MMBtu	0.118	0.515	
CO	0.0823529	lb/MMBtu	0.099	0.433	
VOC	0.0053922	lb/MMBtu	0.006	0.028	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	2.82E-8	1.24E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	1.88E-8	8.24E-8	
Acenaphthene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Acenaphthylene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Anthracene	2.35E-9	lb/MMBtu	2.82E-9	1.24E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Benzene	2.06E-6	lb/MMBtu	2.47E-6	1.08E-5	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	1.41E-9	6.18E-9	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	1.41E-9	6.18E-9	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Chrysene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	1.41E-9	6.18E-9	
Dichlorobenzene	1.18E-6	lb/MMBtu	1.41E-6	6.18E-6	
Fluoranthene	2.94E-9	lb/MMBtu	3.53E-9	1.55E-8	
Fluorene	2.75E-9	lb/MMBtu	3.29E-9	1.44E-8	
Formaldehyde	7.35E-5	lb/MMBtu	8.82E-5	3.86E-4	
Hexane	1.76E-3	lb/MMBtu	2.12E-3	9.28E-3	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	2.12E-9	9.28E-9	
Naphthalene	5.98E-7	lb/MMBtu	7.18E-7	3.14E-6	
Phenanthrene	1.67E-8	lb/MMBtu	2.00E-8	8.76E-8	
Pyrene	4.90E-9	lb/MMBtu	5.88E-9	2.58E-8	
Toluene	3.33E-6	lb/MMBtu	4.00E-6	1.75E-5	
Lead	4.90E-7	lb/MMBtu	5.88E-7	2.58E-6	
Arsenic	1.96E-7	lb/MMBtu	2.35E-7	1.03E-6	
Beryllium	1.18E-8	lb/MMBtu	1.41E-8	6.18E-8	
Cadmium	1.08E-6	lb/MMBtu	1.29E-6	5.67E-6	
Chromium	1.37E-6	lb/MMBtu	1.65E-6	7.21E-6	
Cobalt	8.24E-8	lb/MMBtu	9.88E-8	4.33E-7	
Manganese	3.73E-7	lb/MMBtu	4.47E-7	1.96E-6	
Mercury	2.55E-7	lb/MMBtu	3.06E-7	1.34E-6	
Nickel	2.06E-6	lb/MMBtu	2.47E-6	1.08E-5	
Selenium	2.35E-8	lb/MMBtu	2.82E-8	1.24E-7	
Total			**2.22E-3**	**9.73E-3**	

Greenhouse Gas Emissions(Combined)					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	140	615	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	0.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	0.3	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**141**	**615**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.035
Unit Description		Administration Building Heater (0.4 MMBtu/hr)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.4 MMBtu
	Annual	3,504
Heat (MMBtu)	**Hourly**	0.4
	Annual	3,504
Fuel Usage	**Type**	LNG
	Hourly	0
	Annual	3,504
	Units	gallons
Controls	**Type**	None
	dscfm	66
No. of Units	**count**	1

Criteria Pollutant Emissions

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.007451	lb/MMBtu	0.003	0.013	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.003	0.013	
$PM_{2.5}$	0.007451	lb/MMBtu	0.003	0.013	
SO_2	0.0005882	lb/MMBtu	0.	0.001	
NO_X	0.0980392	lb/MMBtu	0.039	0.172	
CO	0.0823529	lb/MMBtu	0.033	0.144	
VOC	0.0053922	lb/MMBtu	0.002	0.009	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	9.41E-9	4.12E-8	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	6.27E-9	2.75E-8	
Acenaphthene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Acenaphthylene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Anthracene	2.35E-9	lb/MMBtu	9.41E-10	4.12E-9	
Benz(a)anthracene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Benzene	2.06E-6	lb/MMBtu	8.24E-7	3.61E-6	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	4.71E-10	2.06E-9	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	4.71E-10	2.06E-9	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Chrysene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	4.71E-10	2.06E-9	
Dichlorobenzene	1.18E-6	lb/MMBtu	4.71E-7	2.06E-6	
Fluoranthene	2.94E-9	lb/MMBtu	1.18E-9	5.15E-9	
Fluorene	2.75E-9	lb/MMBtu	1.10E-9	4.81E-9	
Formaldehyde	7.35E-5	lb/MMBtu	2.94E-5	1.29E-4	
Hexane	1.76E-3	lb/MMBtu	7.06E-4	3.09E-3	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	7.06E-10	3.09E-9	
Naphthalene	5.98E-7	lb/MMBtu	2.39E-7	1.05E-6	
Phenanthrene	1.67E-8	lb/MMBtu	6.67E-9	2.92E-8	
Pyrene	4.90E-9	lb/MMBtu	1.96E-9	8.59E-9	
Toluene	3.33E-6	lb/MMBtu	1.33E-6	5.84E-6	
Lead	4.90E-7	lb/MMBtu	1.96E-7	8.59E-7	
Arsenic	1.96E-7	lb/MMBtu	7.84E-8	3.44E-7	
Beryllium	1.18E-8	lb/MMBtu	4.71E-9	2.06E-8	
Cadmium	1.08E-6	lb/MMBtu	4.31E-7	1.89E-6	
Chromium	1.37E-6	lb/MMBtu	5.49E-7	2.40E-6	
Cobalt	8.24E-8	lb/MMBtu	3.29E-8	1.44E-7	
Manganese	3.73E-7	lb/MMBtu	1.49E-7	6.53E-7	
Mercury	2.55E-7	lb/MMBtu	1.02E-7	4.47E-7	
Nickel	2.06E-6	lb/MMBtu	8.24E-7	3.61E-6	
Selenium	2.35E-8	lb/MMBtu	9.41E-9	4.12E-8	
Total			**7.41E-4**	**3.24E-3**	

Greenhouse Gas Emissions					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	47	205	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	0.1	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	0.1	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**47**	**205**	

DETAILED EMISSION CALCULATIONS

Category		**Combustion Equipment**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.036-IA1.042
Unit Description		Laboratory Building Heaters (0.4 MMBtu/hr, 6 units)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	0.4 MMBtu
	Annual	3,504
Heat (MMBtu)	**Hourly**	0.4
	Annual	3,504
Fuel Usage	**Type**	LNG
	Hourly	0
	Annual	3,504
	Units	gallons
Controls	**Type**	None
	dscfm	66
No. of Units	**count**	6

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
PM	0.007451	lb/MMBtu	0.018	0.078	(AP-42 Tab. 1.4-2) and (AP-42 Tab. 1.4-1)
PM_{10}	0.007451	lb/MMBtu	0.018	0.078	
$PM_{2.5}$	0.007451	lb/MMBtu	0.018	0.078	
SO_2	0.0005882	lb/MMBtu	0.001	0.006	
NO_X	0.0980392	lb/MMBtu	0.235	1.031	
CO	0.0823529	lb/MMBtu	0.198	0.866	
VOC	0.0053922	lb/MMBtu	0.013	0.057	

DETAILED EMISSION CALCULATIONS - continued

Hazardous Air Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
2-Methylnaphthalene	2.35E-8	lb/MMBtu	5.65E-8	2.47E-7	AP-42, Table 1.4-2, 3 & 4 (7/98) Natural Gas Combustion
3-Methylchloranthrene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
7,12-Dimethylbenz(a)anthracene	1.57E-8	lb/MMBtu	3.76E-8	1.65E-7	
Acenaphthene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Acenaphthylene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Anthracene	2.35E-9	lb/MMBtu	5.65E-9	2.47E-8	
Benz(a)anthracene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Benzene	2.06E-6	lb/MMBtu	4.94E-6	2.16E-5	
Benzo(a)pyrene	1.18E-9	lb/MMBtu	2.82E-9	1.24E-8	
Benzo(b)fluoranthene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Benzo(g,h,i)perylene	1.18E-9	lb/MMBtu	2.82E-9	1.24E-8	
Benzo(k)fluoranthene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Chrysene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Dibenz(a,h)anthracene	1.18E-9	lb/MMBtu	2.82E-9	1.24E-8	
Dichlorobenzene	1.18E-6	lb/MMBtu	2.82E-6	1.24E-5	
Fluoranthene	2.94E-9	lb/MMBtu	7.06E-9	3.09E-8	
Fluorene	2.75E-9	lb/MMBtu	6.59E-9	2.89E-8	
Formaldehyde	7.35E-5	lb/MMBtu	1.76E-4	7.73E-4	
Hexane	1.76E-3	lb/MMBtu	4.24E-3	1.86E-2	
Indeno(1,2,3-cd)pyrene	1.76E-9	lb/MMBtu	4.24E-9	1.86E-8	
Naphthalene	5.98E-7	lb/MMBtu	1.44E-6	6.29E-6	
Phenanthrene	1.67E-8	lb/MMBtu	4.00E-8	1.75E-7	
Pyrene	4.90E-9	lb/MMBtu	1.18E-8	5.15E-8	
Toluene	3.33E-6	lb/MMBtu	8.00E-6	3.50E-5	
Lead	4.90E-7	lb/MMBtu	1.18E-6	5.15E-6	
Arsenic	1.96E-7	lb/MMBtu	4.71E-7	2.06E-6	
Beryllium	1.18E-8	lb/MMBtu	2.82E-8	1.24E-7	
Cadmium	1.08E-6	lb/MMBtu	2.59E-6	1.13E-5	
Chromium	1.37E-6	lb/MMBtu	3.29E-6	1.44E-5	
Cobalt	8.24E-8	lb/MMBtu	1.98E-7	8.66E-7	
Manganese	3.73E-7	lb/MMBtu	8.94E-7	3.92E-6	
Mercury	2.55E-7	lb/MMBtu	6.12E-7	2.68E-6	
Nickel	2.06E-6	lb/MMBtu	4.94E-6	2.16E-5	
Selenium	2.35E-8	lb/MMBtu	5.65E-8	2.47E-7	
Total			**4.44E-3**	**1.95E-2**	

Greenhouse Gas Emissions(Combined)					
Pollutant	**Factor (kg/MMBtu)**	**GWP**	**CO_2e (lb/hr)**	**CO_2e (ton/yr)**	**Reference**
CO_2	53.06	1	281	1,230	40 CFR Part 98, Table C-1 to Subpart C, Natural Gas
CH_4	0.001	28	0	0.6	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
N_2O	0.0001	265	0	0.6	40 CFR Part 98, Table C-2 to Subpart C, Natural Gas
Total CO_2e			**281**	**1,231**	

DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.043
Unit Description		Natural Gas (LNG) Tank (Including Guppies)
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	2,320,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	--	--	--	--	Pressurized tank

DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.044
Unit Description		Used Oil Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	48,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0001381	lb/hr	0.0001	0.001	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 2 (Used Oil)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	10.67
Diameter (ft):	8.00
Liquid Height (ft)	10.67
Avg. Liquid Height (ft):	5.00
Volume (gallons):	4,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	48,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 2 (Used Oil) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.64	0.57	1.21

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.045
Unit Description		Antifreeze Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	24,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0000046	lb/hr	0.000005	0.00002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 3 (Antifreeze)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	12.00
Diameter (ft):	5.33
Liquid Height (ft) :	12.00
Avg. Liquid Height (ft):	6.00
Volume (gallons):	2,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	24,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 3 (Antifreeze) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Ethylene Glycol	0.02	0.02	0.04

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.046
Unit Description		Used Antifreeze Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	24,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0000046	lb/hr	0.000005	0.00002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 4 (Used Antifreeze)
City:	Eureka
State:	Nevada
Company:	Gold bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	12.00
Diameter (ft):	5.33
Liquid Height (ft) :	12.00
Avg. Liquid Height (ft):	6.00
Volume (gallons):	2,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	24,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 4 (Used Antifreeze) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Ethylene Glycol	0.02	0.02	0.04

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.047
Unit Description		30W Oil Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	48,000 Gal

Criteria Pollutant Emissions (Combined)					
Pollutant	**Factor**	**Unit**	**Hourly (lb/hr)**	**Annual (ton/yr)**	**Reference**
VOC	0.0001381	lb/hr	0.0001	0.001	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 5 (30W Oil)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	10.67
Diameter (ft):	8.00
Liquid Height (ft) :	10.67
Avg. Liquid Height (ft):	5.00
Volume (gallons):	4,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	48,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 5 (30W Oil) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.64	0.57	1.21

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.048
Unit Description		Hydraulic Fluid Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	24,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0000046	lb/hr	0.000005	0.00002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 6 (Hydraulic Fluid)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	12.00
Diameter (ft):	5.33
Liquid Height (ft) :	12.00
Avg. Liquid Height (ft):	6.00
Volume (gallons):	2,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	24,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 6 (Hydraulic Fluid) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Ethylene Glycol	0.02	0.02	0.04

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.049
Unit Description		Drill Oil Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	69,600 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0002009	lb/hr	0.0002	0.001	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 7 (Drill Oil)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	10.25
Diameter (ft):	10.00
Liquid Height (ft) :	10.25
Avg. Liquid Height (ft):	5.00
Volume (gallons):	5,800.00
Turnovers:	12.00
Net Throughput(gal/yr):	69,600.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 7 (Drill Oil) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.93	0.83	1.76

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.050
Unit Description		Diesel Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	240,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0006678	lb/hr	0.0007	0.003	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 9 (Diesel)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	23.67
Diameter (ft):	12.00
Liquid Height (ft) :	23.67
Avg. Liquid Height (ft):	12.00
Volume (gallons):	20,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	240,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Elko, Nevada (Avg Atmospheric Pressure = 12.25 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 9 (Diesel) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	3.21	2.64	5.85

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DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.071
Unit Description		1,000 - gallon Diesel Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	20,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0000525	lb/hr	0.0001	0.0002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 10 (Diesel)
City:	Eureka
State:	Nevada
Company:	Gold Bar Project
Type of Tank:	Horizontal Tank
Description:	IA1.071 - 1,000 gallon Diesel Tank

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	8.50
Volume (gallons):	1,000.00
Turnovers:	20.00
Net Throughput(gal/yr):	20,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meterological Data used in Emissions Calculations: Ely, Nevada (Avg Atmospheric Pressure = 11.73 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 10 (Diesel) - Horizontal Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.25	0.21	0.46

DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.076
Unit Description		15,000 - gallon Diesel Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	180,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0005205	lb/hr	0.0005	0.002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2 x 15k-gal Tanks (Diesel)
City:	Eureka
State:	Nevada
Company:	Gold Bar
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	19.00
Diameter (ft):	12.00
Liquid Height (ft)	19.00
Avg. Liquid Height (ft):	9.50
Volume (gallons)	15,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	180,000.00
Is Tank Heated (y/n)	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

2 x 15k-gal Tanks (Diesel) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	2.41	2.15	4.56

DETAILED EMISSION CALCULATIONS

Category		**Liquid Storage Tank**
System No.		IA
System Name		Insignificant Activity
Unit No.		IA1.077
Unit Description		15,000 - gallon Diesel Tank
Operating Hours	**Daily**	24
	Annual	8,760
Throughput	**Hourly**	N/A
	Annual	180,000 Gal

Criteria Pollutant Emissions (Combined)

Pollutant	Factor	Unit	Hourly (lb/hr)	Annual (ton/yr)	Reference
VOC	0.0005205	lb/hr	0.0005	0.002	EPA TANKS 4.0.9d

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2 x 15k-gal Tanks (Diesel)
City:	Eureka
State:	Nevada
Company:	Gold Bar
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	19.00
Diameter (ft):	12.00
Liquid Height (ft) :	19.00
Avg. Liquid Height (ft):	9.50
Volume (gallons):	15,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	180,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig)	-0.03
Pressure Settings (psig)	0.03

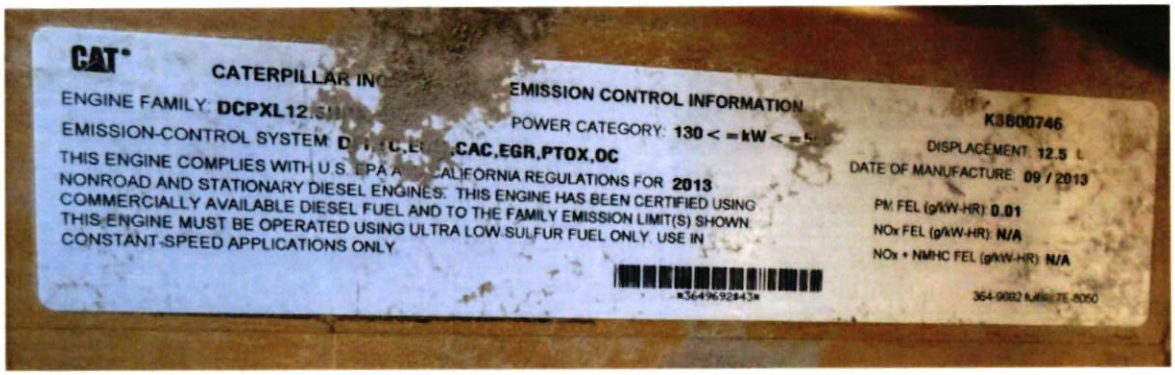
TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

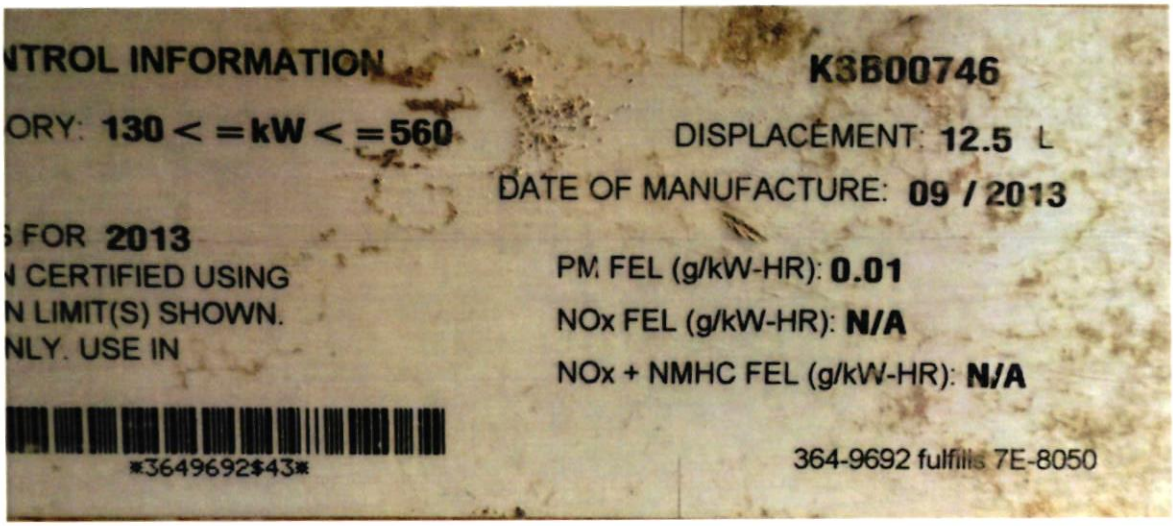
Emissions Report for: Annual

2 x 15k-gal Tanks (Diesel) - Vertical Fixed Roof Tank
Eureka, Nevada

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	2.41	2.15	4.56

System 13 – S2.013: Caterpillar C13





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2013 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Caterpillar Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: **DCPXL12.5HPA-003**

Effective Date: 06/11/2012

Expiration Date: 12/31/2013

Byron J. Bunker, Acting Division Director
Compliance Division

Issue Date: 06/11/2012

Revision Date: N/A

Model Year: 2013
Manufacturer Type: Original Engine Manufacturer
Engine Family: DCPXL12.5HPA

Mobile/Stationary Indicator: Both
Emissions Power Category: 130<kW<=560
Fuel Type: Diesel
After Treatment Devices: Diesel Oxidation Catalyst, PTOX-DPF-Active
Non-after Treatment Devices: Engine Design Modification, Electronic/Electric EGR - Cooled, Electronic Control
FELs: PM 0.01 g/kW-hr

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Parts 60 and 1039, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Parts 60 and 1039 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 60 and 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 60 and 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 60 and 1039. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 60 and 1039.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 1039, Subpart H. Failure to comply with these provisions may render this certificate void *ab initio*.

ELECTRIC POWER - Technical Spec Sheet
STANDARD

Similar Engine Specifications

C13 ACERT

320 ekW/ 400 kVA/ 50 Hz/ 1500 rpm/ 400 V/ 0.8 Power Factor

Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION



Image shown may not reflect actual configuration

C13 ACERT

320 ekW/ 400 kVA

50 Hz/ 1500 rpm/ 400 V

	Metric	English
Package Performance		
Genset Power Rating with Fan @ 0.8 Power Factor	320 ekW	
Genset Power Rating	400 kVA	
Aftercooler (Separate Circuit)	N/A	N/A
Fuel Consumption		
100% Load with Fan	83.5 L/hr	22.0 gal/hr
75% Load with Fan	61.9 L/hr	16.4 gal/hr
50% Load with Fan	43.7 L/hr	11.5 gal/hr
25% Load with Fan	26.1 L/hr	6.9 gal/hr
Cooling System[1]		
Engine Coolant Capacity	14.2 L	3.8 gal
Inlet Air		
Combustion Air Inlet Flow Rate	22.4 m^3/min	789.9 cfm
Max. Allowable Combustion Air Inlet Temp	49 ° C	120 ° F
Exhaust System		
Exhaust Stack Gas Temperature	529.2 ° C	984.5 ° F
Exhaust Gas Flow Rate	62.8 m^3/min	2216.2 cfm
Exhaust System Backpressure (Maximum Allowable)	10.0 kPa	40.0 in. water

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Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION

Heat Rejection		
Heat Rejection to Jacket Water	128 kW	7271 Btu/min
Heat Rejection to Exhaust (Total)	290 kW	16484 Btu/min
Heat Rejection to Aftercooler	53 kW	3037 Btu/min
Heat Rejection to Atmosphere from Engine	53 kW	3041 Btu/min
Heat Rejection to Atmosphere from Generator	24 kW	1348 Btu/min

Alternator[2]	
Motor Starting Capability @ 30% Voltage Dip	745 skVA
Current	577 amps
Frame Size	LC6114B
Excitation	SE
Temperature Rise	150 ° C

Emissions (Nominal)[3]		
NOx	2730.6 mg/Nm³	5.3 g/hp-hr
CO	750.5 mg/Nm³	1.5 g/hp-hr
HC	8.0 mg/Nm³	0.0 g/hp-hr
PM	N/A	N/A

DEFINITIONS AND CONDITIONS

1. For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

2. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.

3. Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

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Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION

Applicable Codes and Standards:
AS1359, CSA C22.2 No100-04, UL142,UL489, UL869, UL2200,
NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528,
NEMA MG1-22,NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions

Fuel Rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Cat representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

www.Cat-ElectricPower.com

Performance No.: EM0425-02

Feature Code: C13DE02

Generator Arrangement: 3969606

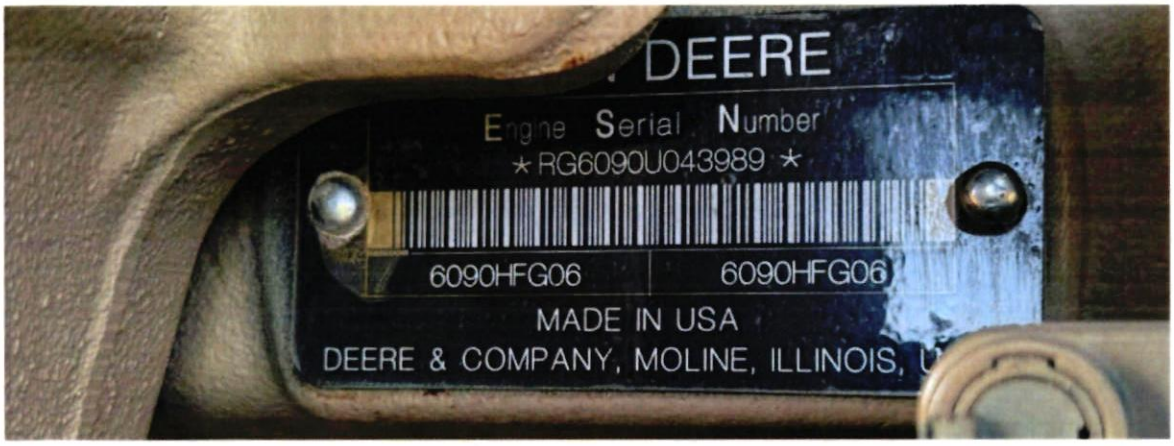
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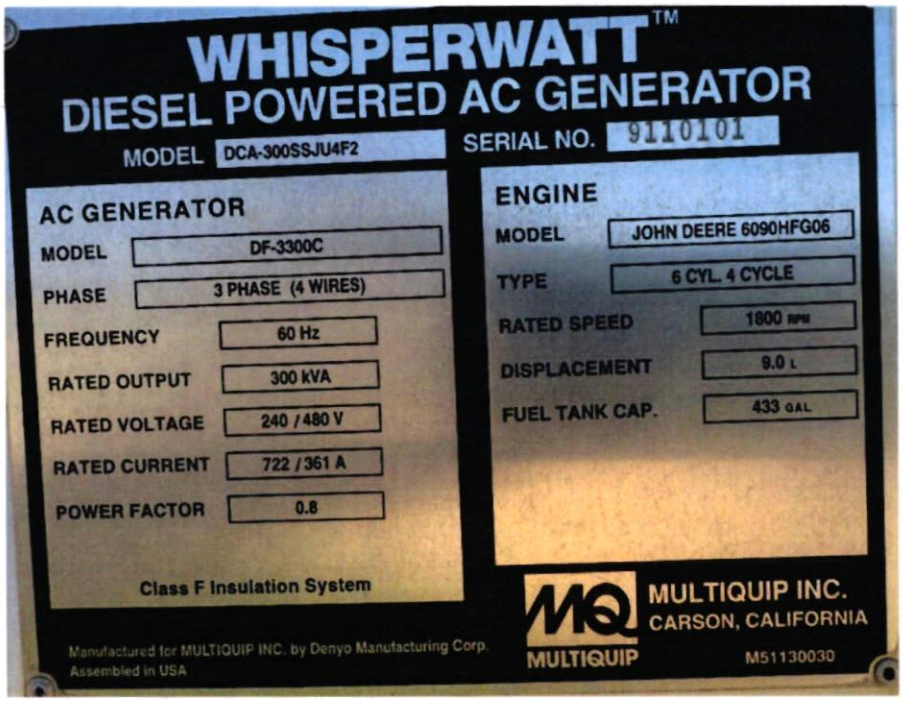
Source Country: U.K.

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

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System 17 – S2.017: John Deere 6090HFG06





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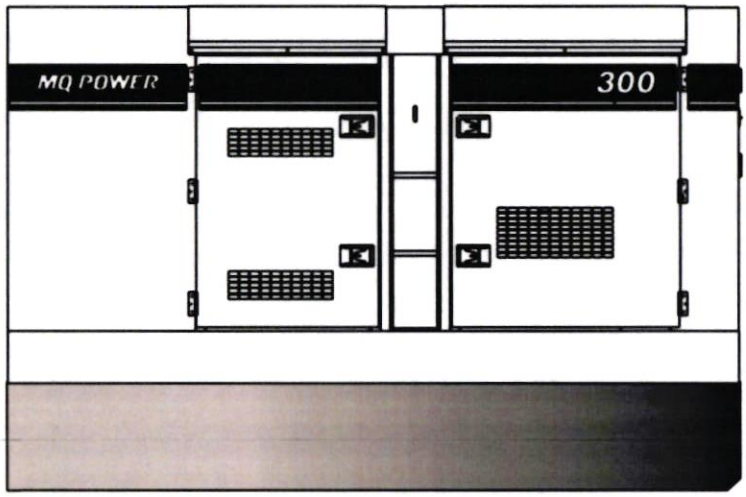
MQ POWER Whisperwatt™ Series

WhisperWatt™ 300

Prime Rating — 240 kW (300 kVA)

Standby Rating — 264 kW (330 kVA)

3-Phase, 50/60 Hertz, 0.8 PF



STANDARD FEATURES

- Heavy duty, 4-cycle, electronic direct injection, turbocharged, charged air cooler, variable speed fan,1000W block heater, diesel engine provides maximum reliability.
- Brushless alternator reduces service and maintenance requirements and meets temperature rise standards for Class F insulation systems.
  - Open delta alternator design provides virtually unlimited excitation for maximum motor starting capability.
  - Automatic voltage regulator (AVR) provides precise regulation.
- Electronic governor system maintains frequency to ±0.25%.
- Full load acceptance of standby nameplate rating in one step (NFPA 110, para 5-13.2.6).
- Sound attenuated, weather resistant, steel housing provides operation at 72 dB(A) at 23 feet. Fully lockable enclosure allows safe unattended operation.
- UN31A internal fuel tank with direct reading fuel gauges are standard.
- E-coat and powder coat paint provides durability and weather protection.
- Digital engine gauges including oil pressure, water temperature, battery volts, engine speed, engine load, fuel level and DEF fluid level.
- Analog generator instrumentation including AC ammeter, AC voltmeter, frequency meter, ammeter phase selector switch, voltmeter phase selector switch, and voltage regulator adjustment potentiometer.
- ECU845 microprocessor-based digital generator controller.
  - Remote 2-wire start/stop control.
  - High visibility LCD display with heated screen and alphanumeric readout.
  - Operational temperature range of -40° to 85° C.
  - Modbus interface for gauge panel and expansion options.
  - AC monitoring along with fuel and DEF level indicators.
- Automatic safety shutdown system monitors the water temperature, engine oil pressure, low coolant, low DEF, overspeed, and overcrank. Warning lights indicate abnormal conditions.
- Fully covered power panel. Three-phase terminals and single phase receptacles allow fast and convenient hookup for most applications including temporary power boxes, tools and lighting equipment. All are NEMA standard.
- Fuel/water separator. Removes condensation from fuel for extended engine life. Panel mounted alarm light included.
- Emergency stop switch — when manually activated, shuts down generator in the event of an emergency.
- EPA emissions certified — Tier 4 Final emissions compliant.
  - Engine fitted with EGR, DOC and SCR.
- Dual frequency capability allows for operation at 50 Hz or 60 Hz.
- Spill Containment — Bunded design protects environment by capturing up to 123% of engine fluids.

DCA300SSJU4F2

MQ POWER Whisperwatt™ Series

SPECIFICATIONS

Generator Specifications	
Design	Revolving field, self-ventilated Drip-proof, single bearing
Armature Connection	Star with Neutral
Phase	3
Standby Output	264 KW (330 KVA)
Prime Output	240 KW (300 KVA)
3Ø Voltage (L-L/L-N) Voltage Change-Over Bus Bars at 3Ø 240/139	208Y/120, 220Y/127, 240Y/139
3Ø Voltage (L-L/L-N) Voltage Change-Over Bus Bars at 3Ø 480/277	416Y/240, 440Y/254, 480Y/277
1Ø Voltage (L-L/L-N) Voltage Change-Over Bus Bars at 1Ø 240/120)	N/A
Power Factor	0.8
Voltage Regulation (No load to full load)	±0.5%
Generator RPM	1800
Frequency	50/60 Hz
No. of Poles	4
Excitation	Brushless with AVR
Frequency Regulation: No Load to Full Load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.25% of mean value for constant loads from no load to full load.
Insulation	Class F
Sound Level dB(A) Full load at 23 feet	72

Engine Specifications	
Make / Model	John Deere / 6090HFG06
Emissions	EPA Tier 4 Final Certified
Starting System	Electric
Design	4-cycle, water cooled, direct injection, turbocharged, charged air cooled, EGR, DOC, and SCR.
Displacement	549.2 in^3 (9.0 liters)
No. cylinders	6
Bore x Stroke	4.64 x 5.34 in. (118.4 x 136 mm)
Gross Engine Power Output	437 hp (326 kW)
BMEP	320 psi (2212 kPa)
Piston Speed	1606 ft/min (8.16 m/s)
Compression Ratio	16.0 : 1
Engine Speed	1800 rpm
Overspeed Limit	2070 rpm
Oil Capacity	9.3 gallons (35 liters)
Battery	12V 430Ah x 1

Fuel System		
Recommended Fuel	ASTM-D975-No.1 & No.2-D*	
Maximum Fuel Flow (per hour)	43 gallons (163.1 liters)	
Maximum Inlet Restriction (Hg)	5.9 in (150 mm)	
Fuel Tank Capacity	430.6 gallons (1630 liters)	
Fuel Consumption	**gph**	**lph**
At full load	16.7	63.2
At 3/4 load	12.5	47.4
At 1/2 load	8.9	33.8
At 1/4 load	5.8	21.9
DEF Tank Capacity	29.7 gallons (112.4 liters)	

* - Use ultra-low sulfur diesel fuel.

Cooling System	
Fan Load	26.8 hp (20 kW)
Coolant Capacity (with radiator)	17.7 gallons (67 liters)
Coolant Flow Rate (per minute)	102 gallons (385 liters)
Heat Rejection to Coolant (per minute)	10,473 Btu (11.05 MJ)
Maximum Coolant Friction Head	8.7 psi (60 kPa)
Maximum Coolant Static Head	78.7 ft. (24.1 m)
Ambient Temperature Rating	104°F (40°C)

Air	
Combustion Air	742 cfm (21.0 m^3/min)
Maximum Air Cleaner Restriction	25 in. H_2O (6.25 kPa)
Alternator Cooling Air	2797 cfm (79.0 m^3/min)
Radiator Cooling Air	11,800 cfm (334.1 m^3/min)

Exhaust System	
Gas Flow (full load)	1,448 cfm (41.0 m^3/min)
Gas Temperature	831°F (444°C)
Maximum Back Pressure	116 in. H_2O (29 kPa)

Amperage	
Rated Voltage	**Maximum Amps**
1Ø 120 Volt	666.7 Amps (4 wire)
1Ø 240 Volt	333.3 Amps (4 wire)
3Ø 240 Volt	722 Amps
3Ø 480 Volt	360 Amps
Main Line Circuit Breaker Rating	800 Amps
Over Current Relay Trip Set Point 480V Mode Only	361 Amps

WARRANTY*

John Deere Engine

12 months from date of purchase with unlimited hours or 24 months and prior to the accumulation of 2000 hours (whichever comes first).

Generator

24 months from date of purchase or 2000 hours (whichever occurs first).

Trailer

12 months excluding normal wear items.

*Refer to the express written, one-year limited warranty sheet for additional information.

NOTICE

Specifications sheet is subject to change and is not intended for use in installation design.

DCA300SSJU4F2

MQ POWER Whisperwatt™ Series

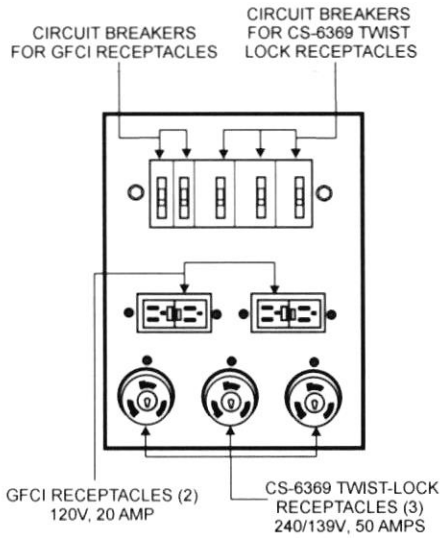
MQ POWER DECIBEL LEVELS

Our soundproof housing allows substantially lower operating noise levels than competitive designs. WhisperWatts are at home on construction sites, in residential neighborhoods, and at hospitals — just about anywhere.

- 90 — Subway / truck traffic
- 80 — Average city traffic
- WhisperWatt at 23 feet
- 70 — Inside car at 60 mph
- 60 — Air conditioner at 20 feet
- 50 — Normal conversation

72.0 DECIBELS

GENERATOR OUTPUT PANEL



OPTIONAL GENERATOR FEATURES

- **Parallel Controls** — provides the ability to connect multiple generators together into a single power generation system.
- **PowerBalance™** — designed to assist generators when operating under low temperature and/or low load conditions to insure peak performance.
- **Battery charger** — provides fully automatic and self-adjusting charging to the generator's battery system.
- **Crankcase Vent Blanket with Heating Element** — insures proper crankcase ventilation in freezing conditions. (Unit comes standard with a non-heated crankcase blanket)
- **Heavy-Duty Batteries** — long life batteries provide extra engine cranking power.
- **Spring Isolators** — provide extra vibration protection for standby applications.
- **Trailer mounted package** — meets National Highway Traffic Safety Administration (NHTSA) regulations. Trailer is equipped with electronic or surge brakes on all axles.

OPTIONAL CONTROL FEATURES

- **Audible alarm** alerts operator of abnormal conditions.

OPTIONAL FUEL CELL FEATURES

- **Sub-base fuel cells (double wall)** — additional fuel cell for extended runtime operation. Contains a leak sensor, low fuel level switch, and a secondary containment tank. UL142 listed.
- 12 hours of minimum run time.
- 24 hours of minimum run time.

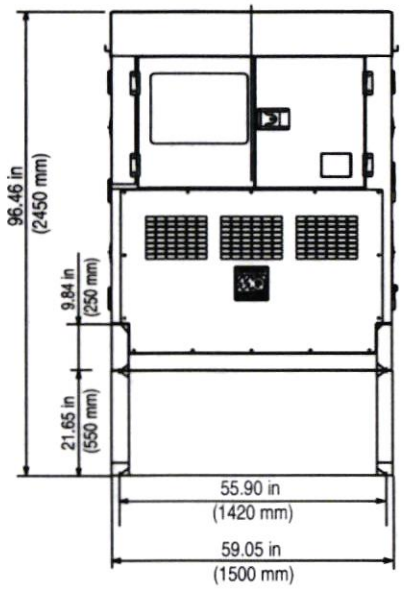
OPTIONAL OUTPUT CONNECTIONS

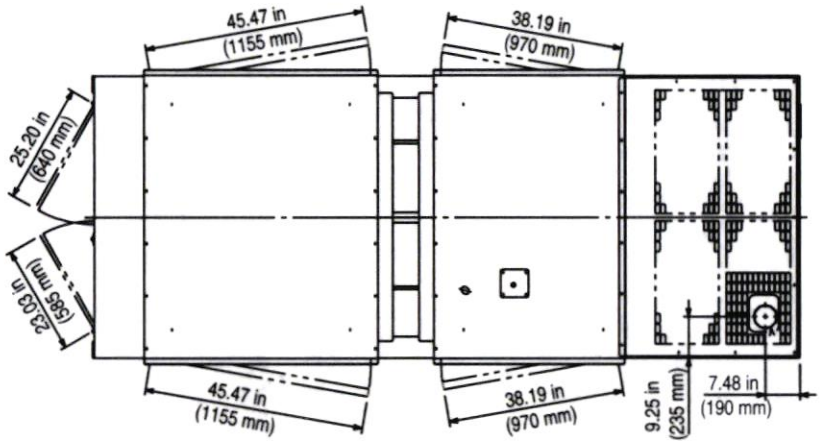
- **Cam-Lok Connectors** — provides quick disconnect alternative to bolt-on connectors.
- **Pin and Sleeve Connectors** — provides industry standard connectors for all voltage requirements.
- **Output Cable** — available in any custom length and size configuration.

DCA300SSJU4F2

MQ POWER Whisperwatt™ Series

DIMENSIONS



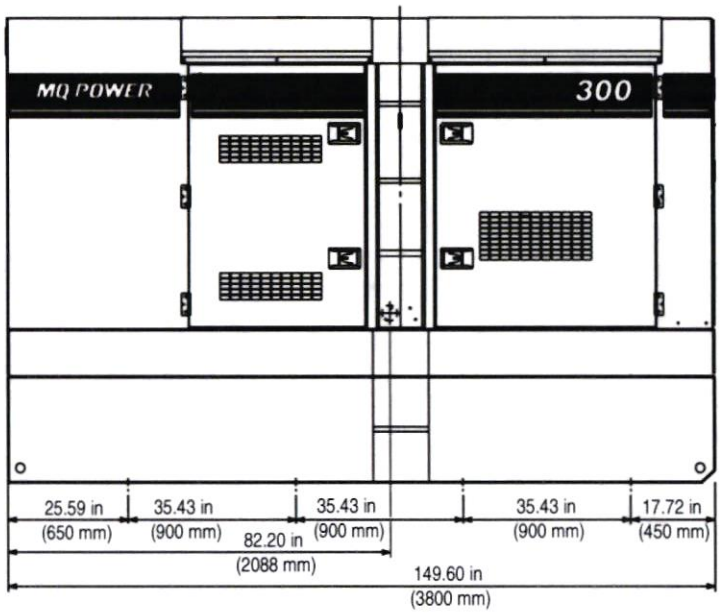


Weight	
Dry Weight	11,220 lbs. (5,090 kg)
Wet Weight	15,010 lbs. (6,810 kg)
Max. Lifting Point Capacity	19,000 lbs. (8,618 kg)

NOTICE

Features and Specifications are subject to change without notice.

Generator can be placed on MQ Trailer Model TRLR300EV (H/E).



MULTIQUIP
POST OFFICE BOX 6254
CARSON, CA 90749
310-537-3700 • 800-883-2551
FAX: 310-604-3831
E-MAIL: sales@multiquip.com
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DCA300SSJU4F2 Rev. #4 (05/31/18)

10/14/18 kW

GENERAC AIR-COOLED STANDBY GENERATOR

Air-Cooled Residential Standby Generator

INCLUDES:

- Cellular connectivity standard, with Wi-Fi™ and Bluetooth™ capabilities
- Electronic fuel and ignition control (EFIC)
- Hydraulic lifters
- Smart Exercise Technology
- True Power™ Electrical Technology
- Power Zone™ 200 Controller
- Oil level sensor
- 200 Amp service rated transfer switch in bundled models
- Electronic governor
- System status & maintenance interval LED indicators
- Sound attenuated enclosure
- Natural gas or LP gas operation
- ecobee by Generac Smart Thermostat included in select bundles
- 5 Year limited warranty, generator and transfer switch
- Listed and labeled by the Southwest Research Institute allowing installation as close as 18 in (457 mm) to a structure.*

  **Must be located away from doors, windows, and fresh air intakes and in accordance with local codes.*

STANDBY POWER RATING

G007257-0, G007321-0 (Aluminum-Metro Gray) - 10kW 60 Hz
G007258-0, G007323-0 (Aluminum-Metro Gray) - 14kW 60 Hz
G007259-0, G007324-0 (Aluminum-Metro Gray) - 18kW 60 Hz



QUIET TEST™

NOTE: Generator is certified for use in the US and Canada. See Transfer Switch section for the transfer switch certification details.

FEATURES

- **INNOVATIVE ENGINE DESIGN & RIGOROUS TESTING** are at the heart of Generac's success in providing the most reliable generators possible. Generac's G-Force engine lineup offers added peace of mind and reliability for when it's needed the most. The G-Force series engines are purpose built and designed to handle the rigors of extended run times in high temperatures and extreme operating conditions.
- **TRUE POWER™ ELECTRICAL TECHNOLOGY**: Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power. This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC systems.
- **TEST CRITERIA**:
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
- **MOBILE LINK® CONNECTIVITY**: Standard with the Generac Air-Cooled Standby Generator home standby generators, Mobile Link Cellular allows users to monitor the status of their generator from anywhere using a smartphone, tablet, or PC. Easily access real-time operating status, maintenance alerts, and generator readiness. Users can also connect their account to an authorized service dealer for proactive support and streamlined service. With Mobile Link, users can see their generator is ready before the next power outage.
- **SOLID-STATE VOLTAGE REGULATION**: This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES**: Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line is offered with its own transfer systems and controls for total system compatibility.

THE GENERAC PROMISE

USA ENGINEERED & BUILT* · 24/7 • 365 CUSTOMER CARE · FIVE YEAR LIMITED WARRANTY 5

GENERAC Mobile Link™

* Assembled in the USA using domestic and foreign parts.

GENERAC

Features and Benefits

Engine

Electronic fuel and ignition control - EFIC	Improves generator performance by automatically adjusting for the changing environment. Improves fuel efficiency and reduces emissions on average.
Hydraulic lifters	Automatically maintains optimal valve spacing. No more manually adjusting valves required.
Generac G-Force design	Maximizes engine "breathing" for increased fuel efficiency. Plateau honed cylinder walls and plasma moly rings help the engine run cooler, reducing oil consumption and supporting longer engine life.
Cast iron cylinder walls	Rigid construction and added durability help prolong engine life.
Full pressure lubrication system	Pressurized lubrication to all vital bearings facilitates better performance, less maintenance, and longer engine life. Featuring up to a 2 year/200 hour oil change interval.
Low oil pressure shutdown system	Shutdown protection helps to prevent catastrophic engine damage due to low oil.
Oil level sensor	Continuously monitors and reports engine oil levels.
High temperature shutdown	Helps prevent damage due to overheating.
Electronic governor	Maintains constant 60 Hz frequency.

Generator

Revolving field	Allows for a smaller, light weight unit which operates 25% more efficiently than a revolving armature generator.
Skewed stator	Produces a smooth output waveform for compatibility with electronic equipment.
Displaced phase excitation	Maximizes motor starting capability.
Automatic voltage regulation	Regulating output voltage to ±1% prevents damaging voltage spikes.
Listed to UL 2200	For your safety.

Power Zone Controls

AUTO/MANUAL/OFF/SERVICE buttons with LED indicators	Select the operating mode and provides easy, at-a-glance status indication in any condition.
Sealed, raised buttons	Smooth, weather-resistant user interface for programming and operations.
External LED indicators	Adjustable brightness LED indicators to communicate system status and maintenance intervals.
Smart Exercise	Allows the system to skip its scheduled exercise if the generator ran for more than 5 consecutive minutes within the 72 hours prior to a scheduled exercise event, allowing for fuel cost savings to the owner.
Utility voltage sensing	Monitors utility voltage, with adjustable dropout (75-80%) and pickup (84-89%) of nominal voltage.
Generator voltage sensing	Monitors generator voltage to verify the cleanest power delivered to the home.
Utility interrupt delay	Prevents nuisance start-ups of the engine, adjustable 2–1,500 seconds from the factory default setting of 10 seconds by a qualified dealer.
Engine warm-up	Verifies engine is ready to assume the load. Adjustable 0–60 seconds by a qualified dealer (factory default setting 5 seconds).
Engine cool-down	Allows engine to cool prior to shutdown. Adjustable 60–1,500 seconds by a qualified dealer (factory default setting 60 seconds).
Programmable exercise	Operates engine to prevent oil seal drying and damage between power outages by running the generator for 5 minutes every week. Also offers a selectable setting for weekly, bi-weekly, or monthly operation with an adjustable run time from 5 to 20 minutes, and an option for a low speed engine rpm, providing flexibility and potentially lower fuel costs to the owner.
Smart battery charger	Delivers charge to the battery only when needed at varying rates depending on outdoor air temperature. Compatible with AGM-style batteries.
Generator emergency shutdown	A recessed button on the outside of the enclosure for emergency personnel to use to perform an emergency shutdown of the generator.

GENERAC

Features and Benefits

Unit

● SAE weather protective enclosure	Sound attenuated enclosure provides quiet operation and weather protection, withstanding winds up to 150 mph (241 km/h). Hinged key locking roof panel for security. Lift-out front for easy access to all routine maintenance items. Electrostatically applied textured epoxy paint for added durability.
● Enclosed muffler	Quiet muffler is mounted inside the unit.
● Small, compact, attractive	Makes for an easy, aesthetically pleasing installation, as close as 18 in (457 mm) away from a structure. Must be located away from doors, windows, and fresh air intakes and in accordance with local codes.
● Main line circuit breaker	Protects generator from overload.

Installation System

● 14 in (35.6 cm) flexible fuel line connector	Listed ANSI Z21.75/CSA 6.27 outdoor appliance connector for the required connection to the gas supply piping.
● Integral sediment trap	Meets IFGC and NFPA 54 installation requirements.

Connectivity

● Generator status	Monitor the generator with a smartphone, tablet, or computer at any time via the Mobile Link application for complete peace of mind. Generator status can also be displayed on certain ecobee Smart Thermostat models.
● Exercise/Run and Total Hours	Review the generator's complete protection profile for exercise hours and total hours.
● Maintenance information	Provides maintenance information for the specific model generator when scheduled maintenance is due.
● Monthly report with previous month's activity	Detailed monthly reports provide historical generator information.
● Battery information	Built in battery diagnostics displaying current state of the battery.
● Weather information	Provides detailed local ambient weather conditions for generator location.
● Configurable exercise and duration	Select Low Speed Exercise, Smart Exercise, or Transfer on Exercise options. Adjust generator to exercise for 5–20 minutes (5 minute default).
● Installation and service application	Generator installers and service technicians must use the Field Pro mobile application when installing or servicing the generator.

GENERAC

Specifications

Generator

Model	10 kW	14 kW	18 kW
Rated maximum continuous power capacity (LP)	10 kW*	14 kW*	18 kW*
Rated maximum continuous power capacity (NG)	9 kW*	14 kW*	17 kW*
Rated voltage		240	
Rated maximum continuous load current – 240 Volts (LP / NG)	42 / 38	58 / 58	75 / 71
Total Harmonic Distortion		Less than 5%	
Main line circuit breaker	45 amp	60 amp	80 amp
Phase		1	
Number of rotor poles		2	
Rated AC frequency		60 Hz	
Power factor		1.0	
Battery requirement (not included)		12 volts, AGM Powersport Battery Group BTX20L 310CCA minimum	
Unit weight (lb / kg)	334 / 156	391 / 177	426 / 193
Dimensions (L x W x H) in / cm		46.4 x 26.3 x 30.7 / 117.9 x 66.8 x 77.9	
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load**	61	65	65
Sound output in dB(A) at 23 ft (7 m) with generator in Quiet-Test™ low-speed exercise mode **	49	55	55
Exercise duration		Adjustable 5 - 20 min (5 min factory default)	

Engine

Engine type		GENERAC G-Force 400 Series	GENERAC G-Force 800 Series	
Number of cylinders		1	2	
Displacement		459 cc	817 cc	
Cylinder block			Aluminum w/ cast iron sleeve	
Valve arrangement			Overhead valve	
Lifter type			Hydraulic	
Ignition system			Solid-state	
Governor system			Electronic	
Compression ratio			9.5:1	
Starter			12 VDC	
Oil capacity including filter		Approx. 1.4 qt (1.3 L)	Approx. 2.5 qt / 2.4 L	
Operating rpm			3,600	
Fuel consumption				
Natural Gas	ft^3/hr (m^3/hr)			
	1/2 Load	98 (2.77)	189 (5.35)	164 (4.65)
	Full Load	132 (3.74)	243 (6.89)	235 (6.64)
Liquid Propane				
	ft^3/hr (gal/hr) [L/hr]			
	1/2 Load	35 (0.94) [3.55]	63 (1.76) [6.66]	60 (1.65) [6.26]
	Full Load	58 (1.60) [6.07]	106 (2.92) [11.03]	105 (2.87) [10.87]

Fuel pipe must be sized for full load. Required fuel pressure to generator fuel inlet at all load ranges - 3.5–7 in water column (0.87–1.74 kPa) for NG, 10–12 in water column (2.49–2.99 kPa) for LP gas. For BTU content, multiply ft^3/hr x 2,500 (LP) or ft^3/hr x 1,000 (NG). For Megajoule content, multiply m^3/hr x 93.15 (LP) or m^3/hr x 37.26 (NG).

**Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters. Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). * Maximum kilovolt amps and current are subject to and limited by such factors as fuel BTU/megajoule content, ambient temperature, humidity, barometric pressure, altitude, engine power and condition, etc. Maximum power decreases approximately 3.5% for each 1,000 ft (304.8 m) above sea level; and also will decrease approximately 1% for each 10 °F (6 °C) above 60 °F (16 °C).

Controls

Mode buttons: AUTO	Automatic start on utility failure. Programmable exerciser.
MANUAL	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
OFF	Stops unit. Generator will not automatically start on utility failure. Control and charger still operate if utility is available.
SERVICE	For diagnostic personnel use to prevent remote commands for safe interaction, and prevent nuisance Mobile Link notifications during diagnostic testing.
Ready to Run/Maintenance messages	Standard
Engine Run Hours indication	Standard
Programmable start delay between 2–1,500 seconds	Standard (programmable by dealer only).
Utility nominal voltage setting	Adjustable to greater than or less than 10% of 240V, (90-110%, default 100%).
Utility Voltage Loss/Return to Utility adjustable (brownout setting)	Adjustable against nominal voltage setting, 75-80% dropout / 84-89% pickup.
Future Set Capable Exerciser/Exercise Set Error warning	Standard
Run/Alarm/Maintenance logs	50 events each.
Engine start sequence	Cyclic cranking: Engine cranks a maximum of five times at factory set intervals and durations.
Starter lock-out	Starter cannot re-engage until 5 sec after engine has stopped.
Smart battery charger	Standard
Charger Fault/Missing AC warning	Standard
Low Battery/Battery Problem Protection and Battery Condition indication	Standard
Automatic Voltage Regulation with Over and Under Voltage protection	Standard
Under-Frequency/Overload/Stepper Overcurrent protection	Standard
Safety Fused/Fuse Problem protection	Standard
Automatic Low Oil Pressure/High Oil Temperature shutdown	Standard
Overcrank/Overspeed (@ 72 Hz)/RPM Sense Loss shutdown	Standard
High Engine Temperature shutdown	Standard
Internal Fault/Incorrect Wiring protection	Standard
Common external fault capability	Standard
Automatically upgradable firmware via Cellular or Wi-Fi	Standard

GENERAC

Transfer Switch Specifications

Service Entrance Rated Switch Features

- Includes fuse control module (FCM) standard.
- Integrated surge protection.
- Energy Management sold separately.
- Electrically operated, mechanically-held contacts for fast, clean connections.
- Rated for all classes of load, 80% continuous load, both inductive and resistive.
- 2–pole, 250 VAC contactors.
- Service equipment rated, dual coil design.
- Rated for both aluminum and copper conductors.
- Main contacts are silver plated or silver alloy to resist welding and sticking.
- NEMA 3R aluminum outdoor enclosure allows for indoor or outdoor mounting flexibility.
- Includes installation fast mount.

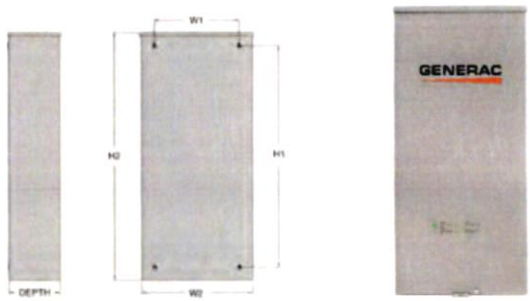
Model	G007323-0 (14kW) G007324-0 (18kW)
Part number	A0007362849
No. of poles	2
Current rating (amps)	200
Voltage rating (VAC)	120/240, 1Ø
Enclosure type	Standard NEMA 3R
Circuit breaker protected	22,000
Lug range	250 MCM - #6
Surge protection	Integrated surge protection
Weight	39.0 lbs (17.7 kg)
ETL certification	ETLus

NOTE: The 200 amp service entrance rated transfer switches are certified for use in US only.

Dimensions

	Height		Width		Depth
	H1	H2	W1	W2	
in	26.8	30.1	10.5	13.5	6.3
cm	68.1	76.45	26.67	34.3	16.01

Wire Ranges		
Conductor Lug	Neutral Lug	Ground Lug
250 MCM - #6	350 MCM - #6	2/0 - #14



Limited Circuit Switch Features

- 16 space, 24 circuit. Breakers not included.
- Electrically operated, mechanically-held contacts for fast, positive connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- 2–pole, 250 VAC contactors.
- 30 millisecond transfer time.
- Dual coil design.
- Rated for both aluminum and copper conductors.
- Main contacts are silver plated or silver alloy to resist welding and sticking.
- NEMA 3R aluminum outdoor enclosure allows for indoor or outdoor mounting flexibility.
- Multi-listed for use with 1 in standard, tandem, GFCI, and AFCI breakers from Siemens, Murray, Eaton, and Square D for the most flexible and cost effective install.

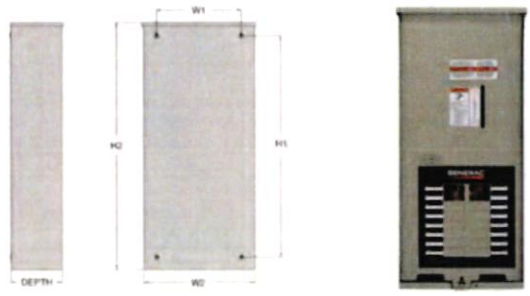
Model	G007321-0 (10 kW)
Part number	10000012054
No. of poles	2
Current rating (amps)	100
Voltage rating (VAC)	120/240, 1Ø
Enclosure type	NEMA 3R
Circuit breaker protected	10,000
Lug wire range	1/0 - #14
Weight	39.0 lbs (17.7 kg)
ETL certification	cETLus

NOTE: The 100 amp service rated transfer switches are certified for use in US and Canada.

Dimensions

	Height		Width		Depth
	H1	H2	W1	W2	
in	26.8	30.1	10.5	13.5	6.9
cm	68.1	76.45	26.67	34.3	17.5

Wire Ranges		
Conductor Lug	Neutral Lug	Ground Lug
1/0 - #14	1/0 - #14	1/0 - #14



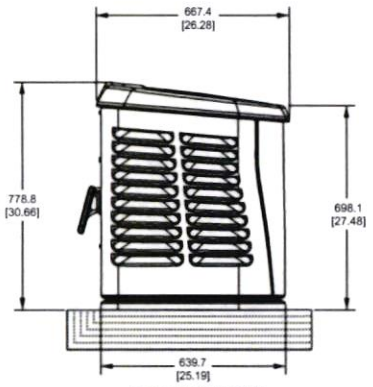
GENERAC

Available Accessories

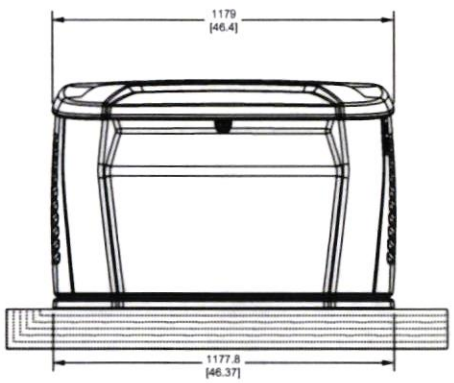
Model #	Product	Description
A0006487350	AGM Group BTX20L Battery	Every standby generator requires a battery to start the system. Generac offers the recommended battery for use with Air-Cooled Standby Generators.
G007211-0	Battery Heater	The battery heater wraps around the battery. Recommended for use if temperature regularly falls below 32 °F (0 °C).
G007102-1	Oil Heater	Oil heater slips directly over the oil filter. Recommended for use if temperature regularly falls below 32 °F (0 °C).
G007103-2	Breather Heater	Breather heater is for use in extreme cold weather applications where heavy icing occurs. Recommended for use if the temperature regularly falls below 0 °F (-18 °C).
G005621-0	Auxiliary Transfer Switch Contact Kit	The auxiliary transfer switch contact kit allows the transfer switch to lock out a single large electrical load that may not be needed. Not compatible with 50 amp pre-wired switches.
G009918-0 - Metro Gray	Touch-Up Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The touch-up paint kit includes the necessary paint to correctly maintain or touch-up a generator enclosure.
G006482-0 - 10 kW G007216-0 - 14-18 kW	Scheduled Maintenance Kit	Generac's scheduled maintenance kit provides all the items necessary to perform complete routine maintenance on an air-cooled standby generator (oil not included).
G007009-0	LTE LP Tank Fuel Level Monitor	The LTE enabled LP tank fuel level monitor provides constant monitoring of the connected LP fuel tank. Monitoring the LP tank's fuel level is an important step in verifying the generator is ready to run during an unexpected power failure. Status alerts are available through a free application to notify users when the LP tank is in need of a refill.
G007000-1 (50 amp) G007006-1 (100 amp)	Generac Load Manager	Generac Load Managers (LMs) are used to optimize the performance of a standby generator. They manage large electrical loads upon startup, and shed them to aid in recovery when overloaded. In many cases, using LMs can reduce the overall size and cost of the system.
G007025-0	Generac HVAC Energy Manager	The Generac HVAC Energy Manager is designed to independently manage up to two residential HVAC systems for Generac Home Standby Generators. Incorporating the Generac HVAC Energy Manager achieves NEC home backup system sizing compliance while also lowering the total cost of acquisition for homeowners by enabling a smaller system to meet the residence's power needs.
G007364-0	ecobee by Generac smart Thermostat	The ecobee by Generac Smart Thermostat Enhanced comes with built-in HVAC load management, removing the need to install extra equipment. This home energy manager offers a seamless integration into the Generac ecosystem, managing the home's HVAC system(s) and protecting the home backup energy system from potential overloads with precision. Can also be used to remotely view the status of the generator.

Dimensions & UPCs

Model	UPC
G007257-0	696471104059
G007321-0	696471104295
G007258-0	696471103700
G007323-0	696471104714
G007259-0	696471103717
G007324-0	696471104721



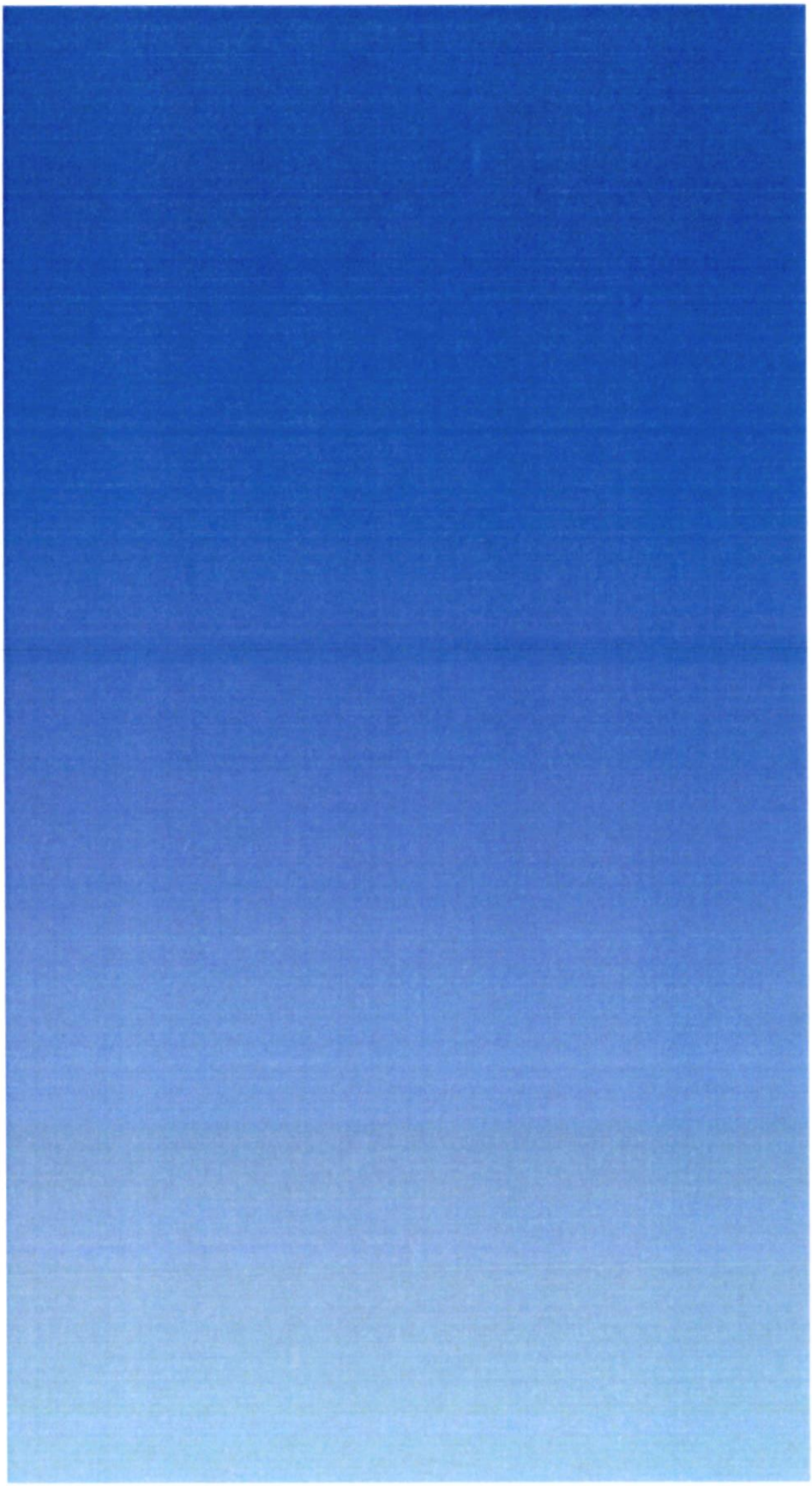
LEFT SIDE VIEW



FRONT VIEW

Dimensions shown are approximate. See installation manual for exact dimensions. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

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Part No. A0005151081
Rev. C 02/11/2026



AIR SCIENCES INC.

DENVER • PORTLAND

Appendix 2: Process Narrative, Maps, Flow Diagrams

McEwen Mining Inc. Gold Bar Project

Class II Air Quality Operating Permit No. AP1041-3799.01 Revision Application

PREPARED FOR:
MCEWEN MINING INC.

PROJECT NO. 320-26A-1
OCTOBER 1, 2026

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LIST OF ABBREVIATIONS

ADR	Adsorption-Desorption-Recovery
AQOP	Air Quality Operating Permit
CFR	Code of Federal Regulations
CO	Carbon Monoxide
hp	Horsepower
LNG	Liquefied Natural Gas
McEwen	McEwen Mining Inc.
NaCN	Sodium Cyanide
NMCP	Nevada Mercury Control Program
NO_X	Oxides of Nitrogen
PM_{10}	Particulate Matter less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter less than 2.5 Microns in Diameter
ROM	Run-of-Mine
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
ton/yr	Tons per Year
VOC	Volatile Organic Compounds

APPENDIX 2 – NARRATIVE DESCRIPTION

McEwen Mining Inc. (McEwen) owns and operates the Gold Bar Project (Gold Bar). The Gold Bar is an existing gold mining and refining facility, located approximately 30 miles northwest of Eureka, in Eureka County, Nevada. McEwen is providing this narrative description as a part of the Class II Air Quality Operating Permit (AQOP) No. AP1041-3799.01 revision application for the facility.

2.1 Introduction

A facility location map is provided in Figure 2-1. The facility is located in the hydrographic basin area: HA 139, N. Kobeh Valley. This planning area has not been triggered for the Prevention of Significant Deterioration baseline for any pollutant.[1]

The principal operation at the Gold Bar facility constitutes a "metals mine," as defined by the two-digit Standard Industrial Classification (SIC) code 10 for the metal mining industry. Because the primary metal recovered is gold, the facility can be further classified by SIC code 1041, defined as "establishments primarily engaged in mining gold ores." Figure 2-2 presents a plot plan of the Gold Bar facility showing the relative locations of the gold mining operations, processing and ancillary sources, and the surrounding topography.

The Gold Bar facility consists of open-pit mining and gold recovery processes, including ore crushing, screening, and agglomeration, heap leaching, carbon adsorption, carbon stripping, electrowinning, retorting, melting, and carbon regeneration.

The Gold Bar is a minor source subject to the Code of Federal Regulations (CFR), Title 40, Part 63 (40 CFR 63), Subpart EEEEEEE – National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category. The Gold Bar refinery emission units subject to this Subpart are covered under Nevada Mercury Operating Permit to Construct No. AP1041-3801 and 40 CFR 70 Program Class I Operating Permit No. AP1041-4232.

2.2 Facility Access

Primary access to the facility from Eureka is via US Highway 50 to 3-Bars Road, then north approximately 16 miles, and east approximately 1.5 miles on General County Road G-215 to the Old Atlas Mill site.

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[1] Nevada - PSD Triggered 107(d) Planning Areas. Accessed July 24, 2026. https://ndep.nv.gov/uploads/documents/westar_psd_trigger_areas.pdf

Figure 2-1. Facility Location Map

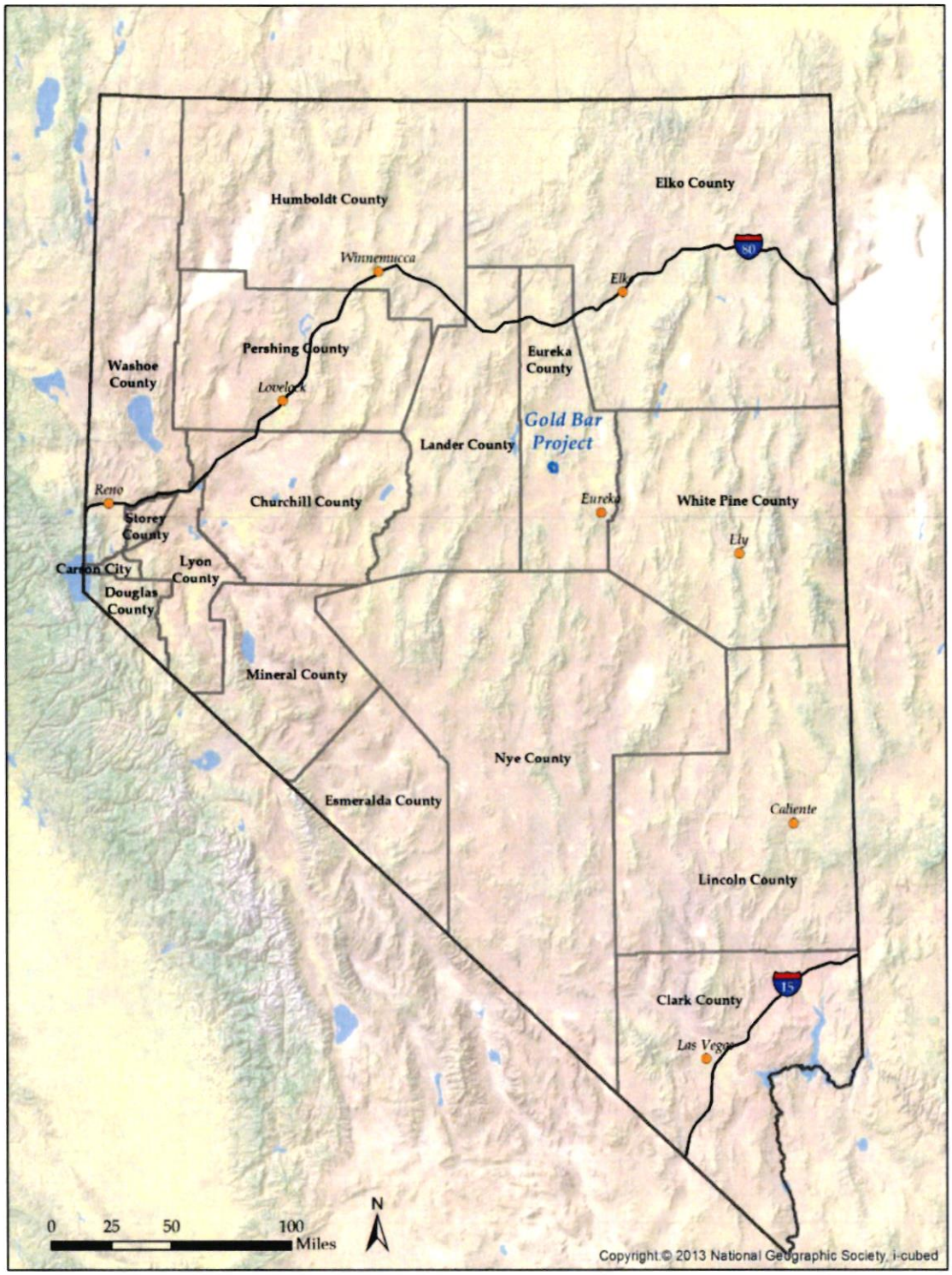
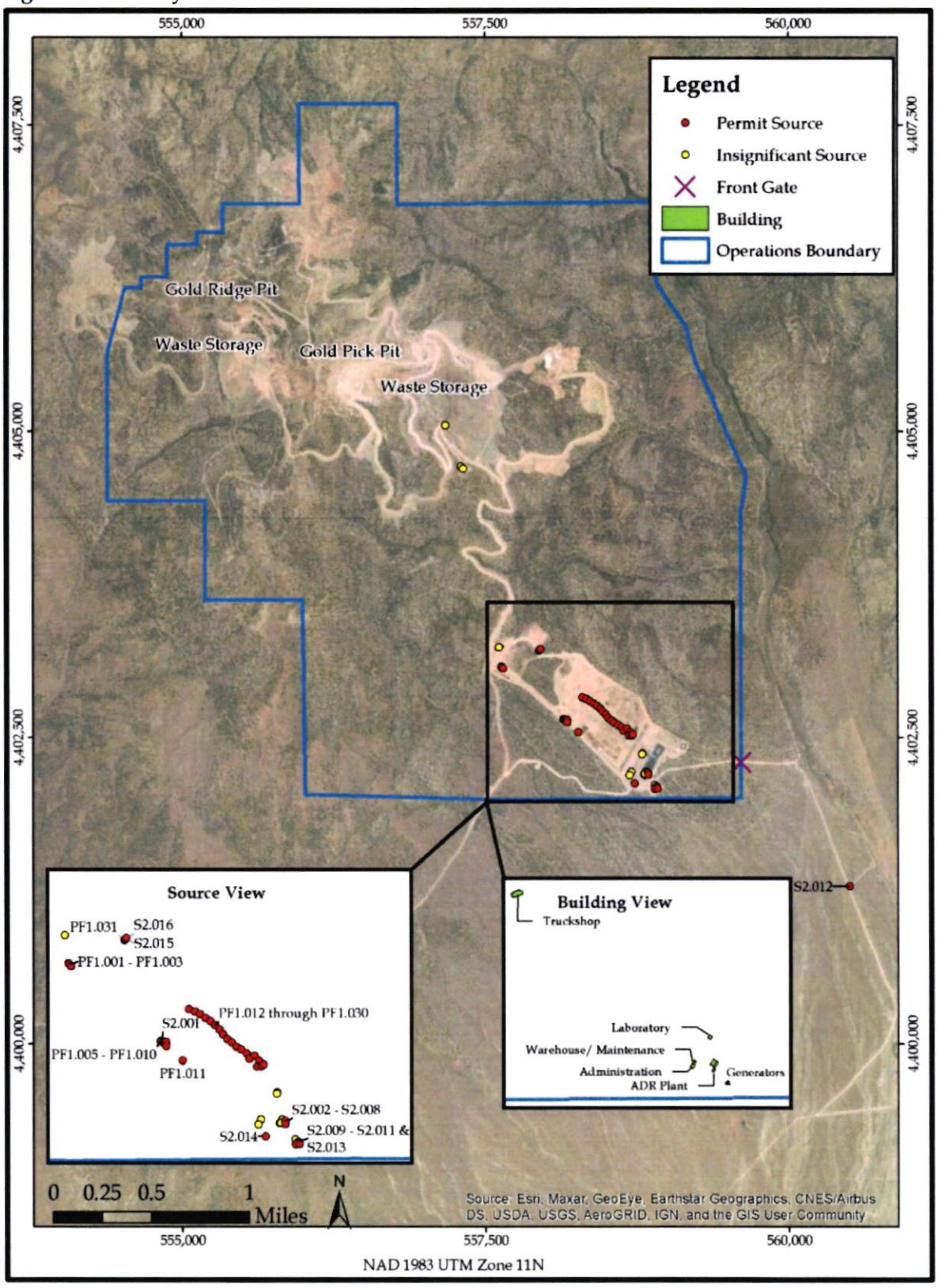


Figure 2-2. Facility Plot Plan



2.3 Proposed Revision

McEwen is submitting this application to revise its Class II AQOP No. AP1041-3799.01 for the Gold Bar facility. The proposed revisions are intended to true up the permit with the as-built primary and backup power generation equipment; increase the permitted gasoline throughput for the facility's fuel dispensing facility; and add two new generator engines. No changes to ore production rates, process equipment, or control technology are requested. The resulting facility-wide potential emissions increases are addressed in Section 2.6. The proposed revision details are as follows:

1. System 10 - S2.009 and S2.010, and System 11 - S2.011: The source naming conventions are revised to match the facility's internal identifications. No physical or operational changes to these units are proposed; the revision aligns the permit designations with the as-built equipment tags used for facility recordkeeping and reporting. McEwen also requests that the 40 CFR 60, Subpart JJJJ applicability analysis be appended in Sections G.5 and H.5 to recognize that the installed engines are non-certified engines and are therefore subject to the applicable performance testing requirements of 40 CFR 60.4243(b), rather than the manufacturer certification provisions.

2. System 13 - S2.013: Replace the currently permitted 437 horsepower (hp) backup diesel generator engine with a larger, 569 hp engine. The replacement unit serves the same backup function at the same location, and no changes to the unit's operating scenario, fuel, or control configuration are requested. As a compression ignition engine, the replacement unit remains subject to 40 CFR 60, Subpart IIII, and 40 CFR 63, Subpart ZZZZ, as described in Section 2.5. The engine specifications and estimated emissions are provided in the application forms and supporting calculations in Appendix 1.

3. System 14 - S2.014: Increase the gasoline throughput limit to 20,000 gallons per month and 240,000 gallons per year. The current permitted limits are 9,900 gallons per month and 118,800 gallons per year. Because the revised limit corresponds to a monthly throughput of 10,000 gallons or more, the gasoline dispensing facility becomes subject to 40 CFR 63.11117 rather than 40 CFR 63.11116, including the requirement to load gasoline into the storage tank by submerged filling. Under 40 CFR 63.11111(i), the source remains subject to the requirements for sources above the threshold even if monthly throughput later falls below 10,000 gallons. McEwen also requests that the applicability determination in Section K.5 be revised accordingly.

4. Add a new diesel-fired portable generator to supply power for ongoing construction and auxiliary activities and to cover for other permitted generators during breakdowns and maintenance. Because the unit will provide power during scheduled maintenance and construction activities, as well as unplanned outages, it is not an emergency stationary engine and is proposed to be permitted as a non-emergency compression

ignition engine, without the operating-hour limitations applicable to emergency units. The unit is subject to 40 CFR 60, Subpart IIII, and 40 CFR 63, Subpart ZZZZ, as described in Section 2.5. The engine was previously permitted as S2.013, and its specifications and estimated emissions are provided in the application forms and supporting calculations in Appendix 1.

5. Add a new propane-fired emergency generator to back up administrative services at the facility office and related support buildings. The engine operation will be limited to power outages and periodic readiness testing and maintenance. The engine specifications and estimated emissions are provided in the application forms and supporting calculations in Appendix 1.

2.4 Facility Operations

2.4.1 Ore Processing

The Gold Bar open-pit mine operates on a 24-hour-a-day schedule. Haul trucks dump the run-of-mine (ROM) ore into stockpiles at the Gold Bar crushing and screening facilities. Front-end loaders transfer the ROM ore to a primary jaw crusher (or bypass the crusher) via a grizzly hopper. Particulate emissions from this transfer and jaw crusher are controlled by wet suppression.

The crushed and bypassed ore is transferred to a three-deck vibrating screen via an overland conveyor. The screen undersized material (minus-3-inch) is conveyed to the agglomeration drum, and the screen oversize material (plus-3-inch) is transferred to the leach pad feed conveyor. A silo is used to provide cement or lime to the screened ore prior to agglomeration. The agglomerated material joins the screen oversize material on the leach pad feed conveyor. Particulate emissions from these activities are controlled by wet suppression. The combined ore stream is transferred to a leach pad via a series of mobile grasshopper, index, and stacking conveyors.

Some ROM ore will be directly dumped onto the leach pad by haul trucks. A portable silo will dispense lime or cement onto the ore in haul trucks before the ore is placed on the leach pad.

The ore processing flow diagram is presented in Figure 2-3.

2.4.2 Gold Recovery and Refining

A dilute sodium cyanide (NaCN) solution is applied to the leach pad ore via drip emitters. The NaCN solution leaches gold and other metals from the ore as it percolates downward through the ore. The metal-laden solution, or "pregnant solution," flows down-gradient along the pad liners and is gathered in a pond. Submersible pumps feed the pregnant solution to an adsorption-desorption-recovery (ADR) plant for gold recovery and refining.

Gold recovery is achieved through the carbon-in-column process, which utilizes carbon adsorption technology. This process involves passing pregnant solution through activated carbon columns, where the metals bind to the activated carbon. The solution stripped of metals, referred to as "barren solution," is adjusted to the desired cyanide concentration and returned to the leach pads for continued leaching.

After carbon adsorption, the gold recovery process continues with carbon stripping. The activated carbon containing the adsorbed metals passes through carbon strip vessels, where it is stripped of the gold (and trace metals) with a heated stripping solution. The resulting pregnant solution exits the strip vessel and passes through heat exchangers to cool itself and preheat the barren strip solution.

The carbon stripped of metals is thermally regenerated in a liquefied natural gas (LNG)-fired carbon regeneration kiln and returned to the carbon-in-column process for continued adsorption. The carbon regeneration kiln is a potential source of mercury emissions. The Gold Bar carbon regeneration kiln is equipped with emission controls compliant with the Nevada Mercury Control Program (NMCP).

Gold from the pregnant strip solution is recovered in electrowinning cells. When pregnant strip solution flows through electrowinning cells, the electric current plates the gold onto steel wool cathodes. Cathode baskets, removed from the electrowinning cells, are dismantled and subjected to a high-pressure spray to remove gold sludge from the steel wool. The barren strip solution from the electrowinning cells is returned to a holding tank and recycled for carbon stripping.

The gold sludge recovered in the electrowinning process is filter-pressed, loaded into trays, and placed in an electric mercury retort to drive off mercury. The post-retort sludge is mixed with fluxes and charged to an electric melting furnace to produce doré bars.

The electrowinning cells, mercury retort, and melting furnace at the Gold Bar are potential sources of mercury emissions. These sources are equipped with emission controls compliant with the NMCP.

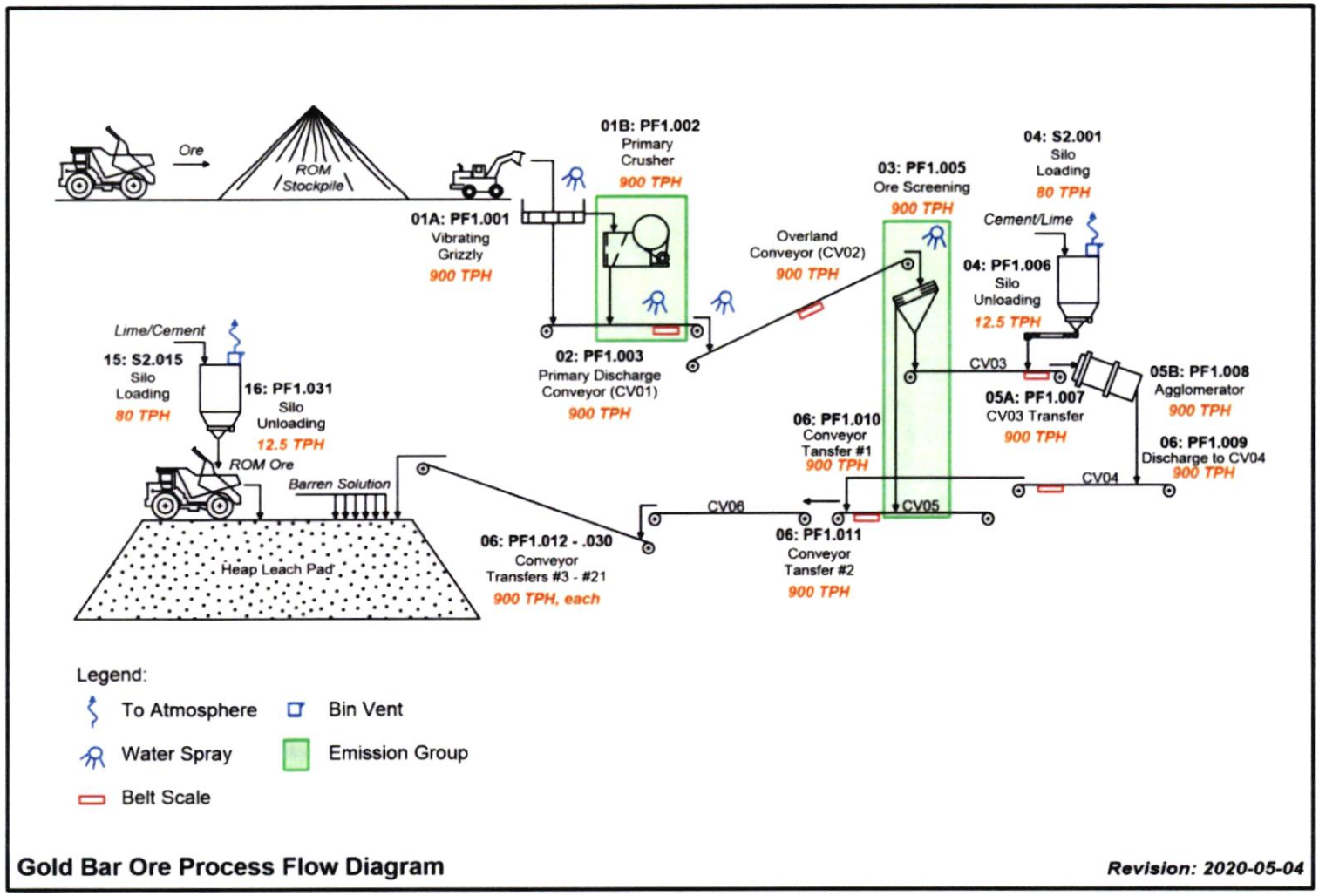


Figure 2-3. Ore Processing Flow Diagram

2.4.3 Power Generation

The Gold Bar facility includes an onsite power generation plant. Electric power for the facility is generated by three LNG-fired reciprocating engines. Each engine is equipped with an oxidation catalyst to control combustion emissions.

In addition, a diesel-fired generator powers activities at the water well site, located approximately 1 mile southeast of the power generation plant.

2.4.4 Ancillary Sources

Ancillary sources at the Gold Bar include emergency backup and portable generators, ammonium nitrate prill storage silos, cement/lime storage silos, process and building heaters, sample preparation and bench-scale laboratory equipment, reagent and fluid storage, and a fuel dispensing facility, including gasoline and diesel storage tanks.

2.5 Regulatory Applicability

The ore crushing, screening, transfer, and handling activities at the Gold Bar are subject to 40 CFR 60, Subpart LL – Standards of Performance for Metallic Mineral Processing Plants.

The Gold Bar refinery sources, including the carbon regeneration kiln, electrowinning circuit, retort, and melting furnace, are subject to 40 CFR 63, Subpart EEEEEEE.

The LNG and propane-fired generator engines at the Gold Bar are subject to 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, and 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The diesel-fired generator engines at the Gold Bar are subject to 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR 63, Subpart ZZZZ.

The Gold Bar gasoline storage tank is subject to 40 CFR 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. With the revised gasoline throughput limit described in Section 2.3, the gasoline dispensing facility is subject to the requirements of 40 CFR 63.11117 for facilities with a monthly throughput of 10,000 gallons or more.

2.6 Facility-Wide Potential Emissions

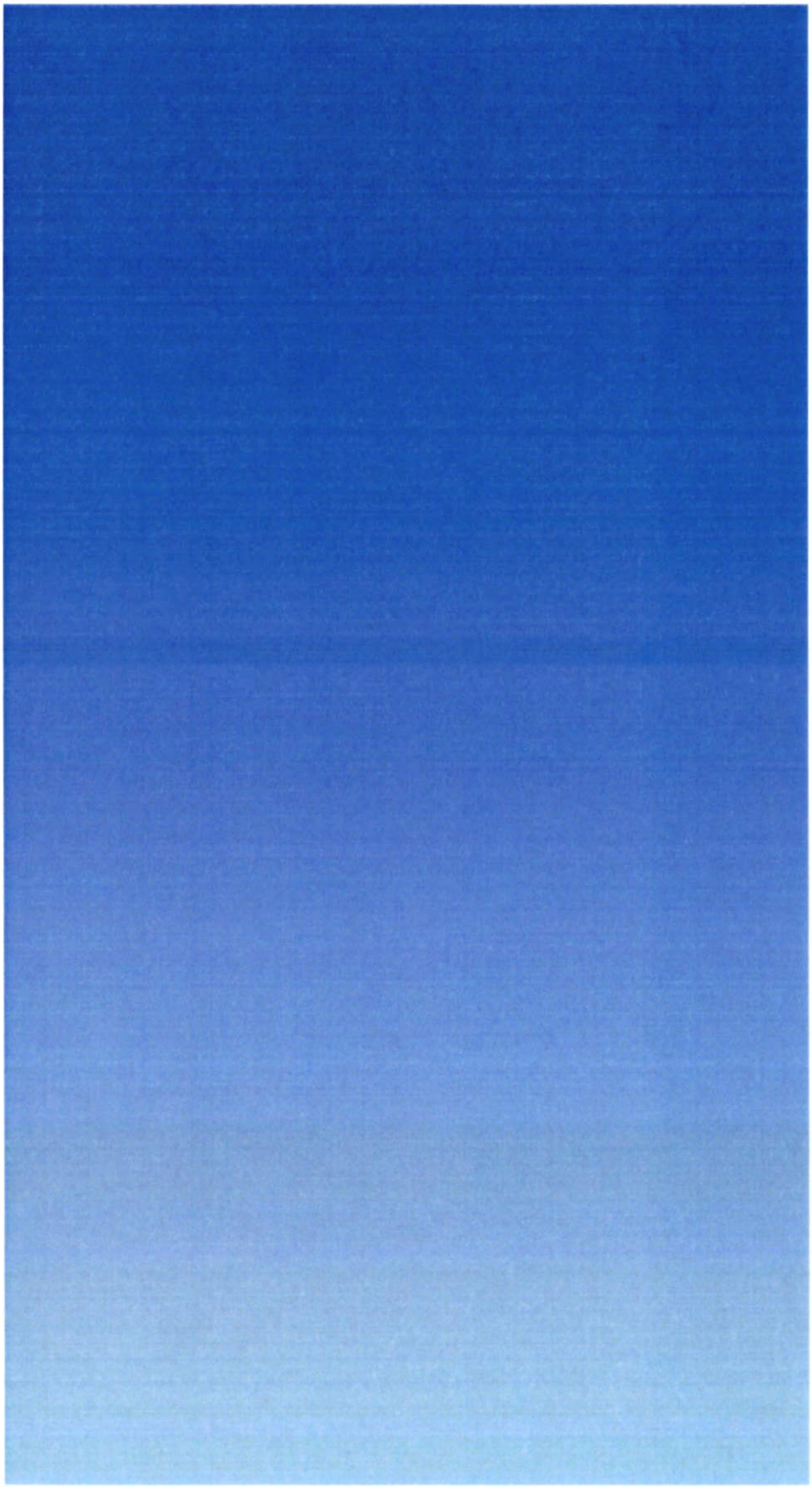
The Gold Bar facility-wide potential emissions in tons per year (ton/yr) are presented in Table 2-1.

Table 2-1. Gold Bar Facility-Wide Potential Emissions (ton/yr)

Activity	PM_{10}	$PM_{2.5}$	CO	NO_X	SO_2	VOC
Permitted Sources[1]	39.85	12.61	71.01	61.80	0.15	35.28
Insignificant Sources	3.19	1.41	6.64	7.90	0.05	0.44
Facility-Wide Total	43.04	14.03	77.64	69.70	0.20	35.73

[1] Including Class I sources.

Detailed emission calculations are provided in Appendix 1.



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Appendix 3: Environmental Evaluation

McEwen Mining Inc. Gold Bar Project

Class II Air Quality Operating Permit No. AP1041-3799.01 Revision Application

PREPARED FOR:
MCEWEN MINING INC.

PROJECT NO. 320-26A-1
OCTOBER 1, 2026

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Attachments

Attachment 3-1 – Model Input Parameters

LIST OF ABBREVIATIONS

ADR	Adsorption-Desorption-Recovery
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
ARM2	Ambient Ratio Method Version 2
BPIP	Building Profile Input Program
CO	Carbon Monoxide
EPA	United States Environmental Protection Agency
g/s	Grams per Second
K	Kelvin
LNG	Liquefied Natural Gas
McEwen	McEwen Mining Inc.
MMBtu/hr	Million British Thermal Units per Hour
NAD83	North American Datum of 1983
NDEP	Nevada Division of Environmental Protection
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
NvAAQS	Nevada State Standards of Quality for Ambient Air
PM_{10}	Particulate Matter less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter less than 2.5 Microns in Diameter
ppm	Parts per Million
PRIME	Plume Rise Model Enhancement
SO_2	Sulfur Dioxide
ton/yr	Tons per Year
UTM	Universal Transverse Mercator
$\mu g/m^3$	Micrograms per Cubic Meter

APPENDIX 3 – ENVIRONMENTAL EVALUATION

3.1 Introduction

McEwen Mining Inc. (McEwen) is providing this environmental evaluation as part of the Class II Air Quality Operating Permit revision application for the Gold Bar Project (Gold Bar).

The Gold Bar is an existing gold mining and refining facility located approximately 30 miles northwest of Eureka, in Eureka County, Nevada. A location map for the Gold Bar facility is presented in Figure 3-1.

This appendix presents the air quality analysis evaluating potential air emissions from the Gold Bar sources. The dispersion model selection and modeling techniques, source characterization and emissions, receptor network, meteorological dataset, background concentrations, and ambient air quality standards used in the air quality evaluation are described in this appendix. The model results and compliance demonstration with the applicable standards are also presented in this appendix.

3.2 Model Selection

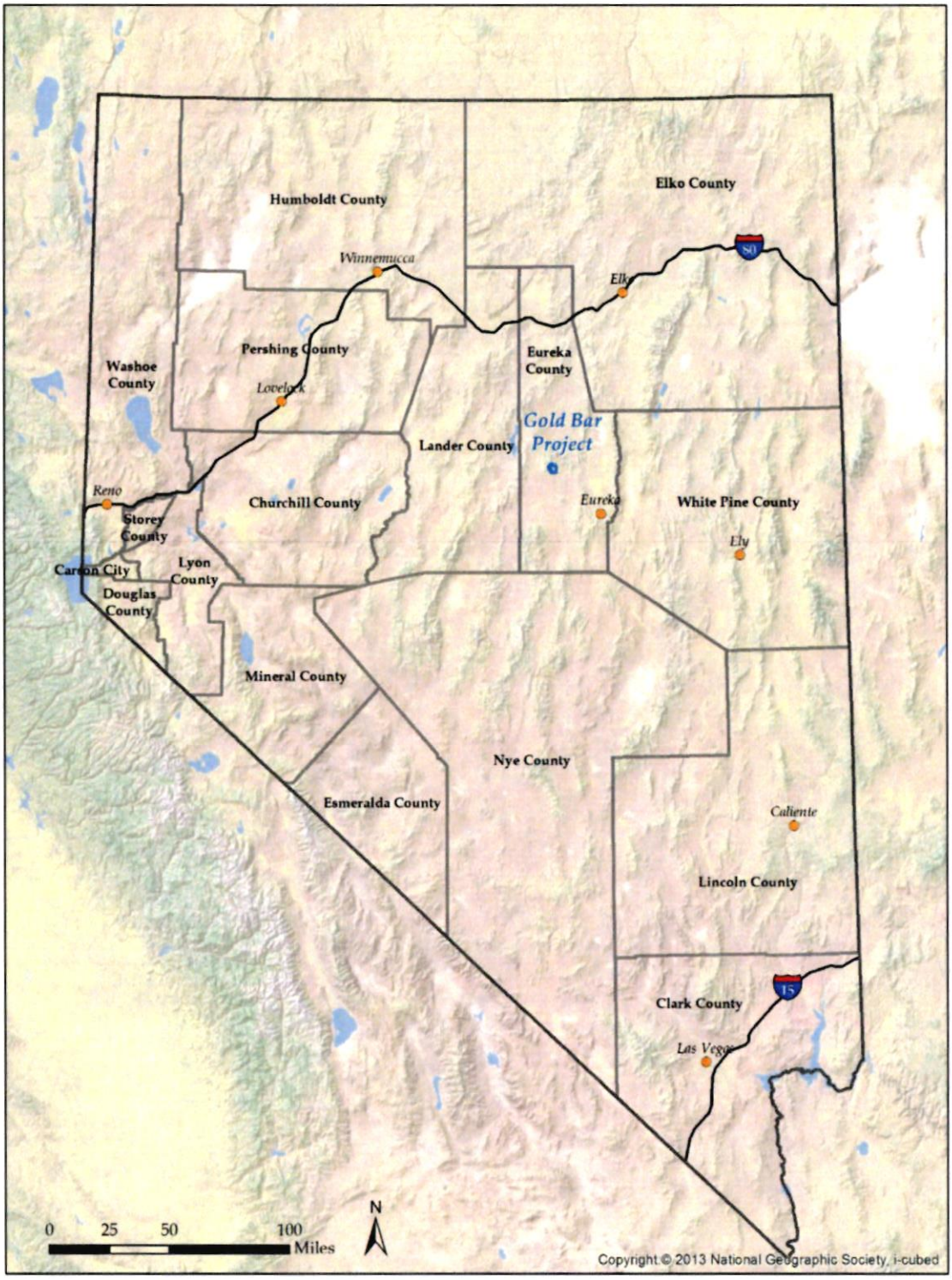
This analysis was conducted using version 24142[1] of the AERMOD modeling system. The AERMOD modeling system is listed as the recommended model for short-range analyses (up to 50 kilometers) in the Guideline on Air Quality Models, maintained by the United States Environmental Protection Agency and published as Appendix W to the Code of Federal Regulations, Title 40, Part 51.

Electronic copies of the AERMOD input, output, and other associated files are provided via the following Google Drive fileshare link.

https://drive.google.com/drive/folders/1tazk05e8H4OZWQkAiPmJ7ubB2jaG0Hft?usp=sharing

[1] The most recent AERMOD modeling system version is 26135; however, NDEP (email communication from S. Speckart, August 5, 2026) confirmed that AERMOD version 24142 remains acceptable for the next few months until NDEP processes and releases Version 26135 meteorological data. Based on Air Sciences' experience, the two versions did not produce any noticeable differences in modeling results.

Figure 3-1. Gold Bar Project Location Map



3.3 Modeled Sources

This analysis evaluates potential emissions from all sources permitted at the Gold Bar facility, including insignificant sources. Emission sources include exhaust stacks (generators, silo vents, heaters, and refinery sources) and process fugitive emission sources (material handling, crushing, and conveying).

3.4 Air Pollutants and Emissions

A summary of the Gold Bar facility-wide potential emissions in tons per year (ton/yr) is provided in Table 3-1.

Table 3-1. Gold Bar Facility-Wide Potential Emissions (ton/yr)

Activity	PM_{10}	$PM_{2.5}$	CO	NO_X	SO_2
Permitted Sources[1]	39.85	12.61	71.01	61.80	0.15
Insignificant Sources	3.19	1.41	6.64	7.90	0.05
Facility-Wide Total	43.04	14.03	77.64	69.70	0.20

[1] Including Class I sources. $PM_{10}/PM_{2.5}$ = particulate matter less than 10/2.5 microns in aerodynamic diameter; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_2 = sulfur dioxide

Detailed emission calculations are provided in Appendix 1.

This air quality analysis presents modeling results for the pollutants and averaging periods listed in Table 3-2.

Table 3-2. Modeled Pollutants and Averaging Periods

Pollutant	Averaging Period
CO	8-hour
	1-hour
NO_2 (nitrogen dioxide)	Annual
	1-hour
$PM_{2.5}$	Annual
	24-hour
PM_{10}	24-hour
SO_2	Annual
	24-hour
	3-hour
	1-hour

3.5 Source Characterization and Model Input Parameters

All the sources with stacks included in this analysis were characterized as POINT or POINTHOR sources in the model. An exhaust temperature of 0 K was entered for sources not associated with heated processes (e.g., silo vents). AERMOD substitutes a 0 K exhaust temperature with the hourly ambient temperature provided in the meteorological data for dispersion calculations.

All process fugitive sources without a stack were characterized as VOLUME sources. The initial lateral and vertical dispersion parameters were calculated based on approximate source dimensions and coefficients provided in EPA guidance.[2] The model input parameters for each source are presented in Attachment 3-1.

The 1-, 3-, and 8-hour averaging period modeled emission rates were based on maximum hourly emissions (except as discussed in Section 3.12), the 24-hour averaging period modeled emission rates were based on maximum daily emissions, and the annual averaging period rates were based on annual emissions. The modeled emission rates in grams per second (g/s) for each source are provided in Attachment 3-1.

A facility plot plan showing the facility boundary, front gate, buildings, and layout of sources is provided in Figure 3-2.

3.6 Coordinate System

The Universal Transverse Mercator (UTM) coordinate system projected in the North American Datum of 1983 (NAD83), Zone 11, was used in this modeling analysis to define all locations in the modeling domain (sources, buildings, and receptors).

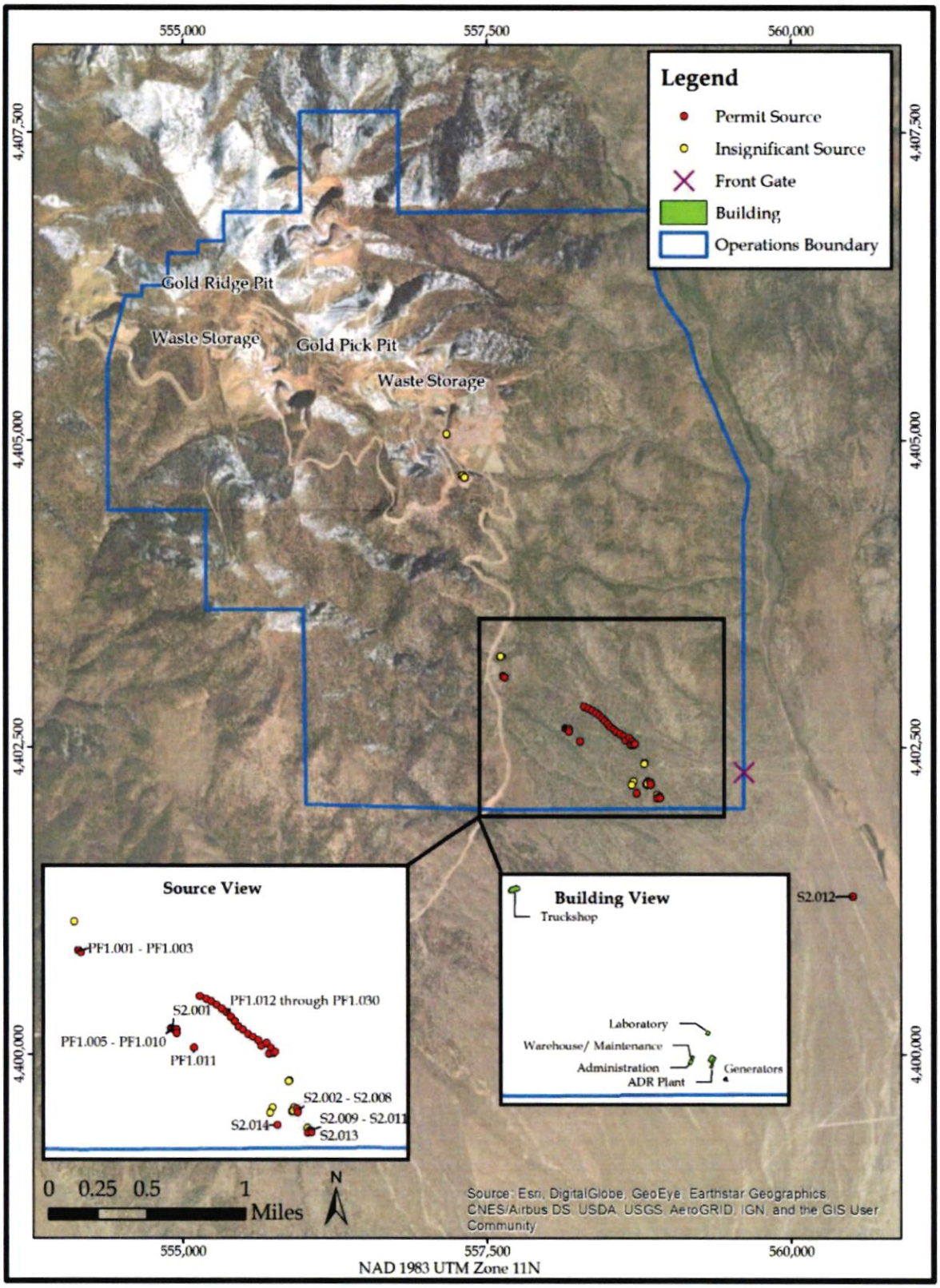
3.7 Building Downwash

The effects of the building-induced downwash were incorporated into this modeling analysis. The building downwash parameters were calculated using the most recent version of the Building Profile Input Program (BPIP) with the Plume Rise Model Enhancement (PRIME) algorithm (BPIP-PRIME version 04274). The BPIP-PRIME input and output files are also provided via the Google Drive fileshare link (Section 3.2).

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[2] EPA. 2019. User's Guide for the AMS/EPA Regulatory Model (AERMOD). EPA-454/B-19-027. August 2019.

Figure 3-2. Gold Bar Project Facility Plot Plan



3.8 Ambient Air Boundary and Receptors

The Gold Bar is an active industrial site where hazardous activities occur, such as explosives handling, blasting, drilling, and heavy equipment operation. To mitigate hazards from these activities, the facility requires strict safety protocols and controlled access. McEwen has established an operations boundary where public access is restricted. McEwen has legal authority to restrict public access within this boundary and does so by using a combination of surveillance, fencing, signage, and natural barriers, such as steep slopes and other rugged terrain features.

The operations boundary shown in Figure 3-2 was used to define the ambient air boundary for modeling purposes. A series of the following nested Cartesian receptor grids was used to assess ground-level concentrations at and beyond the operations boundary:

- Boundary line receptors at 25-meter spacing along the operations boundary;
- Near-field receptors at 50-meter spacing, out to 1,000 meters from the operations boundary; and
- Gridded receptors at 100-meter spacing, out to 2,000 meters from the operations boundary.

All the above grids were centered on the Gold Bar facility. Receptors within the operations boundary were not modeled. The modeled receptors are shown in Figure 3-3.

3.9 Meteorological Data

This analysis was conducted using five years (2019–2023) of hourly meteorological data from the Elko National Weather Service station. These AERMOD-ready meteorological data were provided by the Nevada Division of Environmental Protection (NDEP) (email communication from S. Speckart, April 3, 2025).

A five-year composite wind frequency distribution diagram for the meteorological data is provided in Figure 3-4.

Figure 3-3. Modeled Receptors

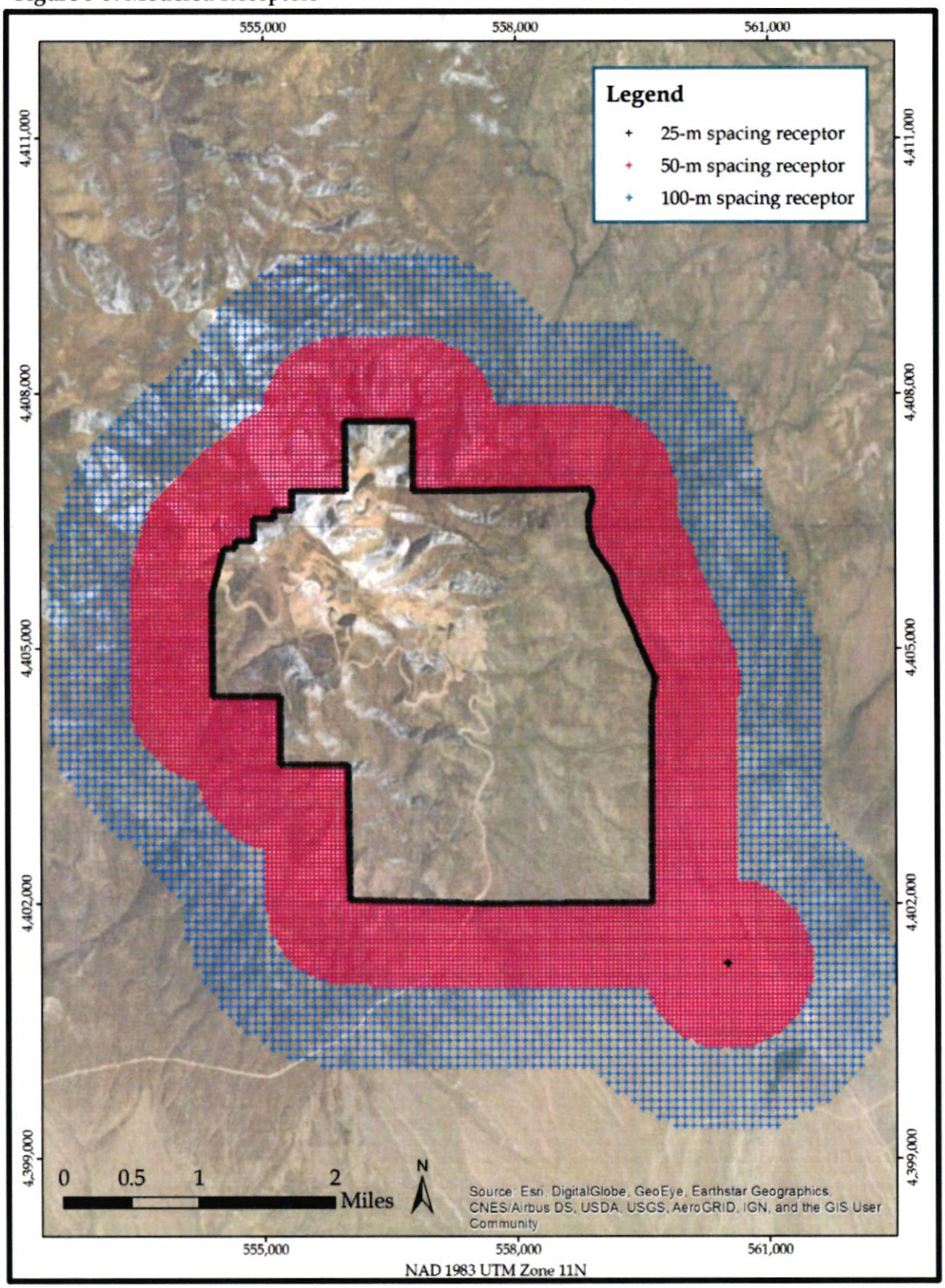
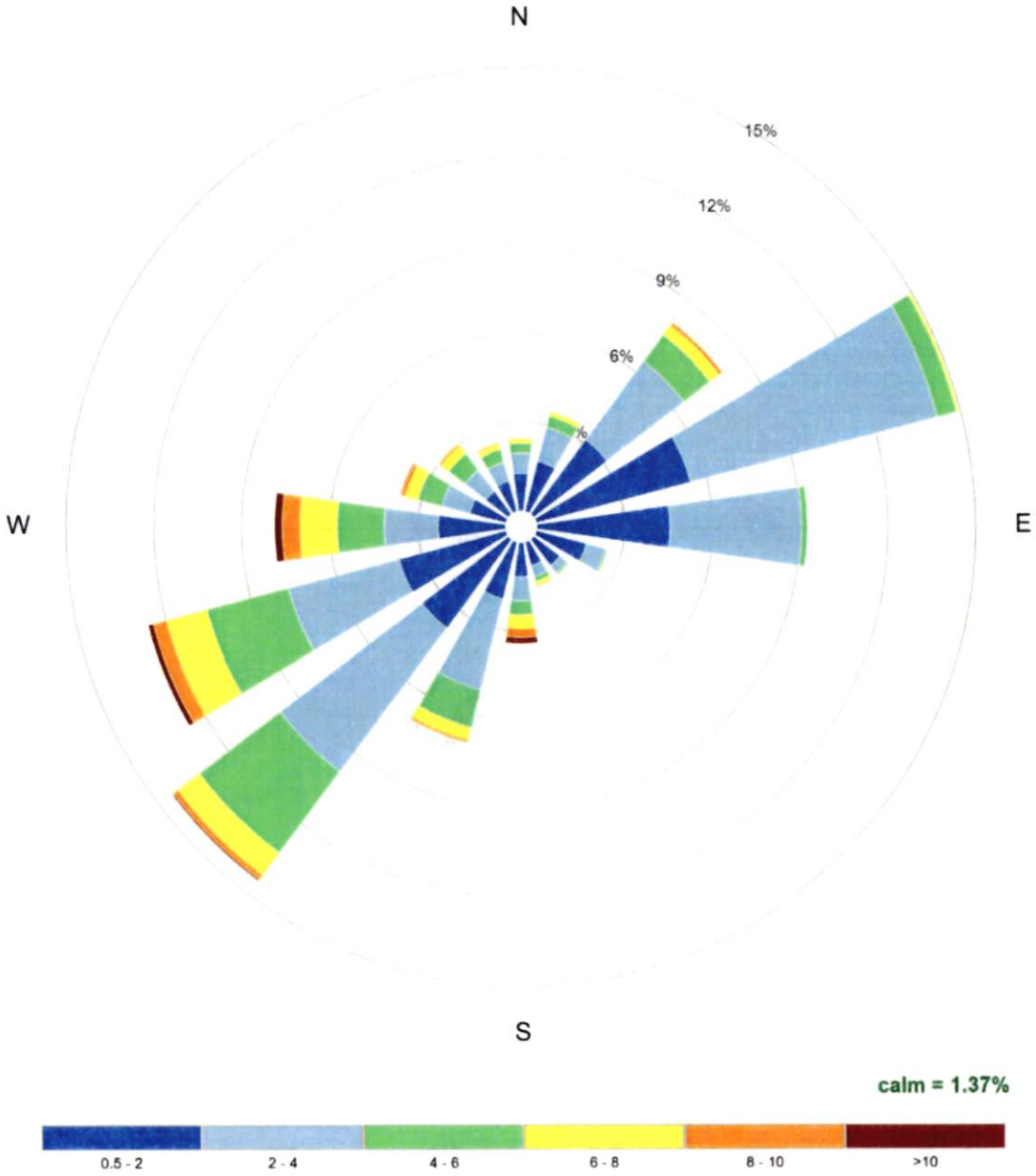


Figure 3-4. Wind Frequency Distribution Diagram: Elko 2019–2023



3.10 Background Concentrations

Background concentrations were added to the modeled concentrations to account for the prevailing air pollution in the modeling domain before comparison with standards for compliance demonstration. Table 3-3 presents the NDEP-recommended background concentrations for rural areas of Nevada, in units of micrograms per cubic meter ($\mu g/m^3$), that were used in this analysis.

Table 3-3. NDEP Default Background Concentrations for Rural Locations

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)
CO	8-hour	--
	1-hour	--
NO_2	Annual	--
	1-hour	--
$PM_{2.5}$	Annual	2.3
	24-hour	8.0
PM_{10}	24-hour	10.2
SO_2	Annual	--
	24-hour	--
	3-hour	--
	1-hour	--

3.11 Modeling Options

Regulatory default options in AERMOD were used to estimate the ground-level concentrations for all the pollutants and averaging periods.

3.12 NO_2 and SO_2 Modeling

The NO_X emissions from combustion sources are principally composed of nitric oxide (NO) and NO_2. Once in the atmosphere, the NO can convert to NO_2 through chemical reactions with ambient ozone.

The default Ambient Ratio Method Version 2 (ARM2) was used to estimate the NO_2 1-hour and annual impacts for this analysis. This method was implemented by using the "ARM2" keyword in AERMOD input files.

For the NO_2 and SO_2 1-hour standards, modeled emissions from the backup emergency generators were calculated from annual average hourly emissions based on 100 hours of

operation per year. This is consistent with NDEP policy[3] and EPA guidance[4] for intermittent sources.

3.13 Ambient Air Quality Standards

Background concentrations were added to the modeled concentrations to estimate the total ambient concentrations, which were compared with the Nevada State Standards of Quality for Ambient Air (NvAAQS) for compliance demonstration. The applicable NvAAQS are presented in Table 3-4.

Table 3-4. NvAAQS for Compliance Demonstration

Pollutant	Averaging Period	NvAAQS(1)		Compliance Design Value
		(ppm)	($\mu g/m^3$)	
CO	8-hour(2)	6	7,000	Not to be exceeded more than once per year
	1-hour	35	40,500	
NO_2	Annual	0.053	100	Annual mean
	1-hour	0.1	188	98th percentile, averaged over 3 years
$PM_{2.5}$	Annual	--	9	Annual mean, averaged over 3 years
	24-hour	--	35	98th percentile, averaged over 3 years
PM_{10}	24-hour	--	150	Not to be exceeded more than once per year on average over 3 years
SO_2	Annual	0.03	80	Annual mean
	24-hour	0.14	365	Not to be exceeded more than once per year
	3-hour	0.5	1,300	Not to be exceeded more than once per year on average over 3 years
	1-hour	0.075	196	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

(1) The more stringent values of the Nevada and National standards

(2) Nevada standard for sites at elevations ≥5,000 feet above mean sea level

[3] Bureaus of Air Pollution Control & Air Quality Planning. 2015. Modeling Guidance for Intermittent Sources and the 1-hr NO_2 Standard. September 2015.

[4] EPA. 2011. Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard. March 1, 2011.

3.14 Modeling Results and Analysis

The modeled design concentrations, estimated total ambient concentrations (modeled concentrations plus background concentrations), and comparison with the applicable NvAAQS are presented in Table 3-5.

Table 3-5. Modeling Results and NvAAQS Compliance Demonstration

Pollutant	Averaging Period	Modeled Concentration[1] (µg/m³)	Background Concentration (µg/m³)	Total Concentration (µg/m³)	NvAAQS (µg/m³)	Compliance
CO	8-hour	1,183.8	--	1,183.8	7,000	Yes
	1-hour	3,807.9	--	3,807.9	40,500	Yes
NO_2	Annual	3.3	--	3.3	100	Yes
	1-hour	100.6	--	100.6	188	Yes
$PM_{2.5}$	Annual	2.2	2.3	4.5	9	Yes
	24-hour	7.1	8.0	15.1	35	Yes
PM_{10}	24-hour	15.7	10.2	25.9	150	Yes
SO_2	Annual	0.03	--	0.03	80	Yes
	24-hour	0.4	--	0.4	365	Yes
	3-hour	1.3	--	1.3	1,300	Yes
	1-hour	1.5	--	1.5	196	Yes

[1] CO 8-hour – Highest 8-hour concentration over 5 years

CO 1-hour – Highest 1-hour concentration over 5 years

NO_2 Annual – Maximum annual concentration over 5 years

NO_2 1-hour – 8th-highest maximum daily 1-hour concentrations averaged over 5 years

$PM_{2.5}$ Annual – Maximum annual concentrations averaged over 5 years

$PM_{2.5}$ 24-hour – 8th-highest 24-hour concentrations averaged over 5 years

PM_{10} 24-hour – Highest 24-hour concentration over 5 years

SO_2 Annual – Maximum annual concentration over 5 years

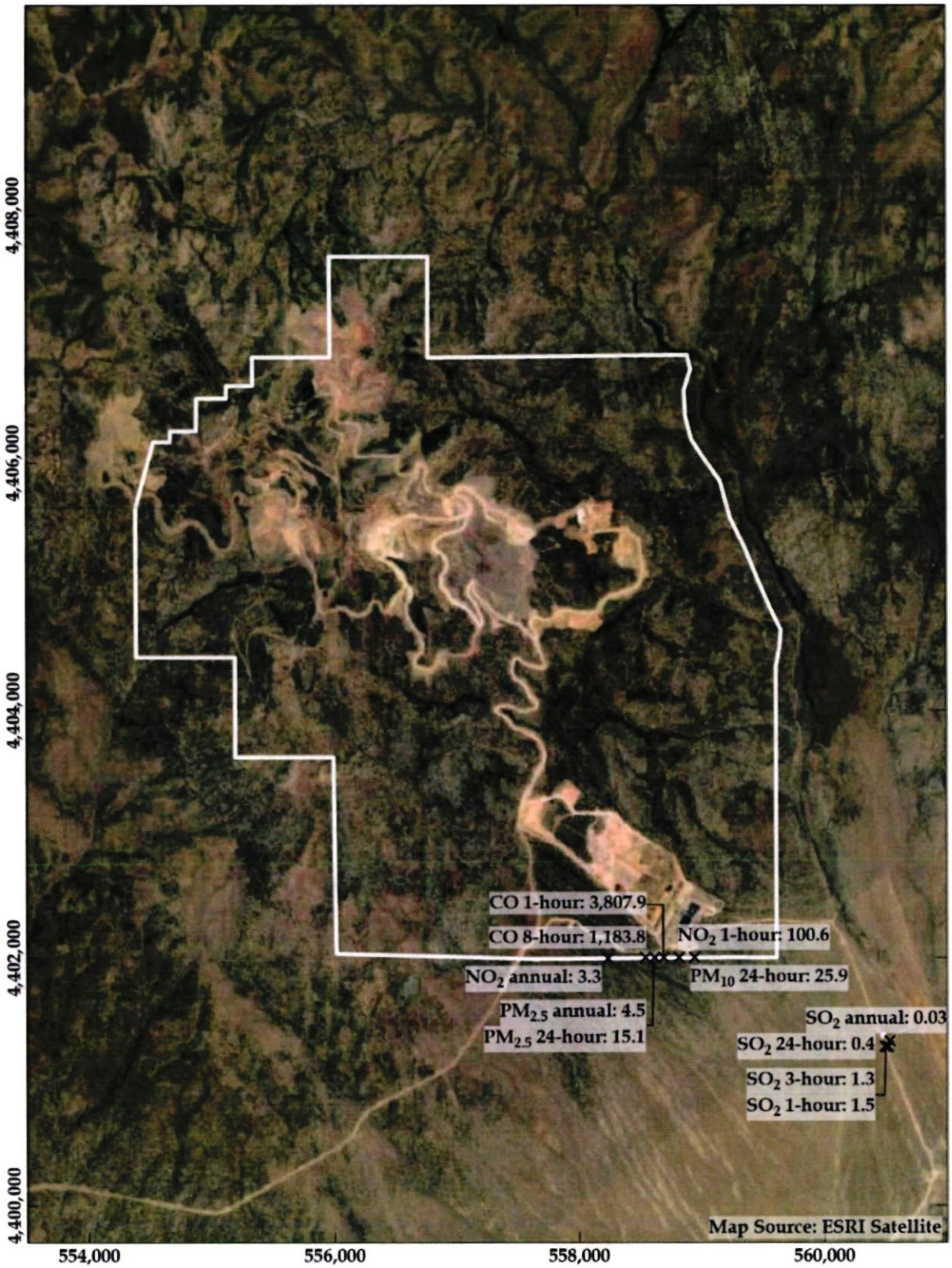
SO_2 24-hour – Highest 24-hour concentration over 5 years

SO_2 3-hour – Highest 3-hour concentration over 5 years

SO_2 1-hour – 4th-highest maximum daily 1-hour concentrations averaged over 5 years

As shown in Table 3-5, the estimated maximum total ambient concentrations for all pollutants and averaging periods are below the applicable NvAAQS. The locations and values of the maximum estimated total concentrations (including background concentrations) for each pollutant and averaging period are shown in Figure 3-5.

Figure 3-5. Modeled Total Ambient Concentrations (µg/m³)



Attachment 3-1 - Model Input Parameters

Table 3-1-1. Modeled Sources and Location Coordinates

Model ID	Source Description	Source Type	UTM East (m)	UTM North (m)	Elevation (m)
GBP001	Ore Transfer through Vibrating Grizzly to Primary Crusher/Bypass (CV01)	VOLUME	557,633	4,403,082	2,192
GBP002	Primary Crushing and Associated Transfers (In from Vibrating Grizzly, Out to Primary Discharge Conveyor (CV01))	VOLUME	557,635	4,403,080	2,192
GBP003	Ore Transfer from Primary Discharge Conveyor (CV01) to Overland Conveyor (CV02)	VOLUME	557,648	4,403,070	2,185
GBP004	Screening and Associated Transfers (In from Overland Conveyor (CV02), Out to Screen Undersize Conveyor (CV03) or Leach Pad Feed Conveyor (CV05))	VOLUME	558,144	4,402,653	2,119
GBP005	Cement/Lime Silo (Including Guppies) Loading	POINT	558,154	4,402,650	2,119
GBP006	Cement/Lime Silo Discharge	VOLUME	558,154	4,402,650	2,119
GBP007	Portable Silo (Including Guppies) Loading	POINT	557,950	4,403,220	2,150
GBP008	Portable Silo Discharge	VOLUME	557,945	4,403,215	2,150
GBP009	Ore Transfer from Conveyor (CV03) to Agglomerator	VOLUME	558,165	4,402,649	2,118
GBP011	Agglomerator Discharge to Agglomerator Product Conveyor (CV04)	VOLUME	558,176	4,402,649	2,118
GBP012	Conveyor Transfers #1 (CV04 to CV05)	VOLUME	558,177	4,402,627	2,117
GBP013	Conveyor Transfers #2	VOLUME	558,269	4,402,547	2,109
GBP014	Conveyor Transfers #3	VOLUME	558,302	4,402,832	2,111
GBP015	Conveyor Transfers #4	VOLUME	558,337	4,402,817	2,109
GBP016	Conveyor Transfers #5	VOLUME	558,366	4,402,802	2,107
GBP017	Conveyor Transfers #6	VOLUME	558,395	4,402,782	2,103
GBP018	Conveyor Transfers #7	VOLUME	558,423	4,402,763	2,098
GBP019	Conveyor Transfers #8	VOLUME	558,450	4,402,742	2,098
GBP020	Conveyor Transfers #9	VOLUME	558,472	4,402,718	2,098
GBP021	Conveyor Transfers #10	VOLUME	558,494	4,402,692	2,096
GBP022	Conveyor Transfers #11	VOLUME	558,515	4,402,666	2,094
GBP023	Conveyor Transfers #12	VOLUME	558,540	4,402,647	2,092
GBP024	Conveyor Transfers #13	VOLUME	558,567	4,402,625	2,090
GBP025	Conveyor Transfers #14	VOLUME	558,595	4,402,607	2,088
GBP026	Conveyor Transfers #15	VOLUME	558,624	4,402,589	2,087
GBP027	Conveyor Transfers #16	VOLUME	558,640	4,402,558	2,085
GBP028	Conveyor Transfers #17	VOLUME	558,671	4,402,573	2,084
GBP029	Conveyor Transfers #18	VOLUME	558,696	4,402,547	2,081
GBP030	Conveyor Transfers #19	VOLUME	558,685	4,402,515	2,081
GBP031	Conveyor Transfers #20	VOLUME	558,709	4,402,516	2,079
GBP032	Conveyor Transfers #21	VOLUME	558,720	4,402,526	2,079

Model ID	Source Description	Source Type	UTM East (m)	UTM North (m)	Elevation (m)
GBP033	Carbon Regeneration Kiln (TU4.001)	POINT	558,843	4,402,205	2,068
GBP034	Electrowinning Cell A (TU4.002), Cell B (TU4.003), Barren Tank (TU4.004), Eluant Tank (TU4.005)	POINT	558,842	4,402,205	2,068
GBP035	Mercury Retort (Electric) (TU4.006)	POINT	558,839	4,402,216	2,068
GBP036	Melting Furnace (Electric) (TU4.007)	POINT	558,843	4,402,197	2,068
GBP037	LNG Generator #2 (Caterpillar G3516C; 2018)	POINT	558,913	4,402,099	2,060
GBP038	LNG Generator #3 (Caterpillar G3516C; 2018)	POINT	558,906	4,402,091	2,060
GBP039	LNG Generator #1 (Caterpillar G3512; 2018)	POINT	558,899	4,402,084	2,060
GBP040	Diesel Generator #4 (Well Site Power, Isuzu BQ-6WGIX, 2018)	POINT	560,501	4,401,290	1,999
GBP041	Backup Generator Engine (Caterpillar C13, 2013)	POINT	558,920	4,402,087	2,059
GBP042	Portable Generator Engine (John Deere 4045HFG, 2014)	POINT	557,955	4,403,225	2,150
GBP043	Portable Generator Engine (John Deere 6090HFG06, 2017)	POINT	558,724	4,402,233	2,075
GBP044	Administrative Backup Generator Engine (Generac 800 Series or similar, 2024+)	POINTHOR	558,690	4,402,214	2,075
GBP046	Carbon Regeneration Kiln Heater (1 MMBtu/hr)	POINT	558,811	4,402,203	2,068
GBP047	Solution Heater (3 MMBtu/hr)	POINT	558,823	4,402,222	2,068
GBP048	ADR Building Heaters (0.4 MMBtu/hr, 16 units)	POINT	558,817	4,402,204	2,068
GBP049	Truckshop Building Heaters (0.4 MMBtu/hr, 10 units)	POINT	557,613	4,403,240	2,188
GBP050	Warehouse/Maintenance Building Heaters (0.4 MMBtu/hr, 3 units)	POINT	558,704	4,402,223	2,075
GBP051	Administration Building Heater (0.4 MMBtu/hr)	POINT	558,691	4,402,196	2,075
GBP052	Laboratory Building Heaters (0.4 MMBtu/hr, 6 units)	POINT	558,797	4,402,371	2,071
GBP061	≤125-Ton Ammonium Nitrate Prill Silo 1 Loading	POINT	557,175	4,405,049	2,363
GBP062	≤125-Ton Ammonium Nitrate Prill Silo 1 Unloading	VOLUME	557,175	4,405,049	2,363
GBP063	Electric Cress Furnace (3 units)	POINT	558,794	4,402,366	2,071
GBP064	Sample Laboratory Splitter (or other transfer points) (6 units)	POINT	558,794	4,402,366	2,071
GBP065	Sample Laboratory Crushers (3 units)	POINT	558,794	4,402,366	2,071
GBP066	Sample Laboratory Screens (3 units)	POINT	558,794	4,402,366	2,071
GBP067	Sample Laboratory Pulverizers (3 units)	POINT	558,794	4,402,366	2,071
GBP069	≤125-Ton Ammonium Nitrate Prill Silo 2 Loading	POINT	557,175	4,405,057	2,364
GBP070	≤125-Ton Ammonium Nitrate Prill Silo 2 Unloading	VOLUME	557,175	4,405,057	2,364
GBP071	≤125-Ton Ammonium Nitrate Prill Silo 3 Loading	POINT	557,175	4,405,042	2,363
GBP072	≤125-Ton Ammonium Nitrate Prill Silo 3 Unloading	VOLUME	557,175	4,405,042	2,363

Table 3-1-2. Model Input Release Parameters

Model ID	Source Type	Parameter 1	Parameter 2	Parameter 3	Parameter 4
GBP001	VOLUME	2.40	1.15	2.23	
GBP002	VOLUME	1.40	0.30	1.30	
GBP003	VOLUME	1.19	0.21	1.11	
GBP004	VOLUME	1.23	1.50	1.15	
GBP005	POINT	6.40	0	0.001	0.15
GBP006	VOLUME	0.76	0.21	0.71	
GBP007	POINT	21.44	0	0.001	0.29
GBP008	VOLUME	2.71	0.11	2.30	
GBP009	VOLUME	3.05	0.21	2.84	
GBP011	VOLUME	0.91	0.21	0.85	
GBP012	VOLUME	1.30	0.21	1.21	
GBP013	VOLUME	1.83	0.21	1.70	
GBP014	VOLUME	1.83	0.21	1.70	
GBP015	VOLUME	1.83	0.21	1.70	
GBP016	VOLUME	1.83	0.21	1.70	
GBP017	VOLUME	1.83	0.21	1.70	
GBP018	VOLUME	1.83	0.21	1.70	
GBP019	VOLUME	1.83	0.21	1.70	
GBP020	VOLUME	1.83	0.21	1.70	
GBP021	VOLUME	1.83	0.21	1.70	
GBP022	VOLUME	1.83	0.21	1.70	
GBP023	VOLUME	1.83	0.21	1.70	
GBP024	VOLUME	1.83	0.21	1.70	
GBP025	VOLUME	1.83	0.21	1.70	
GBP026	VOLUME	1.83	0.21	1.70	
GBP027	VOLUME	1.83	0.21	1.70	
GBP028	VOLUME	1.83	0.21	1.70	
GBP029	VOLUME	1.83	0.21	1.70	
GBP030	VOLUME	1.83	0.21	1.70	
GBP031	VOLUME	1.83	0.21	1.70	
GBP032	VOLUME	1.83	0.21	1.70	
GBP033	POINT	9.14	338.71	11.64	0.10
GBP034	POINT	9.14	336.48	9.46	0.20
GBP035	POINT	10.21	305.37	2.21	0.10
GBP036	POINT	9.14	310.93	8.80	0.49
GBP037	POINT	4.27	732.04	33.64	0.46
GBP038	POINT	4.27	732.04	33.64	0.46
GBP039	POINT	4.27	804.26	31.20	0.46
GBP040	POINT	2.23	793.15	42.30	0.15
GBP041	POINT	2.74	802.32	25.48	0.23

Model ID	Source Type	Parameter 1	Parameter 2	Parameter 3	Parameter 4
GBP042	POINT	1.83	719.26	23.23	0.10
GBP043	POINT	3.35	717.04	53.95	0.13
GBP044	POINTHOR	0.79	922.04	11.13	0.10
GBP046	POINT	14.94	477.59	8.98	0.15
GBP047	POINT	14.94	477.59	15.16	0.20
GBP048	POINT	14.94	477.59	8.09	0.10
GBP049	POINT	16.76	477.59	8.09	0.10
GBP050	POINT	6.40	477.59	8.09	0.10
GBP051	POINT	3.96	477.59	8.09	0.10
GBP052	POINT	9.14	477.59	8.09	0.10
GBP061	POINT	7.77	0	0.001	0.30
GBP062	VOLUME	1.98	0.14	1.843	
GBP063	POINT	9.14	0	0.001	0.30
GBP064	POINT	9.14	0	0.001	0.30
GBP065	POINT	9.14	0	0.001	0.30
GBP066	POINT	9.14	0	0.001	0.30
GBP067	POINT	9.14	0	0.001	0.30
GBP069	POINT	7.77	0	0.001	0.30
GBP070	VOLUME	1.98	0.14	1.843	
GBP071	POINT	7.77	0	0.001	0.30
GBP072	VOLUME	1.98	0.14	1.843	

POINT and POINTHOR (horizontally oriented POINT) source parameters: 1 = release height (meters), 2 = exhaust temperature (K), 3 = exhaust velocity (meters per second), 4 = exhaust diameter (meters)
VOLUME source parameters: 1 = release height (meters), 2 = initial lateral dispersion (meters), 3 = initial vertical dispersion (meters)

Table 3-1-3. Model Input Emission Rates

Model ID	CO 8, 1-hour (g/s)	NO_2 Annual (g/s)	NO_2 1-hour (g/s)	$PM_{2.5}$ Annual (g/s)	$PM_{2.5}$ 24-hour (g/s)	PM_{10} 24-hour (g/s)	SO_2 Annual (g/s)	SO_2 3, 24-hour (g/s)	SO_2 1-hour (g/s)
GBP001				0.00472	0.00472	0.03118			
GBP002				0.01030	0.01030	0.06804			
GBP003				0.00472	0.00472	0.03118			
GBP004				0.03735	0.03735	0.24664			
GBP005				0.00008	0.00005	0.00036			
GBP006				0.00067	0.00067	0.00441			
GBP007				0.00008	0.00005	0.00036			
GBP008				0.00067	0.00067	0.00441			
GBP009				0.01889	0.01889	0.12474			
GBP011				0.00283	0.00283	0.01871			
GBP012				0.00283	0.00283	0.01871			
GBP013				0.00283	0.00283	0.01871			
GBP014				0.00283	0.00283	0.01871			
GBP015				0.00283	0.00283	0.01871			
GBP016				0.00283	0.00283	0.01871			
GBP017				0.00283	0.00283	0.01871			
GBP018				0.00283	0.00283	0.01871			
GBP019				0.00283	0.00283	0.01871			
GBP020				0.00283	0.00283	0.01871			
GBP021				0.00283	0.00283	0.01871			
GBP022				0.00283	0.00283	0.01871			
GBP023				0.00283	0.00283	0.01871			
GBP024				0.00283	0.00283	0.01871			
GBP025				0.00283	0.00283	0.01871			
GBP026				0.00283	0.00283	0.01871			
GBP027				0.00283	0.00283	0.01871			
GBP028				0.00283	0.00283	0.01871			
GBP029				0.00283	0.00283	0.01871			
GBP030				0.00283	0.00283	0.01871			
GBP031				0.00283	0.00283	0.01871			
GBP032				0.00283	0.00283	0.01871			
GBP033				0.09576	0.09576	0.09576			
GBP034				0.01260	0.01260	0.01260			
GBP035				0.00466	0.00466	0.00466			
GBP036				0.06103	0.06103	0.06103			
GBP037	0.41688	0.60417	0.60290	0.02019	0.02019	0.02019	0.00119	0.00119	0.00119
GBP038	0.41688	0.60417	0.60290	0.02019	0.02019	0.02019	0.00119	0.00119	0.00119
GBP039	0.37418	0.47609	0.47667	0.01681	0.01693	0.01693	0.00100	0.00100	0.00100

Model ID	CO 8, 1-hour (g/s)	NO_2 Annual (g/s)	NO_2 1-hour (g/s)	$PM_{2.5}$ Annual (g/s)	$PM_{2.5}$ 24-hour (g/s)	PM_{10} 24-hour (g/s)	SO_2 Annual (g/s)	SO_2 3, 24-hour (g/s)	SO_2 1-hour (g/s)
GBP040	0.37076	0.04239	0.04244	0.00212	0.00212	0.00212	0.00060	0.00060	0.00060
GBP041	0.41252	0.00538	0.00538	0.00001	0.00118	0.00118	0.00001	0.00059	0.00001
GBP042	0.11082	0.00887	0.00887	0.00044	0.00044	0.00044	0.00011	0.00011	0.00011
GBP043	0.31694	0.03622	0.03622	0.00181	0.00181	0.00181	0.00034	0.00034	0.00034
GBP044	2.71111	0.00041	0.00041	0.00002	0.00184	0.00184	0.00000	0.00013	0.00000
GBP046	0.01038	0.01235	0.01235	0.00094	0.00094	0.00094	0.00007	0.00007	0.00007
GBP047	0.03113	0.03706	0.03706	0.00282	0.00282	0.00282	0.00022	0.00022	0.00022
GBP048	0.06641	0.07906	0.07906	0.00601	0.00601	0.00601	0.00047	0.00047	0.00047
GBP049	0.04151	0.04941	0.04941	0.00376	0.00376	0.00376	0.00030	0.00030	0.00030
GBP050	0.01245	0.01482	0.01482	0.00113	0.00113	0.00113	0.00009	0.00009	0.00009
GBP051	0.00415	0.00494	0.00494	0.00038	0.00038	0.00038	0.00003	0.00003	0.00003
GBP052	0.02490	0.02965	0.02965	0.00225	0.00225	0.00225	0.00018	0.00018	0.00018
GBP061				0.00139	0.00139	0.00919			
GBP062				0.00139	0.00139	0.00919			
GBP063				0.01429	0.02500	0.02500			
GBP064				0.00006	0.00006	0.00039			
GBP065				0.00007	0.00007	0.00043			
GBP066				0.00024	0.00024	0.00156			
GBP067				0.00041	0.00041	0.00269			
GBP069				0.00139	0.00139	0.00919			
GBP070				0.00139	0.00139	0.00919			
GBP071				0.00139	0.00139	0.00919			
GBP072				0.00139	0.00139	0.00919			