Edit: Application Tracking

Air Case ID: 13241 Permit Id: 2775

FIN No.: A1447

Company Name: NEVADA GOLD MINES LLC - GOLDRUSH PROJECT

HA Basin No: 053 **Increment Tracked** ☐

Permit No: AP10413336.02 * Select a Permit No

Date App. Received: 10/05/2026 *

Permit Writer: Not Assigned (NA) *

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

Default ODS Date: 10/19/2026 *

Actual ODS Date:

Date App. to be Closed: 12/18/2026 *

Stop Days: **Actual Date App. to be Closed:** 12/18/2026

App. Incomplete? ☐

Date App. Closed:

Fee Paid ($): 2500 *

Case Description:

Comments:

Flag (For Class 4) : None

Update Cancel

RECEIVED
OCT 05 2026
ENVIRONMENTAL PROTECTION

NEVADA GOLD MINES LLC
1655 Mountain City Hwy
Elko, Nevada 89801

www.nevadagoldmines.com

September 24, 2026

CERTIFIED MAIL: 7022 2410 0003 1505 4352
RETURN RECEIPT REQUESTED

RECEIVED
OCT 05 2026
BAPC/BAQP

Ms. Tanya Soleta
Supervisor, Minor Source Permitting
Bureau of Air Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249

RE: Revision Application
Nevada Gold Mines LLC – Goldrush Project
Class II Air Quality Operating Permit No. AP1041-3336.02 (FID A1447)

Dear Ms. Soleta,

Nevada Gold Mines LLC (NGM) is pleased to submit the attached application to revise the Class II Air Quality Operating Permit No. AP1041-3336.02 for the Goldrush Project. With this revision, NGM is proposing to add two emergency generators (System 15, S2.024 and System 17, S2.029) and four cement storage silos (System 16, S2.025 – S2.028). Details for the proposed revision are provided in the application forms and narrative description. Because potential emissions from the proposed revision do not increase by more than 10 tons per year per pollutant, an environmental evaluation (i.e., dispersion modeling) was not completed.

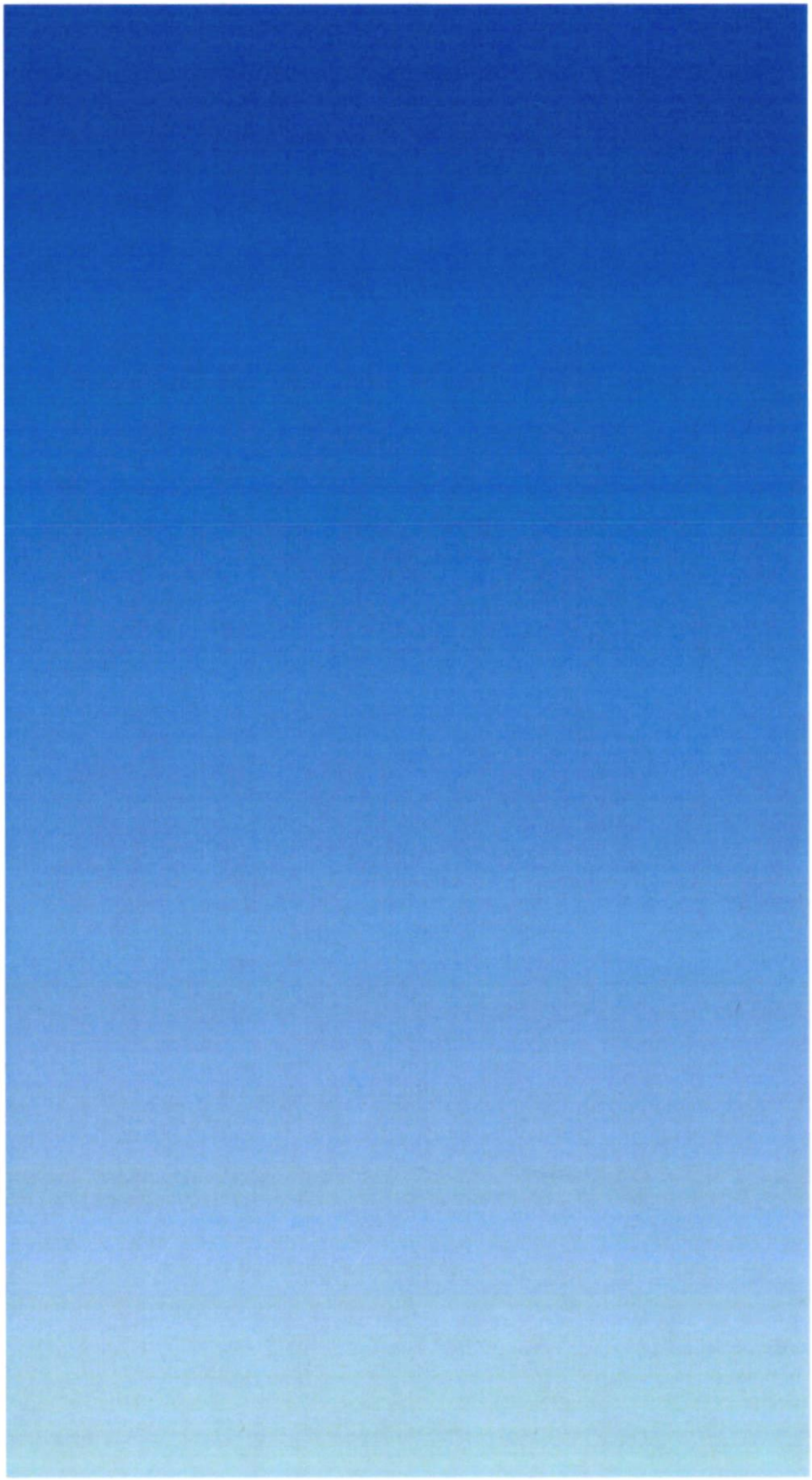
An electronic payment was made on September 23, 2026, in the amount of $2,500 to cover the Class II revision fee. The confirmation number for the electronic payment is 790199571704652120302l.

Please feel free to contact Kirstin Egerton at (775) 299-8928 or kirstin.egerton@nevadagoldmines.com if you have any questions or need any additional information if you have any questions or need any additional information.

Sincerely,

Samuel Marich
General Manager, Cortez District
Nevada Gold Mines LLC

Enclosed: AP1041-3336 Revision Application



AIR SCIENCES INC.

DENVER • PORTLAND • LOS ANGELES

Class II Air Quality Operating Permit No. AP1041-3336.02

Revision Application

PREPARED FOR:
NEVADA GOLD MINES
LLC – GOLDRUSH
PROJECT

PROJECT NO. 59-70-17
SEPTEMBER 2026

Class II Air Quality Operating Permit Application Form

Facility Name: Nevada Gold Mines LLC – Goldrush Project

Existing Facility ID: A1447

Existing Class II AQOP: AP1041-3336.02

Type of Facility: Gold Mine

Number of Units (including IA's) in Facility: 48

If a Revision, Number of Units (including IA's) Affected in Action: 6

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

September 2024
(Ver. 6)

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Appendix 1: Process Narrative, Maps, and Flow Diagram

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 Goldrush Project consists of underground gold exploration and mining. The primary operation at the facility can be classified by SIC Code 1041, NAICS Code 212220.

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

   Name: **Nevada Gold Mines LLC – Goldrush Project**
   Address: **HC 66 Box 1250**
   City: **Crescent Valley**
   State: **Nevada** Zip Code: **89821**

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

   Name: **Nevada Gold Mines LLC**
   Address: **1655 Mountain City Highway**
   City: **Elko**
   State: **Nevada** Zip Code: **89801**

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

   Name: **Same as #2**
   Address:
   City:
   State: Zip Code:

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: **Nevada Gold Mines LLC - Cortez**
   Address: **38 miles south of I-80 from Exit 261 (Beowawe Exit) on State Route 306**
   City: **Crescent Valley**
   State: **Nevada** Zip Code: **89821**

GENERAL COMPANY INFORMATION FORM (continued)

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

Name:	**Samuel Marich**
Title:	**General Manager**
Address:	**HC 66 Box 1250**
City:	**Crescent Valley**
State:	**Nevada** Zip Code: **89821**
Phone Number:	**(775) 397-4917**
Fax Number:	**N/A**
E-mail Address:	**Samuel.Marich@nevadagoldmines.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/download-permit-forms)

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

Name:	**Kirstin Egerton**
Title:	**Senior Environmental Engineer**
Address:	**HC 66 Box 1250**
City:	**Crescent Valley**
State:	**Nevada** Zip Code: **89821**
Phone Number:	**(775) 299-8928**
Fax Number:	**N/A**
E-mail Address:	**kirstin.egerton@nevadagoldmines.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: **53, 54, 138**

HA Basin Name: **N Pine Valley, Crescent Valley, Grass Valley**

Township(s):	**26**	N; Range(s):	**48**	E; Section(s):	**1-17, 20-29, 32-36**
	26		**49**		**19-20, 29-30**
	27		**48**		**14-15, 22-23, 26-28, 33-36**

UTM Coordinates for the Front Gate of the Facility (NAD 83, Zone 11):

4,440,550 m North; **542,725** m East;

Nearest City: **Crescent Valley**

County: **Lander**

Driving Directions from nearest city to the Facility: **35 miles south of I-80 between State Route 306 and State Route 278.**

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: **15: IT Cube Emergency Generator**

Emission Unit Description: **IT Cube Propane-Fired Emergency Generator (38 kW, Mfd. 2009 or newer)**

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	**S2.024**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-02-010-01**
	Manufacturer		**Generac**
	Date Manufactured		**2009 or Newer**
	Model and Serial Number		**Not Specified**
	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	**0.50**
	EPA Tier #		**N/A**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,442,980**
	UTM Easting (NAD 83, Zone 11)	m	**535,306**
Operating Parameters /Fuel Usage	Fuel Type		**Propane**
	Fuel Flow Meter Installed?	yes/no/NA	**No**
	Sulfur Content	%	**0.0185**
	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	**3**
	Stack Inside Diameter	feet	**1.4**
	Stack Temperature	°F	**400**
	Stack Exit Velocity	feet/second	**2.4**
	Actual Gas Volume Flow Rate	acfm	**216**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**105**
	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: **IT Cube Propane-Fired Emergency Generator (38 kW, Mfd. 2009 or newer)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Fuel consumption will be measured by multiplying maximum fuel consumption 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**

STORAGE SILO APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **16: Horse Canyon Cement Storage Silos**

Emission Unit Description: **Horse Canyon Silo #1 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)**

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	
			Silo Loading	**Silo Unloading**
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	**S2.025**	**N/A (sealed transfer)**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**3-05-011-07**	
	Manufacturer		**Not Specified**	
	Date Manufactured		**Not Specified**	
	Model Number		**Not Specified**	
	Equipment Dimensions (LxWxH)	feet	**Not Specified**	
	Drop Dimensions (LxWxH) *if applicable*	feet	**N/A**	
	Emissions Released Inside building?	yes/no	**No**	
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,444,018**	
	UTM Easting (NAD 83, Zone 11)	m	**539,155**	
Operating Parameters	Material Type Processed		**Cement**	
	Batch Process *if applicable*	*unit*/batch	**N/A**	
	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		**Not Specified**	
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**	
Stack Parameters	Stack Height	feet	**80.0**	
	Stack Inside Diameter	feet	**1.5**	
	Stack Temperature	°F	**Ambient**	
	Stack Exit Velocity	feet/second	**15.1**	
	Actual Gas Volume Flow Rate	acfm	**1,600**	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**1,600**	
	Stack Release Type	Vertical/Capped/ Horizontal	**Horizontal**	

STORAGE SILO APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **16: Horse Canyon Cement Storage Silos**

Emission Unit Description: **Horse Canyon Silo #2 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)**

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	
			Silo Loading	**Silo Unloading**
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	**S2.026**	**N/A (sealed transfer)**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**3-05-011-07**	
	Manufacturer		**Not Specified**	
	Date Manufactured		**Not Specified**	
	Model Number		**Not Specified**	
	Equipment Dimensions (LxWxH)	feet	**Not Specified**	
	Drop Dimensions (LxWxH) *if applicable*	feet	**N/A**	
	Emissions Released Inside building?	yes/no	**No**	
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,444,015**	
	UTM Easting (NAD 83, Zone 11)	m	**539,158**	
Operating Parameters	Material Type Processed		**Cement**	
	Batch Process *if applicable*	*unit*/batch	**N/A**	
	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		**Not Specified**	
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**	
Stack Parameters	Stack Height	feet	**80.0**	
	Stack Inside Diameter	feet	**1.5**	
	Stack Temperature	°F	**Ambient**	
	Stack Exit Velocity	feet/second	**15.1**	
	Actual Gas Volume Flow Rate	acfm	**1,600**	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**1,600**	
	Stack Release Type	Vertical/Capped/ Horizontal	**Horizontal**	

STORAGE SILO APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **16: Horse Canyon Cement Storage Silos**

Emission Unit Description: **Horse Canyon Silo #3 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)**

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	
			Silo Loading	**Silo Unloading**
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	**S2.027**	**N/A (sealed transfer)**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**3-05-011-07**	
	Manufacturer		**Not Specified**	
	Date Manufactured		**Not Specified**	
	Model Number		**Not Specified**	
	Equipment Dimensions (LxWxH)	feet	**Not Specified**	
	Drop Dimensions (LxWxH) *if applicable*	feet	**N/A**	
	Emissions Released Inside building?	yes/no	**No**	
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,444,012**	
	UTM Easting (NAD 83, Zone 11)	m	**539,160**	
Operating Parameters	Material Type Processed		**Cement**	
	Batch Process *if applicable*	*unit*/batch	**N/A**	
	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		**Not Specified**	
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**	
Stack Parameters	Stack Height	feet	**80.0**	
	Stack Inside Diameter	feet	**1.5**	
	Stack Temperature	°F	**Ambient**	
	Stack Exit Velocity	feet/second	**15.1**	
	Actual Gas Volume Flow Rate	acfm	**1,600**	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**1,600**	
	Stack Release Type	Vertical/Capped/ Horizontal	**Horizontal**	

STORAGE SILO APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **16: Horse Canyon Cement Storage Silos**

Emission Unit Description: **Horse Canyon Silo #4 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)**

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	
			Silo Loading	**Silo Unloading**
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	**S2.028**	**N/A (sealed transfer)**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**3-05-011-07**	
	Manufacturer		**Not Specified**	
	Date Manufactured		**Not Specified**	
	Model Number		**Not Specified**	
	Equipment Dimensions (LxWxH)	feet	**Not Specified**	
	Drop Dimensions (LxWxH) *if applicable*	feet	**N/A**	
	Emissions Released Inside building?	yes/no	**No**	
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,444,010**	
	UTM Easting (NAD 83, Zone 11)	m	**539,163**	
Operating Parameters	Material Type Processed		**Cement**	
	Batch Process *if applicable*	*unit*/batch	**N/A**	
	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		**Not Specified**	
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	**N/A**	
Stack Parameters	Stack Height	feet	**80.0**	
	Stack Inside Diameter	feet	**1.5**	
	Stack Temperature	°F	**Ambient**	
	Stack Exit Velocity	feet/second	**15.1**	
	Actual Gas Volume Flow Rate	acfm	**1,600**	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**1,600**	
	Stack Release Type	Vertical/Capped/ Horizontal	**Horizontal**	

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **17: Horse Canyon Emergency Generator**

Emission Unit Description: **Horse Canyon Diesel-Fired Emergency Generator (3,634 HP, mfd. 2006 or newer)**

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	**S2.029**
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	**2-01-001-02**
	Manufacturer		**Not Specified**
	Date Manufactured		**2006 or Newer**
	Model and Serial Number		**Not Specified**
	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	**4.9**
	EPA Tier #		**2**
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	**4,444,074**
	UTM Easting (NAD 83, Zone 11)	m	**539,157**
Operating Parameters /Fuel Usage	Fuel Type		**Diesel**
	Fuel Flow Meter Installed?	yes/no/NA	**No**
	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	**10.0**
	Stack Inside Diameter	feet	**0.67**
	Stack Temperature	°F	**915**
	Stack Exit Velocity	feet/second	**935**
	Actual Gas Volume Flow Rate	acfm	**19,579**
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	**5,966**
	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: **Horse Canyon Diesel-Fired Emergency Generator (3,634 HP, mfd. 2006 or newer)**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Fuel consumption will be measured by multiplying maximum fuel consumption 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**

INDUSTRIAL PROCESS AND STORAGE SILO DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Throughput			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	16: Horse Canyon Cement Storage Silos												
S2.025	Horse Canyon Silo #1 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	100	120,000	ton	Vent Filter	Controlled EF	PM	0.00099	lb/ton	0.099	0.059	AP-42, Table 11.12-2, Rev. 6/06 (cement loading - ctrl); PM2.5 = PM10*0.053/0.35
									PM_{10}	0.00034	lb/ton	0.034	0.020	
									$PM_{2.5}$	0.000051	lb/ton	0.0051	0.0031	
	System No. & Name:	16: Horse Canyon Cement Storage Silos												
S2.026	Horse Canyon Silo #2 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	100	120,000	ton	Vent Filter	Controlled EF	PM	0.00099	lb/ton	0.099	0.059	AP-42, Table 11.12-2, Rev. 6/06 (cement loading - ctrl); PM2.5 = PM10*0.053/0.35
									PM_{10}	0.00034	lb/ton	0.034	0.020	
									$PM_{2.5}$	0.000051	lb/ton	0.0051	0.0031	
	System No. & Name:	16: Horse Canyon Cement Storage Silos												
S2.027	Horse Canyon Silo #3 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	100	120,000	ton	Vent Filter	Controlled EF	PM	0.00099	lb/ton	0.099	0.059	AP-42, Table 11.12-2, Rev. 6/06 (cement loading - ctrl); PM2.5 = PM10*0.053/0.35
									PM_{10}	0.00034	lb/ton	0.034	0.020	
									$PM_{2.5}$	0.000051	lb/ton	0.0051	0.0031	
	System No. & Name:	16: Horse Canyon Cement Storage Silos												
S2.028	Horse Canyon Silo #4 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	100	120,000	ton	Vent Filter	Controlled EF	PM	0.00099	lb/ton	0.099	0.059	AP-42, Table 11.12-2, Rev. 6/06 (cement loading - ctrl); PM2.5 = PM10*0.053/0.35
									PM_{10}	0.00034	lb/ton	0.034	0.020	
									$PM_{2.5}$	0.000051	lb/ton	0.0051	0.0031	

*Exact format may be changed, but requested information is still required

COMBUSTION EQUIPMENT DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Power Output		Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Amount	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:		15: IT Cube Emergency Generator																
S2.024	IT Cube Propane-Fired Emergency Generator (38 kW, Mfd. 2009 or newer)	24	100	0.36	36	3.90	390	gal	38	kW	None	N/A	PM	5	lb/kgal	0.020	0.0010	California Air Resources Board (CARB) 1991
													PM_{10}	5	lb/kgal	0.020	0.0010	
													$PM_{2.5}$	5	lb/kgal	0.020	0.0010	
													SO_2	0.35	lb/kgal	0.0014	0.000068	
													NO_X	139	lb/kgal	0.54	0.027	
													CO	129	lb/kgal	0.50	0.025	
													VOC	83	lb/kgal	0.32	0.016	
													Pb	N/A	N/A	N/A	N/A	
													Hg	N/A	N/A	N/A	N/A	
													H_2S	N/A	N/A	N/A	N/A	
System No. & Name:		17: Horse Canyon Emergency Generator																
S2.029	Horse Canyon Diesel-Fired Emergency Generator (3,634 HP, mfd. 2006 or newer)	24	100	24.5	2,454	175.3	17,530	gal	2,710	kW	None	N/A	PM	0.2	g/kW-hr	1.19	0.060	40 CFR Part 1039 Appendix I - Table 2, Tier 2 for PM, CO, NOX; AP-42 Table 3.4-1 (04/25) VOC; SO2 mass balance 0.0015% S
													PM_{10}	0.2	g/kW-hr	1.19	0.060	
													$PM_{2.5}$	0.2	g/kW-hr	1.19	0.060	
													SO_2	0.0015	lb/MMBtu	0.036	0.0018	
													NO_X	6.4	g/kW-hr	38.2	1.91	
													CO	3.5	g/kW-hr	20.9	1.05	
													VOC	0.09	lb/MMBtu	2.21	0.11	
													Pb	N/A	N/A	N/A	N/A	
													Hg	N/A	N/A	N/A	N/A	
													H_2S	N/A	N/A	N/A	N/A	

*Exact format may be changed, but requested information is still required

[redacted]

System 15 (S2.024)
Manufacturer Specification Sheet with Maximum Fuel Flow Rate

16/20/22 kW

[redacted]

GENERAC®

GUARDIAN® SERIES
Residential Standby Generators
Air-Cooled Gas Engine

16/20/22 kW

INCLUDES:

- True Power™ Electrical Technology
- Two-line multilingual digital LCD Evolution™ controller (English/Spanish/French/Portuguese)
- Two transfer switch options available:
  100 amp, 16 circuit switch or
  200 amp service rated smart switch
- Electronic governor
- Standard Wi-Fi™ connectivity available on 16kW and 20kW -1 models and 22kW models
- System status & maintenance interval LED indicators
- Sound attenuated enclosure
- Flexible fuel line connector
- Natural gas or LP gas operation
- 5 Year limited warranty
- 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.*
  https://assets.swri.org/library/DirectoryOfListedProducts/ConstructionIndustry/973_DoC_204_13204-01-01_Rev9.pdf

Standby Power Rating

G007035-1, G007036-1, G007037-1 (Aluminum - Bisque) - 16 kW 60 Hz
G007038-1, G007039-1 (Aluminum - Bisque) - 20 kW 60 Hz
G007042-10, G007043-10 (Aluminum - Bisque) - 22 kW 60 Hz



Product shown with optional fascia kit

c ETL us or c UL us LISTED QUIET TEST Mobile Link

Note: CETL or CUL certification only applies to unbundled units and units packaged with limited circuit switches. Units packaged with the Smart Switch are ETL or UL certified in the USA only.

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**: FREE with select Guardian Series Home standby generators, Mobile Link Wi-Fi allows users to monitor the status of the generator from anywhere in the world using a smartphone, tablet, or PC. Easily access information such as the current operating status and maintenance alerts. Users can connect an account to an authorized service dealer for fast, friendly, and proactive service. With Mobile Link, users are taken care of before the next power outage.
- **SOLID-STATE, FREQUENCY COMPENSATED 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

GENERAC

16/20/22 kW

Features and Benefits

Engine

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 resulting in longer engine life.
"Spiny-lok" cast iron cylinder walls	Rigid construction and added durability provide long engine life.
Electronic ignition/spark advance	These features combine to assure smooth, quick starting every time.
Full pressure lubrication system	Pressurized lubrication to all vital bearings means better performance, less maintenance, and longer engine life. Now featuring up to a 2 year/200 hour oil change interval.
Low oil pressure shutdown system	Shutdown protection prevents catastrophic engine damage due to low oil.
High temperature shutdown	Prevents damage due to overheating.

Generator

Revolving field	Allows for a smaller, light weight unit that 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.
EPA Certified for non-emergency applications	Allows unit to be used for demand response applications (applicable to 22 kW units).
UL 2200 listed	For your safety.

Transfer Switch (if applicable)

Fully automatic	Transfers vital electrical loads to the energized source of power.
NEMA 3R	Can be installed inside or outside for maximum flexibility.
Remote mounting	Mounts near an existing distribution panel for simple, low-cost installation.

Evolution™ Controls

AUTO/MANUAL/OFF illuminated buttons	Selects the operating mode and provides easy, at-a-glance status indication in any condition.
Two-line multilingual LCD	Provides homeowners easily visible logs of history, maintenance, and events up to 50 occurrences.
Sealed, raised buttons	Smooth, weather-resistant user interface for programming and operations.
Utility voltage sensing	Constantly monitors utility voltage, setpoints 65% dropout, 80% pick-up, of standard voltage.
Generator voltage sensing	Constantly monitors generator voltage to verify the cleanest power delivered to the home.
Utility interrupt delay	Prevents nuisance start-ups of the engine, adjustable 2-1500 seconds from the factory default setting of 5 seconds by a qualified dealer.
Engine warm-up	Verifies engine is ready to assume the load, setpoint approximately 5 seconds.
Engine cool-down	Allows engine to cool prior to shutdown, setpoint approximately 1 minute.
Programmable exercise	Operates engine to prevent oil seal drying and damage between power outages by running the generator for 5 minutes every other week. Also offers a selectable setting for weekly or monthly operation 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 lead acid and AGM-style batteries.
Main line circuit breaker	Protects generator from overload.
Electronic governor	Maintains constant 60 Hz frequency.

Unit

SAE weather protective enclosure	Sound attenuated enclosures ensure quiet operation and protection against mother nature, 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 critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation, as close as 18 in (457 mm) away from a structure.

GENERAC

16/20/22 kW

Features and Benefits

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 (Wi-Fi equipped models only)

● Ability to view generator status	Monitor generator with a smartphone, tablet, or computer at any time via the Mobile Link application for complete peace of mind.
● Ability to view generator Exercise/Run and Total Hours	Review the generator's complete protection profile for exercise hours and total hours.
● Ability to view generator 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.
● Ability to view generator battery information	Built in battery diagnostics displaying current state of the battery.
● Weather information	Provides detailed local ambient weather conditions for generator location.

GENERAC

16/20/22 kW

Specifications

Generator

Model	16 kW	20 kW	22 kW
Rated maximum continuous power capacity (LP)	16,000 Watts*	20,000 Watts*	22,000 Watts*
Rated maximum continuous power capacity (NG)	16,000 Watts*	18,000 Watts*	19,500 Watts*
Rated voltage	240	240	240
Rated maximum continuous load current – 240 volts (LP/NG)	66.7 / 66.7	83.3 / 75.0	91.7 / 81.3
Total Harmonic Distortion		Less than 5%	
Main line circuit breaker	70 amp	90 amp	100 amp
Phase		1	
Number of rotor poles		2	
Rated AC frequency		60 Hz	
Power factor		1.0	
Battery requirement (not included)		12 Volts, Group 26R 540 CCA minimum or Group 35AGM 650 CCA minimum	
Unit weight (lb / kg)	409 / 186	448 / 203	466 / 211
Dimensions (L x W x H) in / cm		48 x 25 x 29 / 121.9 x 63.5 x 73.7	
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load**	67	67	67
Sound output in dB(A) at 23 ft (7 m) with generator in Quiet-Test™ low-speed exercise mode**	55	55	57
Exercise duration		5 min	

Engine

Engine type			GENERAC G-Force 1000 Series	
Number of cylinders			2	
Displacement			999 cc	
Cylinder block			Aluminum w/ cast iron sleeve	
Valve arrangement			Overhead valve	
Ignition system			Solid-state w/ magneto	
Governor system			Electronic	
Compression ratio			9.5:1	
Starter			12 VDC	
Oil capacity including filter			Approx. 1.9 qt / 1.8 L	
Operating rpm			3,600	
Fuel consumption				
Natural gas	ft^3/hr (m^3/hr)			
	1/2 Load		218 (6.17)	204 (5.78)	228 (6.46)
	Full Load		309 (8.75)	301 (8.52)	327 (9.26)
Liquid propane	ft^3/hr (gal/hr) [L/hr]			
	1/2 Load		74 (2.03) [7.70]	87 (2.37) [8.99]	92 (2.53) [9.57]
	Full Load		107 (2.94) [11.11]	130 (3.56) [13.48]	142 (3.90) [14.77]

Note: **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 2500 (LP) or ft^3/hr x 1000 (NG). For Megajoule content, multiply m^3/hr x 93.15 (LP) or m^3/hr x 37.26 (NG).

Controls

Two-line plain text multilingual LCD	Simple user interface for ease of operation.
Mode buttons: AUTO	Automatic start on utility failure. 7 day exerciser.
MANUAL	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
OFF	Stops unit. Power is removed. Control and charger still operate.
Ready to Run/Maintenance messages	Standard
Engine run hours indication	Standard
Programmable start delay between 2–1500 seconds	Standard (programmable by dealer only)
Utility Voltage Loss/Return to Utility adjustable (brownout setting)	From 140–171 V / 190–216 V
Future Set Capable Exerciser/Exercise Set Error warning	Standard
Run/Alarm/Maintenance logs	50 events each
Engine start sequence	Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration).
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
Field upgradable firmware	Standard

Rating definitions - Optional Standby: Applicable for supplying backup power for the duration of the utility power outage with correct maintenance performed. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046, UL2200, and DIN6271).

* Maximum kilovolt amps and current are subject to and limited by such factors as fuel BTU/megajoule content, ambient temperature, 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).

**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.

Cat® 3516C
Diesel Generator Sets

System 17 (S2.029) Manufacturer Specification Sheet with Maximum Fuel Flow Rate

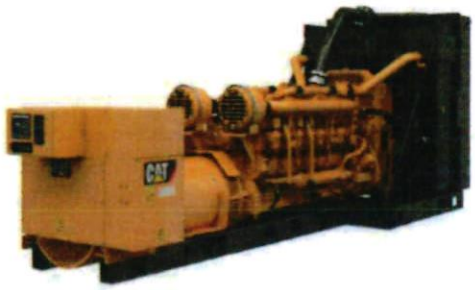


Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.69)
Stroke – mm (in)	215 (8.46)
Displacement – L (in³)	78 (4764.73)
Compression Ratio	14.7:1
Aspiration	TA
Fuel System	EUI
Governor Type	ADEM™ A3

Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Continuous 60 Hz ekW (kVA)	Emissions Performance
2500 (3125)	2500 (3125)	2250 (2812)	2050 (2562)	U.S. EPA Stationary Emergency Use Only (Tier 2)

Standard Features

Cat® Diesel Engine
- Meets U.S. EPA Stationary Emergency Use Only (Tier 2) emission standards
- Reliable performance proven in thousands of applications worldwide

Generator Set Package
- Accepts 100% block load in one step and meets other NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators
- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System
- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels
- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty
- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing
- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

CAT

Optional Equipment

Engine

Air Cleaner
- ☑ Single element
- ☐ Dual element

Muffler
- ☐ Industrial grade (15 dB)

Starting
- ☑ Standard batteries
- ☐ Oversized batteries
- ☐ Standard electric starter(s)
- ☑ Heavy duty electric starter(s)
- ☐ Air starter(s)
- ☑ Jacket water heater

Alternator

Output voltage
- ☐ 380V ☐ 6300V
- ☐ 440V ☐ 6600V
- ☐ 480V ☐ 6900V
- ☐ 600V ☐ 12470V
- ☐ 2400V ☐ 13200V
- ☐ 4160V ☑ 13800V

Temperature Rise (over 40°C ambient)
- ☐ 150°C
- ☑ 125°C/130°C
- ☐ 105°C
- ☐ 80°C

Winding type
- ☐ Random wound
- ☑ Form wound

Excitation
- ☐ Internal excitation (IE)
- ☑ Permanent magnet (PM)

Attachments
- ☑ Anti-condensation heater
- ☑ Stator and bearing temperature monitoring and protection

Power Termination

Type
- ☑ Bus bar
- ☐ Circuit breaker
- ☐ 1600A ☐ 2000A
- ☐ 2500A ☐ 3000A
- ☐ 3200A ☐ 4000A
- ☐ 5000A
- ☐ IEC ☐ UL
- ☐ 3-pole ☐ 4-pole
- ☐ Manually operated
- ☐ Electrically operated

Trip Unit
- ☐ LSI ☐ LSI-G
- ☐ LSIG-P

Control System

Controller
- ☐ EMCP 4.2B
- ☑ EMCP 4.3
- ☐ EMCP 4.4

Attachments
- ☑ Local annunciator module
- ☐ Remote annunciator module
- ☐ Expansion I/O module
- ☐ Remote monitoring software

Charging
- ☐ Battery charger – 10A
- ☑ Battery charger – 20A
- ☐ Battery charger – 35A

Vibration Isolators
- ☐ Rubber
- ☐ Spring
- ☑ Seismic rated

Cat Connect

Connectivity
- ☐ Ethernet
- ☐ Cellular
- ☑ Satellite

Extended Service Options

Terms
- ☐ 2 year (prime)
- ☐ 3 year
- ☐ 5 year
- ☐ 10 year

Coverage
- ☐ Silver
- ☐ Gold
- ☐ Platinum
- ☐ Platinum Plus

Ancillary Equipment
- ☐ Automatic transfer switch (ATS)
- ☐ Uninterruptible power supply (UPS)
- ☐ Paralleling switchgear
- ☐ Paralleling controls

Certifications
- ☐ UL2200
- ☐ CSA
- ☑ IBC seismic certification
- ☐ OSHPD pre-approval

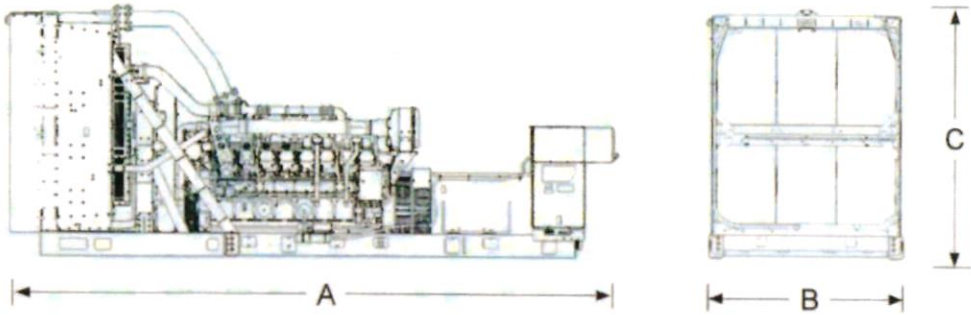
Note: *Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.*

Package Performance

Performance	Standby		Mission Critical		Prime		Continuous	
Frequency	60 Hz		60 Hz		60 Hz		60 Hz	
Gen set power rating with fan	2500 ekW		2500 ekW		2250 ekW		2050 ekW	
Gen set power rating with fan @ 0.8 power factor	3125 kVA		3125 kVA		2812 kVA		2562 kVA	
Emissions	EPA ESE (TIER 2)		EPA ESE (TIER 2)		EPA ESE (TIER 2)		EPA ESE (TIER 2)	
Performance number	EM1894-01		EM1895-02		DM8447-04		DM8268-03	
Fuel Consumption								
100% load with fan – L/hr (gal/hr)	656.8	(175.3)	656.8	(175.3)	593.0	(156.6)	549.3	(145.1)
75% load with fan – L/hr (gal/hr)	510.8	(134.9)	510.8	(134.9)	467.8	(123.6)	435.6	(115.1)
50% load with fan – L/hr (gal/hr)	372.4	(98.4)	372.4	(98.4)	341.9	(90.3)	316.8	(83.7)
25% load with fan – L/hr (gal/hr)	219.3	(57.9)	219.3	(57.9)	203.0	(53.6)	188.9	(49.9)
Cooling System								
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	2800.0	(98881)	2800.0	(98881)	2800.0	(98881)	2800.0	(98881)
Engine coolant capacity – L (gal)	233.0	(61.6)	233.0	(61.6)	233.0	(61.6)	233.0	(61.6)
Radiator coolant capacity – L (gal)	268.8	(71.0)	268.8	(71.0)	268.8	(71.0)	268.8	(71.0)
Total coolant capacity – L (gal)	501.8	(132.6)	501.8	(132.6)	501.8	(132.6)	501.8	(132.6)
Inlet Air								
Combustion air inlet flow rate – m³/min (cfm)	242.2	(7212.2)	242.2	(7212.2)	193.1	(6819.8)	183.8	(6491.7)
Exhaust System								
Exhaust stack gas temperature – °C (°F)	490.7	(915.2)	490.7	(915.2)	471.3	(880.4)	463.6	(866.5)
Exhaust gas flow rate – m³/min (cfm)	554.5	(19578.8)	554.5	(19578.8)	507.9	(17935.1)	476.5	(16826.7)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection								
Heat rejection to jacket water – kW (Btu/min)	826	(46992)	826	(46992)	777	(44160)	739	(42021)
Heat rejection to exhaust (total) – kW (Btu/min)	2502	(142265)	2502	(142265)	2243	(127532)	2092	(118949)
Heat rejection to aftercooler – kW (Btu/min)	786	(44723)	786	(44723)	690	(39224)	619	(35176)
Heat rejection to atmosphere from engine – kW (Btu/min)	161	(9146)	161	(9146)	150	(8542)	145	(8229)
Heat rejection from alternator – kW (Btu/min)	121	(6853)	121	(6853)	99	(5607)	94	(5368)
Emissions (Nominal)								
NOx mg/Nm³ (g/hp-h)	2349.1	(5.32)	2349.1	(5.32)	2206.7	(4.95)	2038.1	(4.62)
CO mg/Nm³ (g/hp-h)	195.4	(0.42)	195.4	(0.42)	141.2	(0.30)	124.8	(0.27)
HC mg/Nm³ (g/hp-h)	42.1	(0.10)	42.1	(0.10)	44.4	(0.11)	49.2	(0.12)
PM mg/Nm³ (g/hp-h)	14.1	(0.04)	14.1	(0.04)	10.9	(0.03)	11.0	(0.03)
Emissions (Potential Site Variation)								
NOx mg/Nm³ (g/hp-h)	2818.9	(6.38)	2818.9	(6.38)	2648.0	(5.94)	2445.8	(5.55)
CO mg/Nm³ (g/hp-h)	351.8	(0.76)	351.8	(0.76)	254.2	(0.55)	224.6	(0.49)
HC mg/Nm³ (g/hp-h)	55.9	(0.14)	55.9	(0.14)	59.1	(0.15)	65.5	(0.16)
PM mg/Nm³ (g/hp-h)	19.7	(0.05)	19.7	(0.05)	15.2	(0.04)	15.3	(0.04)

3516C Diesel Generator Sets
Electric Power

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
7495 (295.1)	2569 (101.2)	3009 (118.5)	17 590 (38,780)

Note: *For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.*

Ratings Definitions

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.

Mission Critical
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime
Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Continuous
Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rated kW for 100% of the operating hours.

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, 2014/35/EU, 2006/42/EC, 2014/30/EU.

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

Data Center Applications
Tier III/Tier IV compliant per Uptime Institute requirements. ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates
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.)

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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

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3516 PGFL
LEHE1377-00 (8-17)

PERFORMANCE DATA[EM1894]

January 16, 2018

Performance Number: EM1894

Change Level: 02

SALES MODEL:	3516C
BRAND:	CAT
ENGINE POWER (BHP):	3,634
GEN POWER WITH FAN (EKW):	2,500.0
COMPRESSION RATIO:	14.7
RATING LEVEL:	STANDBY
PUMP QUANTITY:	1
FUEL TYPE:	DIESEL
MANIFOLD TYPE:	DRY
GOVERNOR TYPE:	ADEM3
ELECTRONICS TYPE:	ADEM3
CAMSHAFT TYPE:	STANDARD
IGNITION TYPE:	CI
INJECTOR TYPE:	EUI
FUEL INJECTOR:	3920221
UNIT INJECTOR TIMING (IN):	64.34
REF EXH STACK DIAMETER (IN):	12
MAX OPERATING ALTITUDE (FT):	2,953

COMBUSTION:	DI
ENGINE SPEED (RPM):	1,800
HERTZ:	60
FAN POWER (HP):	130.1
ASPIRATION:	TA
AFTERCOOLER TYPE:	ATAAC
AFTERCOOLER CIRCUIT TYPE:	JW+OC, ATAAC
INLET MANIFOLD AIR TEMP (F):	122
JACKET WATER TEMP (F):	210.2
TURBO CONFIGURATION:	PARALLEL
TURBO QUANTITY:	4
TURBOCHARGER MODEL:	GTA5523N-51T-1.40
CERTIFICATION YEAR:	2006
CRANKCASE BLOWBY RATE (FT3/HR):	3,619.4
FUEL RATE (RATED RPM) NO LOAD (GAL/HR):	16.2
PISTON SPD @ RATED ENG SPD (FT/MIN):	2,539.4

INDUSTRY	SUBINDUSTRY	APPLICATION
OIL AND GAS	LAND PRODUCTION	PACKAGED GENSET
ELECTRIC POWER	STANDARD	PACKAGED GENSET

General Performance Data

THIS STANDBY RATING IS FOR A STANDBY ONLY ENGINE ARRANGEMENT. RERATING THE ENGINE TO A PRIME OR CONTINUOUS RATING IS NOT PERMITTED.

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP
EKW	%	BHP	PSI	LB/BHP-HR	GAL/HR	IN-HG	DEG F	DEG F	IN-HG	DEG F
2,500.0	100	3,633	336	0.337	175.0	78.7	121.9	1,257.5	73.7	850.7
2,250.0	90	3,283	303	0.336	157.4	73.1	117.9	1,187.0	67.7	805.1
2,000.0	80	2,935	271	0.337	141.1	66.8	113.9	1,130.0	60.6	771.3
1,875.0	75	2,760	255	0.339	133.8	63.5	112.3	1,106.1	57.1	759.0
1,750.0	70	2,586	239	0.342	126.2	60.0	109.9	1,084.8	53.7	748.2
1,500.0	60	2,237	207	0.348	111.3	52.3	105.5	1,044.3	46.2	730.5
1,250.0	50	1,889	174	0.358	96.5	44.3	101.5	1,006.8	39.1	717.5
1,000.0	40	1,547	143	0.366	80.7	34.0	95.7	965.0	30.7	702.1
750.0	30	1,203	111	0.378	64.9	24.0	91.0	909.0	22.9	675.7
625.0	25	1,029	95	0.388	57.1	19.5	90.1	870.4	19.6	654.6
500.0	20	854	79	0.400	48.8	14.9	88.7	812.8	16.1	619.1
250.0	10	497	46	0.454	32.2	7.4	84.4	639.9	11.1	500.7

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
EKW	%	BHP	IN-HG	DEG F	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
2,500.0	100	3,633	85	461.5	7,287.6	18,807.6	32,267.8	33,492.3	7,056.8	6,459.6
2,250.0	90	3,283	79	433.3	7,010.4	17,355.6	30,953.6	32,055.8	6,747.1	6,203.5
2,000.0	80	2,935	73	406.1	6,677.5	15,977.0	29,330.8	30,320.5	6,381.7	5,888.1
1,875.0	75	2,760	69	392.8	6,521.0	15,366.6	28,518.9	29,454.2	6,199.4	5,732.7
1,750.0	70	2,586	66	379.8	6,305.6	14,697.2	27,541.4	28,424.8	5,982.7	5,533.7
1,500.0	60	2,237	58	349.2	5,845.1	13,330.2	25,384.7	26,164.1	5,507.0	5,109.3
1,250.0	50	1,889	49	316.2	5,360.5	11,961.2	23,064.3	23,735.1	4,995.9	4,651.4
1,000.0	40	1,547	38	274.9	4,652.6	10,183.4	19,911.6	20,477.1	4,309.7	4,018.2
750.0	30	1,203	28	230.7	3,911.5	8,341.7	16,706.6	17,160.9	3,612.2	3,375.1
625.0	25	1,029	23	208.3	3,596.5	7,490.0	15,294.6	15,694.5	3,304.9	3,093.1
500.0	20	854	18	184.2	3,261.8	6,551.0	13,823.8	14,165.6	2,985.9	2,801.6
250.0	10	497	10	140.3	2,772.6	5,002.5	11,496.9	11,723.3	2,561.1	2,425.3

Heat Rejection Data

GREENHOUSE GASES (GHG) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions						References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	GWP Multiplier	Unit	CO2e Hourly Rate (lbs/hr)	CO2e Yearly Rate (tons/yr)	
System No. & Name:		**15: IT Cube Emergency Generator**															
S2.024	IT Cube Propane-Fired Emergency Generator (38 kW, Mfd. 2009 or newer)	24	100	0.36	36	3.90	390	gal	None	N/A	CO_2	62.87	1	kg/MMBtu	49.46	2.47	40 CFR Part 98, Table C-1 to Subpart C, Propane
											CH_4	0.003	28	kg/MMBtu	0.059	0.0030	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
											N_2O	0.0006	265	kg/MMBtu	0.14	0.0070	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
System No. & Name:		**17: Horse Canyon Emergency Generator**															
S2.029	Horse Canyon Diesel-Fired Emergency Generator (3,634 HP, mfd. 2006 or newer)	24	100	24.5	2,454	175.3	17,530	gal	None	N/A	CO_2	73.96	1	kg/MMBtu	4,002	200	40 CFR Part 98, Table C-1 to Subpart C, Distillate Fuel Oil #2
											CH_4	0.003	28	kg/MMBtu	4.54	0.23	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products
											N_2O	0.0006	265	kg/MMBtu	8.60	0.43	40 CFR Part 98, Table C-2 to Subpart C, Petroleum Products

*Exact format may be changed, but requested information is still required

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	15: IT Cube Emergency Generator														
S2.024	IT Cube Propane-Fired Emergency Generator (38 kW, Mfd. 2009 or newer)	24	100	0.36	36	3.90	390	gal	None	N/A	1,1,2,2-Tetrachloroethane	2.53E-05	lb/MMBtu	9.03E-06	4.51E-07	AP-42, Table 3.2-3 (10/24) Natural Gas-fired 4-Stroke Rich-Burn Engines
											1,1,2-Trichloroethane	1.53E-05	lb/MMBtu	5.46E-06	2.73E-07	
											1,1-Dichloroethane	1.13E-05	lb/MMBtu	4.03E-06	2.02E-07	
											1,2-Dichloroethane	1.13E-05	lb/MMBtu	4.03E-06	2.02E-07	
											1,2-Dichloropropane	1.30E-05	lb/MMBtu	4.64E-06	2.32E-07	
											1,3-Butadiene	6.63E-04	lb/MMBtu	2.37E-04	1.18E-05	
											1,3-Dichloropropene	1.27E-05	lb/MMBtu	4.53E-06	2.27E-07	
											Acetaldehyde	2.79E-03	lb/MMBtu	9.96E-04	4.98E-05	
											Acrolein	2.63E-03	lb/MMBtu	9.39E-04	4.69E-05	
											Benzene	1.58E-03	lb/MMBtu	5.64E-04	2.82E-05	
											Carbon tetrachloride	1.77E-05	lb/MMBtu	6.32E-06	3.16E-07	
											Chlorobenzene	1.29E-05	lb/MMBtu	4.60E-06	2.30E-07	
											Chloroform	1.37E-05	lb/MMBtu	4.89E-06	2.44E-07	
											Ethylbenzene	2.48E-05	lb/MMBtu	8.85E-06	4.42E-07	
											Ethylene Dibromide	2.13E-05	lb/MMBtu	7.60E-06	3.80E-07	
											Formaldehyde	2.05E-02	lb/MMBtu	7.32E-03	3.66E-04	
											Methanol	3.06E-03	lb/MMBtu	1.09E-03	5.46E-05	
											Methylene chloride	4.12E-05	lb/MMBtu	1.47E-05	7.35E-07	
											Naphthalene	9.71E-05	lb/MMBtu	3.47E-05	1.73E-06	
											PAH	1.41E-04	lb/MMBtu	5.03E-05	2.52E-06	
											Styrene	1.19E-05	lb/MMBtu	4.25E-06	2.12E-07	
											Toluene	5.58E-04	lb/MMBtu	1.99E-04	9.96E-06	
											Vinyl chloride	7.18E-06	lb/MMBtu	2.56E-06	1.28E-07	
											Xylenes	1.95E-04	lb/MMBtu	6.96E-05	3.48E-06	

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HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	16: Horse Canyon Cement Storage Silos														
S2.025	Horse Canyon Silo #1 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	N/A	N/A	100	120,000	ton cement	Vent Filter	N/A	Arsenic	4.24E-09	lb/ton	5.81E-08	2.54E-07	
											Beryllium	4.86E-10	lb/ton	6.66E-09	2.92E-08	AP-42, Table 11.12-8 (6/06) Cement Silo Filling
											Cadmium	4.68E-09	lb/ton	6.41E-08	2.81E-07	
											Chromium	2.90E-08	lb/ton	3.97E-07	1.74E-06	
											Lead	1.09E-08	lb/ton	1.49E-07	6.54E-07	
											Manganese	1.17E-07	lb/ton	1.60E-06	7.02E-06	
											Nickel	4.18E-08	lb/ton	5.73E-07	2.51E-06	
											Phosphorus	2.36E-07	lb/ton	3.23E-06	1.42E-05	

*Exact format may be changed, but requested information is still required

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	16: Horse Canyon Cement Storage Silos														
S2.026	Horse Canyon Silo #2 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	N/A	N/A	100	120,000	ton cement	Vent Filter	N/A	Arsenic	4.24E-09	lb/ton	5.81E-08	2.54E-07	AP-42, Table 11.12-8 (6/06) Cement Silo Filling
											Beryllium	4.86E-10	lb/ton	6.66E-09	2.92E-08	
											Cadmium	4.68E-09	lb/ton	6.41E-08	2.81E-07	
											Chromium	2.90E-08	lb/ton	3.97E-07	1.74E-06	
											Lead	1.09E-08	lb/ton	1.49E-07	6.54E-07	
											Manganese	1.17E-07	lb/ton	1.60E-06	7.02E-06	
											Nickel	4.18E-08	lb/ton	5.73E-07	2.51E-06	
											Phosphorus	2.36E-07	lb/ton	3.23E-06	1.42E-05	

*Exact format may be changed, but requested information is still required

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	16: Horse Canyon Cement Storage Silos														
S2.027	Horse Canyon Silo #3 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	N/A	N/A	100	120,000	ton cement	Vent Filter	N/A	Arsenic	4.24E-09	lb/ton	5.81E-08	2.54E-07	AP-42, Table 11.12-8 (6/06) Cement Silo Filling
											Beryllium	4.86E-10	lb/ton	6.66E-09	2.92E-08	
											Cadmium	4.68E-09	lb/ton	6.41E-08	2.81E-07	
											Chromium	2.90E-08	lb/ton	3.97E-07	1.74E-06	
											Lead	1.09E-08	lb/ton	1.49E-07	6.54E-07	
											Manganese	1.17E-07	lb/ton	1.60E-06	7.02E-06	
											Nickel	4.18E-08	lb/ton	5.73E-07	2.51E-06	
											Phosphorus	2.36E-07	lb/ton	3.23E-06	1.42E-05	

*Exact format may be changed, but requested information is still required

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	16: Horse Canyon Cement Storage Silos														
S2.028	Horse Canyon Silo #4 Loading (Silo unloading to underground via fully enclosed screw feeder and hopper)	24	8,760	N/A	N/A	100	120,000	ton cement	Vent Filter	N/A	Arsenic	4.24E-09	lb/ton	5.81E-08	2.54E-07	AP-42, Table 11.12-8 (6/06) Cement Silo Filling
											Beryllium	4.86E-10	lb/ton	6.66E-09	2.92E-08	
											Cadmium	4.68E-09	lb/ton	6.41E-08	2.81E-07	
											Chromium	2.90E-08	lb/ton	3.97E-07	1.74E-06	
											Lead	1.09E-08	lb/ton	1.49E-07	6.54E-07	
											Manganese	1.17E-07	lb/ton	1.60E-06	7.02E-06	
											Nickel	4.18E-08	lb/ton	5.73E-07	2.51E-06	
											Phosphorus	2.36E-07	lb/ton	3.23E-06	1.42E-05	

*Exact format may be changed, but requested information is still required

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:	17: Horse Canyon Emergency Generator														
S2.029	Horse Canyon Diesel-Fired Emergency Generator (3,634 HP, mfd. 2006 or newer)	24	100	24.5	2,454	175.3	17,530	gal	None	N/A	Benzene	7.76E-04	lb/MMBtu	1.90E-02	9.52E-04	AP-42 Tables 3.4-3, and 3.4-4 (04/25), Large Stationary Diesel Engines
											Toluene	2.81E-04	lb/MMBtu	6.90E-03	3.45E-04	
											Xylenes	1.93E-04	lb/MMBtu	4.74E-03	2.37E-04	
											Formaldehyde	7.89E-05	lb/MMBtu	1.94E-03	9.68E-05	
											Acetaldehyde	2.52E-05	lb/MMBtu	6.18E-04	3.09E-05	
											Acrolein	7.88E-06	lb/MMBtu	1.93E-04	9.67E-06	
											Naphthalene	1.30E-04	lb/MMBtu	3.19E-03	1.60E-04	
											Acenaphthylene	9.23E-06	lb/MMBtu	2.27E-04	1.13E-05	
											Acenaphthene	4.68E-06	lb/MMBtu	1.15E-04	5.74E-06	
											Fluorene	1.28E-05	lb/MMBtu	3.14E-04	1.57E-05	
											Phenanthrene	4.08E-05	lb/MMBtu	1.00E-03	5.01E-05	
											Anthracene	1.23E-06	lb/MMBtu	3.02E-05	1.51E-06	
											Fluoranthene	4.03E-06	lb/MMBtu	9.89E-05	4.95E-06	
											Pyrene	3.71E-06	lb/MMBtu	9.11E-05	4.55E-06	
											Benz(a)anthracene	6.22E-07	lb/MMBtu	1.53E-05	7.63E-07	
											Chrysene	1.53E-06	lb/MMBtu	3.75E-05	1.88E-06	
											Benzo(b)fluoranthene	1.11E-06	lb/MMBtu	2.72E-05	1.36E-06	
											Benzo(k)fluoranthene	2.18E-07	lb/MMBtu	5.35E-06	2.68E-07	
											Benzo(a)pyrene	2.57E-07	lb/MMBtu	6.31E-06	3.15E-07	
											Indeno(1,2,3-cd)pyrene	4.14E-07	lb/MMBtu	1.02E-05	5.08E-07	
											Dibenz(a,h)anthracene	3.46E-07	lb/MMBtu	8.49E-06	4.25E-07	
											Benzo(g,h,i)perylene	5.56E-07	lb/MMBtu	1.36E-05	6.82E-07	

*Exact format may be changed, but requested information is still required

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)	30.99	76.65
Total PM_{10}	16.70	39.02
Total $PM_{2.5}$	5.03	7.95
Total Sulfur Dioxide (SO_2)	0.39	1.39
Total Carbon Monoxide (CO)	47.63	23.82
Total Oxides of Nitrogen (NO_X)	90.13	59.64
Total Volatile Organic Compounds (VOC)	9.40	19.28
Total Lead (Pb)	N/A	Included in Total HAPs
Total Hydrogen Sulfide (H_2S)	N/A	N/A
Total Sulfuric Acid Mist (H_2SO_4)	N/A	N/A
Total Hazardous Air Pollutants (HAPs)	N/A	0.404
Total Greenhouse Gases (CO_{2e})	N/A	37,500
Other Regulated Pollutants (Specify)	N/A	N/A

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)	76.35	38.88	7.87	1.39	57.70	22.75	19.16	0.402	37,302	N/A
Proposed Facility-Wide PTE (TPY)	76.65	39.02	7.95	1.39	59.64	23.82	19.28	0.404	37,500	N/A
Change in Facility-Wide PTE (TPY)	0.30	0.14	0.073	0.0019	1.94	1.07	0.13	0.0026	198	N/A

SURFACE AREA DISTURBANCE FORM

1. Total Acres of the Facility Site: **20,023**
2. Total Acres Disturbed: **543**
3. Add Surface Area Disturbance location as Township(s), Range(s) and Section
   T27N R48E S14-15, 22-23, 26-28, 33-36; T26N R48E S1-17, 20-29, 32-36; T26N R49E S19-20, 29-30
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: N/A
   - ☐ Other Applicable BMPs: N/A
   - ☐ If using water trucks, list how many water trucks are used and their capacity in gallons: **1 truck at 4,000 gallons**

PLANT BOUNDARY COORDINATES FORM *if applicable*

N/A – No Changes Proposed

Corner Number	UTM Easting	UTM Northing

PLANT BUILDING PARAMETERS FORM *if applicable*

N/A – No Changes Proposed

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) – **N/A**
- ☒ Combustion Equipment Application Form(s)
- ☒ Storage Silos Application Form(s)
- ☐ Liquid Storage Tank Application Form(s) – **N/A**
- ☐ Manufacturer's Guarantee – **N/A**
- ☒ Facility-Wide Potential to Emit Table
- ☒ Surface Area Disturbance Form
- ☐ Plant Boundary Coordinates Form *if applicable* – **N/A**
- ☐ Plant Building Parameters Form *if applicable* – **N/A**
- ☒ Detailed Emission Calculations (for all emission units including IA units)
- ☐ Source Testing Data (if referenced in calculations) – **N/A**
- ☒ 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] – **N/A**
- ☐ Manufacturer's Guarantee *if applicable* – **N/A**
- ☒ Equipment Specifications *if applicable*
- ☐ TANKs Modeling Output *if applicable* – **N/A**
- ☒ 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.

Signature of Responsible Official

Samuel Marich, General Manager

Print or Type Name and Title

9/24/2026

Date

Appendix 1: Process Narrative, Maps, and Flow Diagram

NARRATIVE DESCRIPTION

Proposed Changes

Nevada Gold Mines LLC (NGM) is providing this narrative as part of the application for a revision of Class II Air Quality Operating Permit No. AP1041-3336.02 for the Goldrush Project (Goldrush). With this revision, NGM is proposing to add two emergency generators to provide backup power for various critical systems. The first proposed emergency generator includes a 2009 or newer, propane-fired, 4-stroke, rich-burn engine subject to 40 CFR Part 60, Subpart JJJJ and 40 CFR Part 63, Subpart ZZZZ. The second proposed emergency generator includes a 2006 or newer, diesel-fired engine subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ. The maximum fuel consumption rate for each engine is provided in the generator manufacturer specification sheets included with this application. Additionally, NGM is proposing to add four cement storage silos to support underground backfill activities.

Given that potential emissions do not increase by more than 10 tons per year per pollutant, an environmental evaluation (i.e., dispersion modeling) was not completed for this modification.

Existing Facility

The principal operation at Goldrush constitutes a metal mine as defined by the two-digit SIC Code 10 for Metal Mining. Because ore mined primarily contains gold, the facility can be further classified by SIC Code 1041, defined as "establishments primarily engaged in mining gold ores." Goldrush is classified by NAICS Code 212220 for "Gold Ore Mining."

Goldrush is comprised of an underground mine that has diesel-fired generators subject to 40 CFR Part 63, Subpart ZZZZ and 40 CFR Part 60, Subpart IIII, a propane-fired generator subject to 40 CFR Part 63, Subpart ZZZZ and 40 CFR Part 60, Subpart JJJJ, a gasoline storage tank subject to 40 CFR Part 63, Subpart CCCCCC, shotcrete/cement-rock-fill (CRF) plants, a backfill plant, and several insignificant activity sources including diesel tanks (NAC 445B.288.2(d)), polyfiber feed systems (NAC 445B.288.4), and propane-fired heaters (NAC 445B.288.2(e)).

A process flow diagram, vicinity map, and an area map of the facility are provided as Figures 1-3.

Figure 1. Process Flow Diagrams

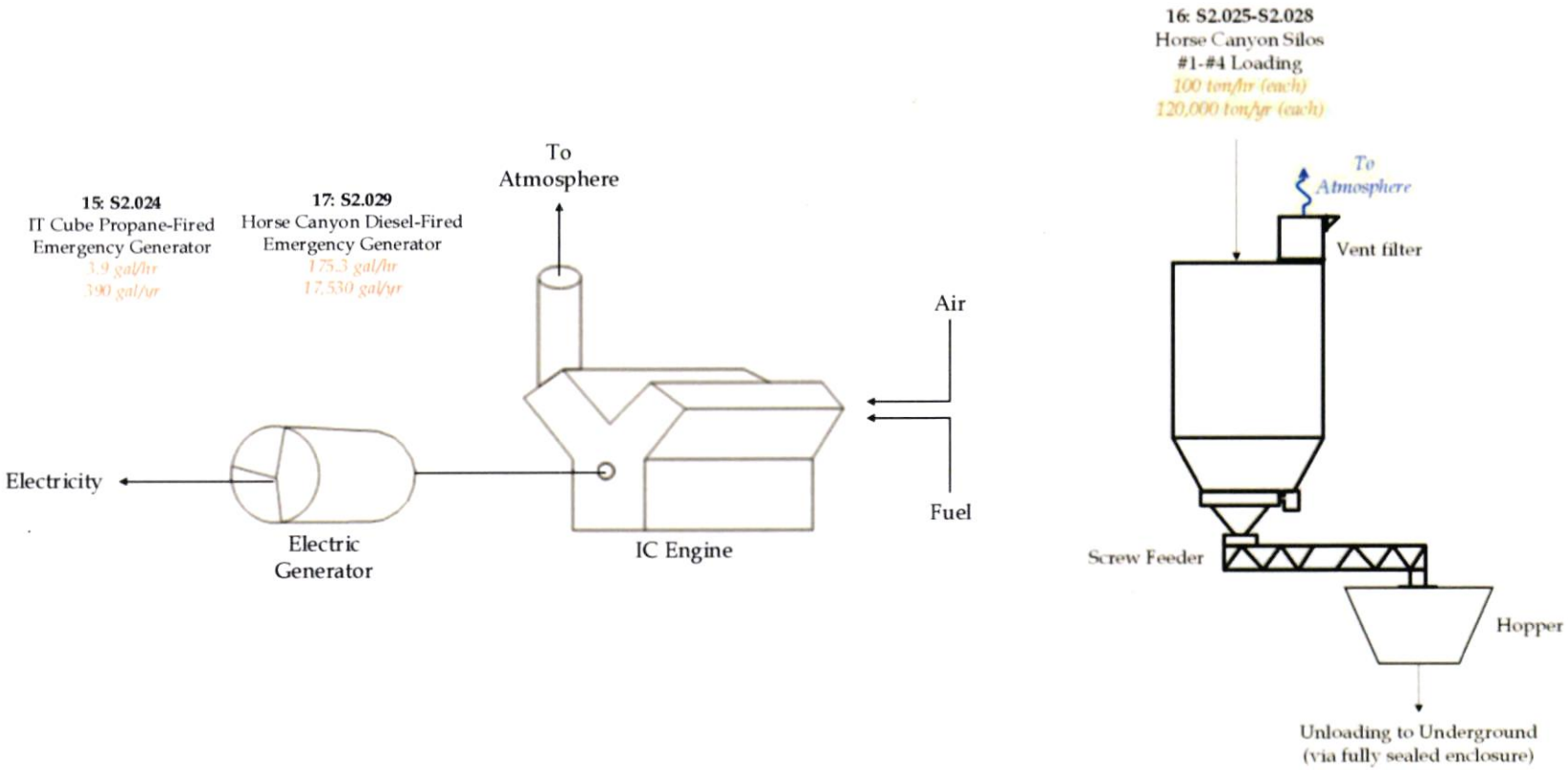


Figure 2. Facility Vicinity Map

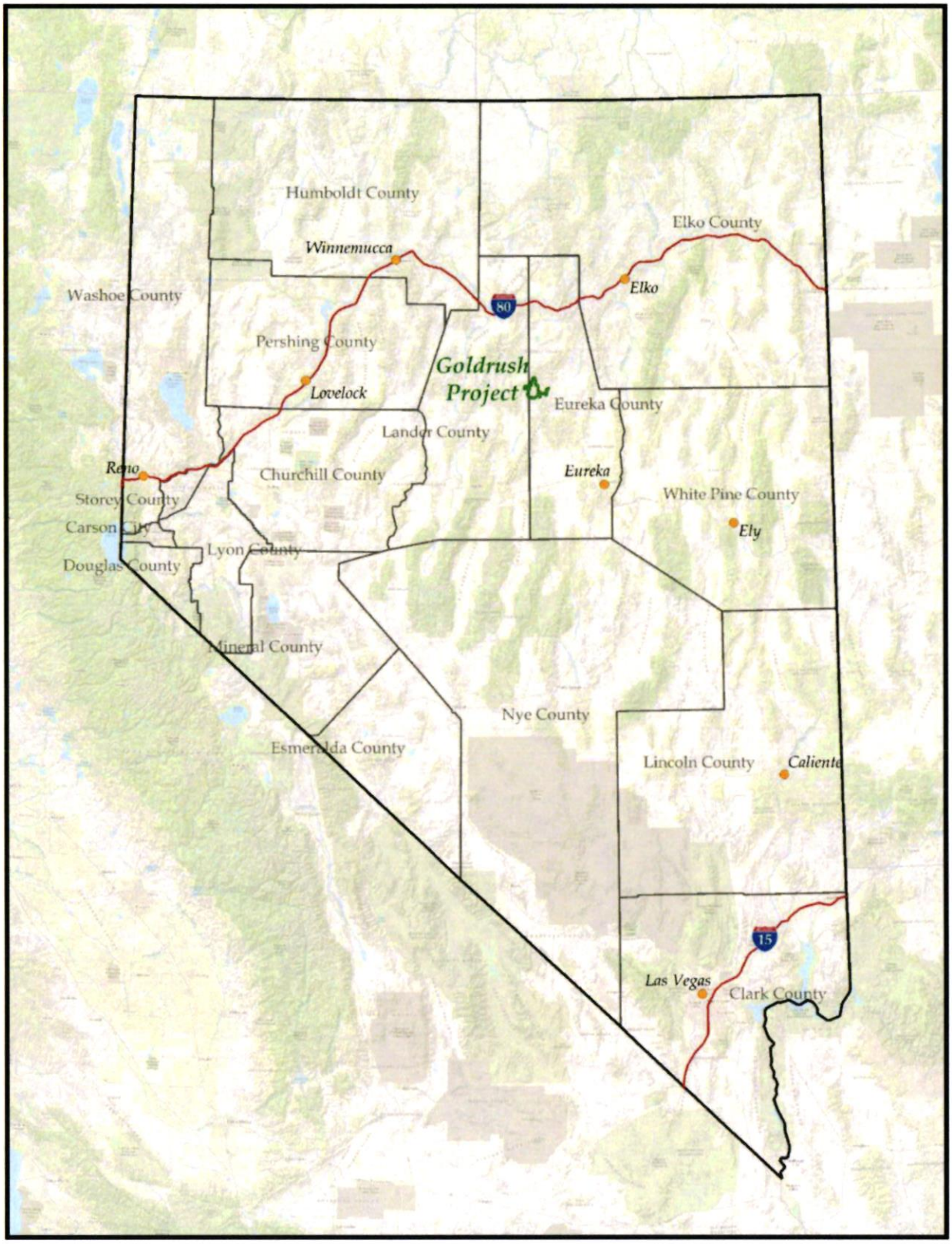


Figure 3. Area Map of the Facility

