



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9349 • www.ndep.nv.gov/bapc

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT (40 CFR Part 70 Program)

Issued to: ORNI 39 LLC/ORNI 41 LLC (HEREINAFTER REFERRED TO AS PERMITTEE)

Mailing Address: 6884 SIERRA CENTER PARKWAY, RENO, NV 89511

Physical Address: 1350 GRASS VALLEY ROAD, AUSTIN, NV 89310

Driving Directions: FROM AUSTIN, NV, TRAVEL APPROXIMATELY 5 MILES EAST ON U.S. HIGHWAY 50. TURN LEFT ONTO GRASS VALLEY ROAD (LANDER COUNTY ROAD 201) AND TRAVEL APPROXIMATELY 10 MILES.

General Facility Location:

SECTION 15-16, 21-22, T 20 N, R 45 E, MDB&M
HA 137B – BIG SMOKEY VALLEY/NORTHERN PART / LANDER COUNTY
NORTH 4,382,308 M, EAST 507,383 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 01 – Ormat Energy Converters

Phase I

- S2.008 MHI Ormat Energy Converter (OEC) - I
- S2.009 MHI Ormat Energy Converter (OEC) - II
- S2.010 MHI Ormat Energy Converter (OEC) - III

Phase II

- S2.011 MHII Ormat Energy Converter (OEC) - I
- S2.012 MHII Ormat Energy Converter (OEC) - II
- S2.013 MHII Ormat Energy Converter (OEC) - III

Phase III

- S2.014 MHIII Ormat Energy Converter (OEC) - 31
- S2.015 MHIII Ormat Energy Converter (OEC) - 32

Phase IIIA

- S2.016 MHIIIA Ormat Energy Converter (OEC) - 31A

B. System 02 – Emergency Diesel Generators

- S2.001 MHI 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model # 6063HK36; Serial #06R1050019; Year Manufactured 2010)
- S2.002 MHII 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model # 6063HK36; Serial #06R1064416; Year Manufactured 2010)

C. System 03 – MHI Emergency Diesel Fire Pump Engine

- S2.003 MHI 227 kW Emergency Diesel Fire Pump Engine (305 HP John Deere; Model #Ju6H-UFADX8; Serial # PE6068L179207; Year Manufactured 2010)

D. System 04 – MHI 520 Gallon Gasoline Fuel Tank

- S2.004 MHI 520 Gallon Gasoline Fuel Tank

E. System 05 – MHIII Emergency Diesel Generator

- S2.005 MHIII 567 kW Emergency Diesel Generator (760 HP Perkins; Model # 2506C-E15TAG3; Serial #MGDF5333NO9782D; Year manufactured: 2017)



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT (AS PERMITTEE)

Emission Unit List (continued):

F. System 06 – MHIII Emergency Diesel Fire Pump Engine

S2.006 MHIII 227 kW Emergency Diesel Fire Pump Engine (305 HP John Deere; Model #Ju6H-UFADX8; Serial #PE6068L179207; Year manufactured: 2010)

G. System 07 – MHIIIA Emergency Diesel Generator

S2.007 MHIIIA 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model #TBD; Serial # TBD; Year Build: 2007+)

******End of Emission Unit List******



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section I. General Conditions

- A. Nevada Administrative Code (NAC) 445B.063
The Department may use any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed, to determine excess emissions.
- B. NAC 445B.22013
Prohibited Discharge
The Permittee shall not cause or permit the discharge into the atmosphere from any stationary source of any hazardous air pollutant or toxic regulated air pollutant that threatens the health and safety of the general public, as determined by the Director.
- C. NAC 445B.22017
Visible Emissions: Maximum Opacity; Determination and Monitoring of Opacity.
1. Except as otherwise provided in this section and NAC 445B.2202, the Permittee may not cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:
a. If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A of 40 CFR Part 60.
2. The provisions of this section and NAC 445B.2202 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.
- D. NAC 445B.22067
Open Burning
The open burning of any combustible refuse, waste, garbage, oil, or for any salvage operations, except as specifically exempted, is prohibited. Specific exemptions from open burning are described in NAC 445B.22067(2).
- E. NAC 445B.22087
Odors
1. The Permittee may not discharge or cause to be discharged, from any stationary source, any material or regulated air pollutant which is or tends to be offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents the comfortable enjoyment of life or property.
2. The Director shall investigate an odor when 30 percent or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy. The sample must be at least 20 people or 75 percent of those exposed if fewer than 20 people are exposed.
3. The Director shall deem the odor to be a violation if he or she is able to make two odor measurements within a period of 1 hour. These measurements must be separated by at least 15 minutes. An odor measurement consists of a detectable odor after the odorous air has been diluted with eight or more volumes of odor-free air.
- F. NAC 445B.225
Prohibited Conduct: Concealment of Emissions
The Permittee may not install, construct or use any device which conceals any emission without reducing the total release of regulated air pollutants to the atmosphere.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section I. General Conditions (continued)

G. NAC 445B.227

Prohibited conduct: Operation of source without required equipment; removal or modification of required equipment; modification of required procedure

Except as otherwise provided in NAC 445B.001 to 445B.390, inclusive, no person may:

1. Operate a stationary source of air pollution unless the control equipment for air pollution which is required by applicable requirements or conditions of this Operating Permit is installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the permit.

H. NAC 445B.232

Excess Emissions

1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.100 to 445B.390, inclusive, must be approved in advance by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. The Permittee shall notify the Director of the proposed time and expected duration at least 30 days before any scheduled maintenance or testing which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled maintenance or testing must not be conducted unless the scheduled maintenance or testing is approved pursuant to NAC 445B.232(1).
3. The Permittee shall notify the Director of the proposed time and expected duration at least 24 hours before any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.390, inclusive. The scheduled repairs must not be conducted unless the scheduled repairs are approved pursuant to NAC 445B.232(1).
4. The Permittee shall notify the Director by email of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during start-up or shutdown of that equipment. The Permittee shall send the email to aircompliance@ndep.nv.gov.
5. The Permittee shall provide the Director, within 15 days after any malfunction, upset, start-up, shutdown or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
 - a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
 - b. The estimated magnitude of the excess emissions expressed in opacity or in the units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
 - c. The time and duration of the excess emissions.
 - d. The identity of the equipment causing the excess emissions.
 - e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
 - f. The steps taken to limit the excess emissions.
 - g. Documentation that the equipment for controlling air pollution, process equipment or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.
6. The Permittee shall ensure that any notification or related information submitted to the Director pursuant to this section is provided in a format specified by the Director.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section I. General Conditions (continued)

I. NAC 445B.252

Testing and Sampling

1. To determine compliance with NAC 445B.001 to 445B.390, inclusive, before the approval or the continuance of an operating permit or similar class of permits, the Director may either conduct or order the Permittee of any stationary source to conduct or have conducted such testing and sampling as the Director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the Director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial start-up of the facility and at such other times as may be required by the Director.
2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the Director:
 - a. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
 - b. Approves the use of an equivalent method;¹
 - c. Approves the use of an alternative method, the results of which the Director has determined to be adequate for indicating whether a specific stationary source is in compliance;² or
 - d. Waives the requirement for tests of performance because the Permittee of a stationary source has demonstrated by other means to the Director's satisfaction that the affected facility is in compliance with the standard.
3. Tests of performance must be conducted under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of start-up, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard.
4. The Permittee of an affected facility shall give notice to the Director 30 days before the test of performance to allow the Director to have an observer present. A written testing procedure for the test of performance must be submitted to the Director at least 30 days before the test of performance to allow the Director to review the proposed testing procedures.
5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the Director's approval.
6. All testing and sampling will be performed in accordance with recognized methods and as specified by the Director.³
7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power and other pertinent allied facilities as may be required and specified in writing by the Director must be provided and paid for by the Permittee of the stationary source.
8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of these regulations, and copies of these results must be provided to the Director no later than 60 days after the testing or sampling, or both.
9. Notwithstanding the provisions of NAC 445B.252(2), the Director shall not approve an alternative method or equivalent method to determine compliance with a standard or emission limitation contained in Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations for:
 - a. An emission unit that is subject to a testing requirement pursuant to Part 60, 61 or 63 of Title 40 of the Code of Federal Regulations; or
 - b. An affected source.

¹ Requires additional approval from the EPA Administrator.

² Requires additional approval from the EPA Administrator.

³ Requires additional approval from the EPA Administrator.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

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(AS PERMITTEE)

Section I. General Conditions (continued)

J. NAC 445B.273(1)

Schedules for Compliance

All new and existing stationary sources must comply with NAC 445B.001 through 445B.390, inclusive. Existing stationary sources are in compliance with those sections and may continue to operate under the provisions of their approved compliance schedules, which may be amended from time to time.

K. NAC 445B.275

Violations: Acts constituting: notice

1. Failure to comply with any requirement of NAC 445B.001 to 445B.390, inclusive, any applicable requirement or any condition of an operating permit constitutes a violation. As required by NRS 445B.450, the Director shall issue a written notice of an alleged violation to the Permittee for any violation, including, but not limited to:
 - a. Failure to apply for and obtain an operating permit;
 - b. Failure to construct a stationary source in accordance with the application for an operating permit as approved by the Director;
 - c. Failure to construct or operate a stationary source in accordance with any condition of an operating permit;
 - d. Commencing construction or modification of a stationary source without applying for and receiving an operating permit or a modification of an operating permit as required by NAC 445B.001 to 445B.3477, inclusive, or a mercury operating permit to construct as required by NAC 445B.3611 to 445B.3689, inclusive;
 - e. Failure to comply with any requirement for recordkeeping, monitoring, reporting or compliance certification contained in an operating permit; or
 - f. Failure to pay fees as required by NAC 445B.327 or 445B.3689.
2. The written notice must specify the provision of NAC 445B.001 to 445B.390, inclusive, the condition of the operating permit or the applicable requirement that is being violated.
3. Written notice shall be deemed to have been served if delivered to the person to whom addressed or if sent by registered or certified mail to the last known address of the person.

L. NAC 445B.305

Operating permits: Imposition of more stringent standards for emissions

The Director may impose standards for emissions on a proposed stationary source that are more stringent than those found in NAC 445B.001 to 445B.390, inclusive, as a condition of approving an operating permit for the proposed stationary source.

M. NAC 445B.315

Contents of operating permits: Exception for operating permits to construct; required conditions

1. Notwithstanding any provision of this section to the contrary, the provisions of this section do not apply to operating permits to construct.
2. The Director shall cite the legal authority for each condition contained in an operating permit.
3. An operating permit must contain the following conditions:
 - a. The term of the operating permit is 5 years.
 - b. The Permittee shall retain records of all required monitoring data and supporting information for 5 years after the date of the sample collection, measurement, report or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.
 - c. Each of the conditions and requirements of the operating permit is severable, and if any are held invalid, the remaining conditions and requirements continue in effect.



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Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section I. General Conditions (continued)

M. NAC 445B.315 (continued)

Contents of operating permits: Exception for operating permits to construct; required conditions (continued)

3. An operating permit must contain the following conditions (continued):

- d. The Permittee shall comply with all conditions of the operating permit. Any noncompliance constitutes a violation and is a ground for:
 - (1) An action for noncompliance;
 - (2) Revising, revoking, reopening and revising, or terminating the operating permit by the Director; or
 - (3) Denial of an application for a renewal of the operating permit by the Director.
- e. The need to halt or reduce activity to maintain compliance with the conditions of the operating permit is not a defense to noncompliance with any condition of the operating permit.
- f. The Director may revise, revoke and reissue, reopen and revise, or terminate the operating permit for cause.
- g. The operating permit does not convey any property rights or any exclusive privilege.
- h. The Permittee shall provide the Director, in writing and within a reasonable time, with any information that the Director requests⁴ to determine whether cause exists for revising, revoking and reissuing, reopening and revising, or terminating the operating permit, or to determine compliance with the conditions of the operating permit.
- i. The Permittee shall pay fees to the Director in accordance with the provisions set forth in NAC 445B.327 and 445B.331.
- j. The Permittee shall allow the Director or any authorized representative, upon presentation of credentials, to:
 - (1) Enter upon the premises of the Permittee where:
 - (a) The stationary source is located;
 - (b) Activity related to emissions is conducted; or
 - (c) Records are kept pursuant to the conditions of the operating permit;⁵
 - (2) Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the operating permit⁶
 - (3) Inspect, at reasonable times, any facilities, practices, operations or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the operating permit; and
 - (4) Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the operating permit or applicable requirements.
- k. A responsible official (as defined in NAC 445B.156) of the stationary source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of the operating permit are true, accurate and complete.

N. NAC 445B.319, NAC 445B.342, NAC 445B.3425, and NAC 445B.344

Any changes to this operating permit will comply with all provisions established under NAC 445B.319 (Administrative Amendment),⁷ NAC 445B.342 (Notification of Authorized Change), NAC 445B.3425 (Minor Revision), and NAC 445B.344 (Significant Revision).

⁴ The Permittee shall submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, and emissions. These reports will be submitted in the format required by the Nevada Division of Environmental Protection Bureau of Air Pollution Control and Bureau of Air Quality Planning (Air Programs) for all emission units/systems specified on the form. The report must be submitted to the Air Programs no later than March 1 annually for the preceding calendar year, unless otherwise approved by the Air Programs.

⁵ Under NAC 445B.288(3), the Permittee shall retain an operating log for emission units considered insignificant activities subject to a limitation on its hours of operation pursuant to NAC 445B.288(2) for not less than 5 years.

⁶ The Permittee shall provide a digital spreadsheet or specified format required by the Nevada Division of Environmental Protection Bureau of Air Pollution Control.

⁷ Under NAC 445B.287(3), an operating permit may not be transferred from one owner or piece of equipment to another. The Permittee may apply for an administrative amendment reflecting a change of ownership or the name of the stationary source.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section I. General Conditions (continued)

O. NAC 445B.325

Termination, reopening and revision, modification, and revocation and reissuance

1. A Class I operating permit must be reopened and revised to incorporate any additional applicable requirement adopted pursuant to the Act if, on the effective date of the applicable requirement, the operating permit has a remaining term of 3 or more years. The reopening must be completed no later than 18 months after the effective date of the applicable requirement.⁸
2. An operating permit may be terminated, reopened and revised, modified, or revoked and reissued if:
 - a. The Director or the Administrator determines that the operating permit contains a material mistake or is based on inaccurate statements;
 - b. The Director or the Administrator determines that the operating permit, as written, does not ensure compliance with all applicable requirements; or
 - c. The Director determines that there has been a violation of any of the provisions of NAC 445B.001 to 445B.390, inclusive, any applicable requirement, or any condition contained in the operating permit
3. The Director shall notify the Permittee at least 30 days before the Director terminates, reopens and revises, revises, or revokes and reissues the operating permit. The notice must be made by certified mail and must contain the legal authority, the jurisdiction and the reasons for the action taken.⁹
4. If the Administrator notifies the Director and the Permittee that cause exists to reopen the operating permit, the Director shall forward to the Administrator a proposed determination of the reopening and revision, the revision of, or the revocation and reissuance of the operating permit within 90 days after receipt of the notice from the Administrator.¹⁰
5. If the Director reopens an operating permit, he or she shall revise only those portions of the operating permit for which cause exists.
6. The reopening of an operating permit pursuant to this section must comply with all of the relevant requirements for the issuance or revision of a permit, including the requirements related to the content of the permit and the requirements for notice, public participation and comment, and a review by any affected states.

P. NAC 445B.3265

Operating permits: Revocation and reissuance

1. An operating permit may be revoked if the control equipment is not operating.
2. An operating permit may be revoked by the Director upon determining that there has been a violation of NAC 445B.001 to 445B.390, inclusive, or the provisions of 40 CFR 52.21, or 40 CFR Part 60 or 61, Prevention of Significant Deterioration, New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants, adopted by reference in NAC 445B.221.
3. The revocation is effective 10 days after the service of a written notice, unless a hearing is requested.

⁸ State only requirements (only Nevada has authority to enforce).

⁹ State only requirements (only Nevada has authority to enforce).

¹⁰ State only requirements (only Nevada has authority to enforce).



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
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Section I. General Conditions (continued)

P. NAC 445B.3265 (continued)

Operating permits: Revocation and reissuance (continued)

4. To reissue a revoked operating permit, the holder of the revoked permit must file a new application with the Director, accompanied by the fee for an initial operating permit as specified in NAC 445B.327. An environmental review of the stationary source must be conducted as though construction had not yet commenced.

Q. NAC 445B.3405(1)(d)

The Permittee shall record:

1. Monitoring information required by the conditions of this permit including the date, the location and the time of the sampling or the measurements and the operating conditions at the time of the sampling or measurements; and
2. The date on which the analyses were performed, the company that performed them, the analytical techniques that the company used, and the results of such analyses.

R. NAC 445B.3405(1)(e)

The Permittee shall:

1. Promptly report to the Director all deviations from the requirements of this operating permit; and
2. Report to the Director the probable cause of all deviations and any action taken to correct the deviations. For this operating permit, prompt is defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232, or for reporting of an emergency (as defined by NAC 445B.326); and
3. Submit reports of any required monitoring every 6 months, within 8 weeks after June 30 and December 31 of each calendar year. The reports must contain a summary of the data collected as required by all monitoring, recordkeeping and compliance requirements and as specified in this operating permit.

S. NAC 445B.3405(1)(j)

The Permittee shall submit a compliance certification annually,¹¹ or more frequently if required by an applicable requirement, to the Director. A copy of the compliance certification must be submitted to the Administrator. A compliance certification must include:

1. An identification of each term or condition of the operating permit that is the basis of the certification;
2. The status of the stationary source's compliance with any applicable requirement;
3. A statement of whether compliance was continuous or intermittent;
4. The method used for determining compliance; and
5. Any other facts the Director determines to be necessary to determine compliance.

T. NAC 445B.3443

Renewal of permit

1. All Class I operating permits must be renewed 5 years after the date of issuance.
2. A complete application for the renewal of a Class I operating permit must be submitted to the Director on the form provided by the Director with the appropriate fee at least 240 days, but not earlier than 18 months, before the expiration date of the current Class I operating permit for stationary sources.¹²
3. Applications for the renewal of a Class I operating permit must comply with all requirements for the issuance of an initial Class I operating permit as specified in NAC 445B.3395.
4. If an application for the renewal of a Class I operating permit is submitted in accordance with NAC 445B.3443(2), the stationary source may continue to operate under the conditions of the existing Class I operating permit until the Class I operating permit is renewed or the application for renewal is denied.

¹¹ The Permittee shall submit the compliance certification on or before March 1.

¹² The Director shall determine whether the application is complete within 60 days of receipt of the application (NAC 445B.3395). It is recommended the Permittee submit the application at least 300 days before the expiration date of the current Class I operating permit.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

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(AS PERMITTEE)

Section I. General Conditions (continued)

- T. NAC 445B.3443 (continued)
Renewal of permit (continued)
5. If an application for the renewal of a Class I operating permit is not submitted in accordance with NAC 445B.3443(2):
 - a. The stationary source may be required to cease operation when the Class I operating permit expires; and
 - b. The Permittee of the stationary source:
 - (1) Must apply for the issuance of a new Class I operating permit pursuant to NAC 445B.3375; and
 - (2) May not recommence the operation until the new Class I operating permit is issued.
 6. The fee for the issuance of a new Class I operating permit or the renewal of a Class I operating permit is specified in NAC 445B.327.
- U. Nevada Revised Statute (NRS) 445B.470
Prohibited acts; penalty; establishment of violation; request for prosecution
1. A person shall not knowingly:
 - a. Violate any applicable provision, the terms or conditions of any permit or any provision for the filing of information;
 - b. Fail to pay any fee;
 - c. Falsify any material statement, representation or certification in any notice or report; or
 - d. Render inaccurate any monitoring device or method, required pursuant to the provisions of NRS 445B.100 to 445B.450, inclusive, or 445B.470 to 445B.640, inclusive, or any regulation adopted pursuant to those provisions.
 2. Any person who violates any provision of NRS 445B.470(1) shall be punished by a fine of not more than \$10,000 for each day of the violation.
 3. The burden of proof and degree of knowledge required to establish a violation of subsection 1 are the same as those required by 42 U.S.C. § 7413(c), as that section existed on October 1, 1993.
 4. If, in the judgment of the Director of the Department or the Director's designee, any person is engaged in any act or practice which constitutes a criminal offense pursuant to NRS 445B.100 to 445B.640, inclusive, the Director of the Department or the designee may request that the Attorney General or the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
 5. If, in the judgment of the control officer of a local air pollution control board, any person is engaged in such an act or practice, the control officer may request that the district attorney of the county in which the criminal offense is alleged to have occurred institute by indictment or information a criminal prosecution of the person.
- V. ASIP NAC Article 2.5.4
Breakdown or upset, determined by the Director to be unavoidable and not the result of careless or marginal operations, shall not be considered a violation of these regulations.

*****End of General Conditions*****



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Section II. Construction Conditions

A. Not Applicable.

******End of Construction Conditions******

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Section III. Ambient Air Monitoring Requirements

A. Not Applicable.

*****End of Ambient Air Monitoring Requirements*****

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**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT**

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(AS PERMITTEE)

Section IV. Specific Operating Conditions**A. Emission Units S2.008 through S2.016**

System 01 – Ormat Energy Converters		Location UTM (Zone 11, NAD 83)	
		m North	m East
Phase I			
S2.008	MHI Ormat Energy Converter (OEC)-I	4,382,395	507,633
S2.009	MHI Ormat Energy Converter (OEC) - II	4,382,358	507,553
S2.010	MHI Ormat Energy Converter (OEC) - III	4,382,322	507,475
Phase II			
S2.011	MHII Ormat Energy Converter (OEC) - I	4,381,991	507,636
S2.012	MHII Ormat Energy Converter (OEC) - II	4,381,956	507,555
S2.013	MHII Ormat Energy Converter (OEC) - III	4,381,923	507,479
Phase III			
S2.014	MHIII Ormat Energy Converter (OEC) - 31	4,381,624	507,733
S2.015	MHIII Ormat Energy Converter (OEC) - 32	4,381,585	507,644
Phase IIIA			
S2.016	MHIIIA Ormat Energy Converter (OEC) - 31A	4,381,777	507,639

1. Air Pollution Control Equipment (NAC 445B.3405)
S2.008 through S2.016, each, shall be controlled by a vapor recovery unit (VRU).
2. Operating Parameters (NAC 445B.3405)
 - a. Hours
 - (1) **S2.008 through S2.016, each, may operate a total of 24 hours per day.**
3. Emission Limits (NAC 445B.305, NAC 445B.3405)

The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.008 through S2.016, combined**, the following pollutants in excess of the following specified limits:

 - a. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **174.5** tons per 12-month rolling period.
 - b. NAC 445B.22017 – The opacity from **S2.008 through S2.016, each**, shall not equal or exceed **20** percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

 - a. Monitor and record the hours of operation for **Phase I (S2.008 through S2.010, combined), Phase II (S2.011 through S2.013, combined), Phase III (S2.014 and S2.015, combined), and Phase IIIA (S2.016)** for each calendar day.
 - b. Monitor and record the volume, in gallons, of the Binary Motive Fluid (BMF) released to the atmosphere and calculate the mass, in pounds, of VOCs contained in the emitted BMF for **Phase I (S2.008 through S2.010, combined), Phase II (S2.011 through S2.013, combined), Phase III (S2.014 and S2.015, combined), and Phase IIIA (S2.016)**, on a cumulative monthly basis, for each 12-month rolling period. in accordance with the following:
 - (1) Record the date, location and quantity of BMF, in gallons, each time BMF is added or removed from the BMF system.
 - (2) Record the mass, in pounds, of VOCs per gallon of BMF added or removed from the BMF system as provided by the BMF manufacturer's most current SDS.
 - (3) At the end of each month, record the quantity of BMF in storage and the corresponding VOC content of the BMF in storage, in pounds, in the BMF supply tank(s).
 - (a) BMF will only be added into the BMF systems via the BMF supply tank(s).



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

A. Emission Units S2.008 through S2.016 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

b. Monitor and record the volume, in gallons, of the Binary Motive Fluid (BMF) released to the atmosphere and calculate the mass, in pounds, of VOCs contained in the emitted BMF for **Phase I (S2.008 through S2.010, combined), Phase II (S2.011 through S2.013, combined), Phase III (S2.014 and S2.015, combined), and Phase IIIA (S2.016)**, on a cumulative monthly basis, for each 12-month rolling period, in accordance with the following:

- (4) At the end of each month, calculate and record the total BMF emitted and the corresponding VOC content of the total BMF emitted, in tons, for the system by:
 - (a) Subtracting the total quantity of BMF, and the corresponding VOC content of BMF, in pounds, in storage in the BMF storage tank(s) at the end of the current month from the total quantity of BMF, and the corresponding VOC content of the BMF, in pounds, in the BMF storage tank(s) at the end of the previous month, then-
 - (b) Adding the total net quantity of BMF added to the BMF storage tanks, and the corresponding net VOC content of the BMF added to the BMF storage tanks, in pounds, during the current month.
 - (c) The resulting value is the VOC loss from the system as emissions, in pounds as shown below:

VOC loss = (VOC content in storage at end of previous month) – (VOC content in storage at end of current month) + (net quantity of VOC added to system during current month)

- (d) The VOC portion of BMF so calculated in pounds, when divided by 2,000, will be considered to be the VOC, in tons, emitted into the atmosphere for that month.
- (5) At the end of each month, record the total VOC emitted in tons.
- (6) At the end of each month, calculate and record the cumulative total of VOC emitted in tons for the preceding 12-month rolling period.

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT**

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)**B. Emission Units S2.001 and S2.002**

System 02 – Emergency Diesel Generators		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.001	MHI 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model # 6063HK36; Serial #06R1050019; Year Manufactured 2010)	4,382,419	507,501
S2.002	MHI 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model # 6063HK36; Serial #06R1064416; Year Manufactured 2010)	4,382,024	507,505

1. Air Pollution Control Equipment (NAC 445B.3405)

- S2.001 and S2.002, each**, have no add-on controls.
- Descriptive Stack Parameters for S2.001 and S2.002
Stack Height: 10.0 feet
Stack Diameter: 0.67 feet
Stack Temperature: 800 °F

2. Operating Parameters (NAC 445B.3405)

- S2.001 and S2.002, each**, may consume only diesel.
- The maximum allowable fuel consumption rate for **S2.001 and S2.002, each**, shall not exceed **36.2 gallons** per hour, averaged over a calendar day, nor more than **3,620.0 gallons** per 12-month rolling period of non-emergency use.
- Hours
 - S2.001 and S2.002, each**, may operate a total of **24** hours per day.
 - S2.001 and S2.002, each**, may operate a total of **100** hours per year of non-emergency use. There is no time limit on operation in emergency situations.

3. Emission Limits (NAC 445B.305, NAC 445B.3405)

The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.001 and S2.002, each**, the following pollutants in excess of the following specified limits:

- The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.0050** tons per 12-month rolling period.
- The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.0050** tons per 12-month rolling period.
- The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10** pounds per hour, nor more than **0.0050** tons per 12-month rolling period.
- The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0092** pounds per hour, nor more than **0.00046** tons per 12-month rolling period.
- The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **7.71** pounds per hour, nor more than **0.39** tons per 12-month rolling period.
- The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.86** pounds per hour, nor more than **0.043** tons per 12-month rolling period.
- The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.084** pounds per hour, nor more than **0.0042** tons per 12-month rolling period.
- NAC 445B.22017 – The opacity from the **S2.001 and S2.002, each**, shall not equal or exceed **20** percent.
- NAC 445B.2203 – The maximum allowable discharge of **PM₁₀** to the atmosphere from **S2.001 and S2.002, each**, shall not exceed **0.60** pounds per MMBtu.
- NAC 445B.22047 – The maximum allowable discharge of **sulfur** to the atmosphere from **S2.001 and S2.002, each**, shall not exceed **3.55** pounds per hour.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

B. Emission Units S2.001 and S2.002 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

- a. Monitor and record the consumption rate of **diesel** for each calendar day for **S2.001 and S2.002, each**, (in gallons) by multiplying the hourly fuel consumption rate as stated in **B.2.b.** of this section and the total daily hours of operation. The corresponding average hourly fuel consumption rate in gallons per hour as provided on the manufacturer's specification, to be kept onsite with records.
- b. Record the consumption rate of **diesel**, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
- c. Monitor and record the total daily hours of operation for **S2.001 and S2.002, each**, for each calendar day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
- e. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

5. Federal Requirements

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4205)

The Permittee must comply with the emission standards for new non-road CI (compression ignition) ICE (internal combustion engine) in 40 CR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. (40 CFR 60.4205(b))

- (1) For a 2007 model year and later Tier 2 non-road engine with a rated power greater than or equal to 37 kW (50 hp): (40 CFR 60.4202(a), 40 CFR 1039 Appendix I)
 - (a) The discharge of PM to the atmosphere shall not exceed **0.20** grams/kW-hr (**0.25** pounds per hour).
 - (b) The discharge of CO to the atmosphere shall not exceed **3.5** grams/kW-hr (**4.38** pounds per hour).
 - (c) The discharge of NMHC (non-methane hydrocarbon) + NO_x to the atmosphere shall not exceed **6.4** grams/kW-hr (**8.00** pounds per hour).
- (2) Exhaust opacity must not exceed: (40 CFR 60.4202(a)(1)(i), 40 CFR 1039.105(b))
 - (a) 20 percent during acceleration mode;
 - (b) 15 percent during the lugging mode; and
 - (c) 50 percent during the peaks in either the acceleration or lugging modes.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

B. Emission Units S2.001 and S2.002 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 1090.305)

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) The Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 1068. (40 CFR 60.4211(a))
- (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **B.5.d.(5)** of this section. (40 CFR 60.4211(c))
- (4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **B.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **B.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **B.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **B.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

B. Emission Units S2.001 and S2.002 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

(4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **B.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **B.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **B.5.d.(4)(b)** of this section. Except as provided in paragraph **B.5.d.(4)(c)** of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))

i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))

(5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))

(a) For CI ICE greater than 500 hp, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee change emission-related settings in a way that is not permitted by the manufacturer. The Permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. (40 CFR 60.4211(g)(3))

e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT****Issued to:** ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)**Section IV. Specific Operating Conditions (continued)****C. Emission Unit S2.003**

System 03 – MHI Emergency Diesel Fire Pump Engine		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.003	MHI 227 kW Emergency Diesel Fire Pump Engine (305 HP John Deere; Model #Ju6H-UFADX8; Serial # PE6068L179207; Year Manufactured 2010)	4,382,483	507,650

1. Air Pollution Control Equipment (NAC 445B.3405)a. **S2.003** has no add-on controls.b. Descriptive Stack Parameters

Stack Height: 8.00 feet

Stack Diameter: 0.42 feet

Stack Temperature: 100 °F

2. Operating Parameters (NAC 445B.3405)a. **S2.003** may consume only **diesel**.b. The maximum allowable fuel consumption rate for **S2.003** shall not exceed **15.25 gallons** per hour, averaged over a calendar day, nor more than **1,525.0 gallons** per 12-month rolling period of non-emergency use.c. Hours(1) **S2.003** may operate a total of **24 hours** per day.(2) **S2.003** may operate a total of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.3. Emission Limits (NAC 445B.305, NAC 445B.3405)The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.003** the following pollutants in excess of the following specified limits:a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.63 pounds** per hour, nor more than **0.031 tons** per 12-month rolling period.e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **1.80 pounds** per hour, nor more than **0.090 tons** per 12-month rolling period.f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.30 pounds** per hour, nor more than **0.015 tons** per 12-month rolling period.g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.050 pounds** per hour, nor more than **0.0025 tons** per 12-month rolling period.h. NAC 445B.22017 – The opacity from the **S2.003** shall not equal or exceed **20 percent**.i. NAC 445B.22047 – The maximum allowable discharge of **sulfur** to the atmosphere from **S2.003** shall not exceed **1.63 pounds** per hour.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

C. Emission Unit S2.003 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

- a. Monitor and record the consumption rate of **diesel** for each calendar day for **S2.003** (in gallons) by multiplying the hourly fuel consumption rate as stated in **C.2.b.** of this section and the total daily hours of operation. The corresponding average hourly fuel consumption rate in gallons per hour as determined from the maximum engine size, brake-specific fuel consumption, and heat content.
- b. Record the consumption rate of **diesel**, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
- c. Monitor and record the total daily hours of operation for **S2.003** for each calendar day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
- e. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

5. Federal Requirements

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4202, 40 CFR 60.4205)

The Permittee must comply with the emission standards in Table 4 of 40 CFR Part 60 Subpart IIII, for all pollutants, for the same model year and National Fire Protection Association (NFPA) maximum engine power. (40 CFR 60.4202(d), 40 CFR 60.4205(c))

- (1) For a 2009 model year and later stationary fire pump engine with a maximum engine power of $225 \leq \text{kW} < 450$ ($300 \leq \text{hp} < 600$) and less than 30 liters per cylinder: (40 CFR 60.4202(d), 40 CFR 4205(c), Table 4)
 - (a) The discharge of PM to the atmosphere shall not exceed **0.20** gram/kW-hr (0.15 gram/hp-hr) (**0.10** pounds per hour).
 - (b) The discharge of non-methane hydrocarbon (NMHC) + NO_x to the atmosphere shall not exceed **4.0** grams/kW-hr (3.0 grams/hp-hr) (**2.00** pounds per hour).
 - (c) The discharge of carbon monoxide (CO) to the atmosphere shall not exceed **3.5** grams/kW-hr (2.6 gram/hp-hr) (**1.75** pounds per hour).

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 1090.305)

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

C. Emission Unit S2.003 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) The Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 1039. (40 CFR 60.4211(a))
- (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **C.5.d.(5)** of this section. (40 CFR 60.4211(c))
- (4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **C.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **C.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **C.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **C.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))
 - (c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **C.5.d.(4)(b)** of this section. Except as provided in paragraph **C.5.d.(4)(c)** of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))
 - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

C. Emission Unit S2.003 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211) (continued)

(5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))

(a) For CI ICE greater than or equal to 100 HP and less than or equal to 500 hp, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee change emission-related settings in a way that is not permitted by the manufacturer. (40 CFR 60.4211(g)(2))

e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT****Issued to:** ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)**Section IV. Specific Operating Conditions (continued)****D. Emission Unit S2.004**

System 04 – MHI 520 Gallon Gasoline Fuel Tank		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.004	MHI 520 Gallon Gasoline Fuel Tank	4,382,499	507,655

1. Air Pollution Control Equipment (NAC 445B.3405)
 - a. Emissions from **S2.004** shall be controlled by submerged fill.
 - b. Descriptive Stack Parameters
Shell Diameter: 4.50 feet
Shell Height: 5.70 feet
Capacity: 520 gallons
2. Operating Parameters (NAC 445B.3405)
 - a. **S2.004** shall only be used to store **gasoline**.
 - b. The maximum allowable throughput rate for **S2.004** shall not exceed **400.0** gallons per month, nor more than **4,800.0** gallons per 12-month rolling period.
 - c. Hours
(1) **S2.004** may operate a total of **24** hours per day.
3. Emission Limits (NAC 445B.305, NAC 445B.3405)

The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.004** the following pollutants in excess of the following specified limits:

 - a. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.22** tons per year.
 - b. NAC 445B.22017 – The opacity from the **S2.004** shall not equal or exceed **20** percent.
4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

 - a. Monitor and record the throughput of **gasoline**, in gallons, loaded into, or dispensed from, **S2.004**, on a monthly basis, as determined from vendor invoices for tank loading or fuel pump non-resettable meter for tank dispensing.
 - b. Record the throughput rate of material, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
5. Federal Requirements
National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities
 - a. Permittee must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR 63.11115)



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.004

5. Federal Requirements (continued)

National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63 Subpart CCCCCC – for Gasoline Dispensing Facilities (continued)

- b. Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
 - (1) Minimize gasoline spills. (40 CFR 63.11116(a)(1))
 - (2) Clean up spills as expeditiously as practicable. (40 CFR 63.11116(a)(2))
 - (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use. (40 CFR 63.11116(a)(3))
 - (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. (40 CFR 63.11116(a)(4))
- c. Permittee must have records available within 24 hours of a request by the Administrator to document your gasoline throughput. (40 CFR 63.11116(b))

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT****Issued to:** ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)**Section IV. Specific Operating Conditions (continued)****E. Emission Unit S2.005**

System 05 – MHIII Emergency Diesel Generator		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.005	MHIII 567 kW Emergency Diesel Generator (760 HP Perkins; Model #2506C-E15TAG3; Serial #: MGDF5333NO9782D; Year manufactured: 2017)	4,381,671	507,739

1. Air Pollution Control Equipment (NAC 445B.3405)**a. S2.005** has no add-on controls.**b. Descriptive Stack Parameters**

Stack Height: 10.0 feet

Stack Diameter: 0.67 feet

Stack Temperature: 800 °F

2. Operating Parameters (NAC 445B.3405)**a. S2.005** may consume only **diesel**.**b.** The maximum allowable fuel consumption rate for **S2.005** shall not exceed **36.2 gallons** per hour, averaged over a calendar day, nor more than **3,620.0 gallons** per 12-month rolling period of non-emergency use.**c. Hours****(1) S2.005** may operate a total of **24 hours** per day.**(2) S2.005** may operate a total of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.**3. Emission Limits (NAC 445B.305, NAC 445B.3405)**The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.005** the following pollutants in excess of the following specified limits:**a.** The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.**b.** The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.**c.** The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.**d.** The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0092 pounds** per hour, nor more than **0.00046 tons** per 12-month rolling period.**e.** The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **7.71 pounds** per hour, nor more than **0.39 tons** per 12-month rolling period.**f.** The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.86 pounds** per hour, nor more than **0.043 tons** per 12-month rolling period.**g.** The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.084 pounds** per hour, nor more than **0.0042 tons** per 12-month rolling period.**h.** NAC 445B.22017 – The opacity from the **S2.005** shall not equal or exceed **20 percent**.**i.** NAC 445B.2203 – The maximum allowable discharge of **PM₁₀** to the atmosphere from **S2.005** shall not exceed **0.60 pounds** per MMBtu.**j.** NAC 445B.22047 – The maximum allowable discharge of **sulfur** to the atmosphere from **S2.005** shall not exceed **3.55 pounds** per hour.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

E. Emission Unit S2.005 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

- a. Monitor and record the consumption rate of **diesel** for each calendar day for **S2.005** (in gallons) by multiplying the hourly fuel consumption rate as stated in **E.2.b.** of this section and the total daily hours of operation. The corresponding average hourly fuel consumption rate in gallons per hour as provided on the manufacturer's specification, to be kept onsite with records.
- b. Record the consumption rate of **diesel**, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
- c. Monitor and record the total daily hours of operation for **S2.005** for each calendar day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
- e. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

5. Federal Requirements

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4205)

The Permittee must comply with the emission standards for new non-road CI (compression ignition) ICE (internal combustion engine) in 40 CR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. (40 CFR 60.4205(b))

- (1) For a 2007 model year and later Tier 2 non-road engine with a rated power greater than 560 kW : (40 CFR 60.4202(a), 40 CFR 1039 Appendix I)
 - (a) The discharge of PM to the atmosphere shall not exceed **0.20** grams/kW-hr (**0.25** pounds per hour).
 - (b) The discharge of CO to the atmosphere shall not exceed **3.5** grams/kW-hr (**4.38** pounds per hour).
 - (c) The discharge of NMHC (non-methane hydrocarbon) + NO_x to the atmosphere shall not exceed **6.4** grams/kW-hr (**8.00** pounds per hour).
- (2) Exhaust opacity must not exceed: (40 CFR 60.4202(a)(1)(i), 40 CFR 1039.105(b))
 - (a) 20 percent during acceleration mode;
 - (b) 15 percent during the lugging mode; and
 - (c) 50 percent during the peaks in either the acceleration or lugging modes.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

E. Emission Unit S2.005 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 1090.305)

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) The Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 1068. (40 CFR 60.4211(a))
- (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **E.5.d.(5)** of this section. (40 CFR 60.4211(c))
- (4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **E.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **E.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **E.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **E.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

E. Emission Unit S2.005 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

(4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **E.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **E.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **E.5.d.(4)(b)** of this section. Except as provided in paragraph **E.5.d.(4)(c)** of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))

i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))

(5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))

(a) For CI ICE greater than 500 hp, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee change emission-related settings in a way that is not permitted by the manufacturer. The Permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. (40 CFR 60.4211(g)(3))

e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT****Issued to:** ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)**Section IV. Specific Operating Conditions (continued)****F. Emission Unit S2.006**

System 06 – MHIII Emergency Diesel Fire Pump Engine		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.006	MHIII 227 kW Emergency Diesel Fire Pump Engine (305 HP John Deere; Model #Ju6H-UFADX8; Serial #: PE6068L179207; Year manufactured: 2010)	4,381,650	507,709

1. Air Pollution Control Equipment (NAC 445B.3405)a. **S2.006** has no add-on controls.b. Descriptive Stack Parameters

Stack Height: 8.00 feet

Stack Diameter: 0.42 feet

Stack Temperature: 100 °F

2. Operating Parameters (NAC 445B.3405)a. **S2.006** may consume only **diesel**.b. The maximum allowable fuel consumption rate for **S2.006** shall not exceed **15.25 gallons** per hour, averaged over a calendar day, nor more than **1,525.0 gallons** per 12-month rolling period of non-emergency use.c. Hours(1) **S2.006** may operate a total of **24 hours** per day.(2) **S2.006** may operate a total of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.3. Emission Limits (NAC 445B.305, NAC 445B.3405)The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.006** the following pollutants in excess of the following specified limits:a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.055 pounds** per hour, nor more than **0.0028 tons** per 12-month rolling period.d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.63 pounds** per hour, nor more than **0.031 tons** per 12-month rolling period.e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **1.80 pounds** per hour, nor more than **0.090 tons** per 12-month rolling period.f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.30 pounds** per hour, nor more than **0.015 tons** per 12-month rolling period.g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.050 pounds** per hour, nor more than **0.0025 tons** per 12-month rolling period.h. NAC 445B.22017 – The opacity from the **S2.006** shall not equal or exceed **20 percent**.i. NAC 445B.22047 – The maximum allowable discharge of **sulfur** to the atmosphere from **S2.006** shall not exceed **1.63 pounds** per hour.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

F. Emission Unit S2.006 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

- a. Monitor and record the consumption rate of **diesel** for each calendar day for **S2.006** (in gallons) by multiplying the hourly fuel consumption rate as stated in **F.2.b.** of this section and the total daily hours of operation. The corresponding average hourly fuel consumption rate in gallons per hour as determined from the maximum engine size, brake-specific fuel consumption, and heat content.
- b. Record the consumption rate of **diesel**, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
- c. Monitor and record the total daily hours of operation for **S2.006** for each calendar day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
- e. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

5. Federal Requirements

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4202, 40 CFR 60.4205)

The Permittee must comply with the emission standards in Table 4 of 40 CFR Part 60 Subpart IIII, for all pollutants, for the same model year and National Fire Protection Association (NFPA) maximum engine power. (40 CFR 60.4202(d), 40 CFR 60.4205(c))

- (1) For a 2009 model year and later stationary fire pump engine with a maximum engine power of $225 \leq \text{kW} < 450$ ($300 \leq \text{hp} < 600$) and less than 30 liters per cylinder: (40 CFR 60.4202(d), 40 CFR 4205(c), Table 4)
 - (a) The discharge of PM to the atmosphere shall not exceed **0.20** gram/kW-hr (0.15 gram/hp-hr) (**0.10** pounds per hour).
 - (b) The discharge of non-methane hydrocarbon (NMHC) + NO_x to the atmosphere shall not exceed **4.0** grams/kW-hr (3.0 grams/hp-hr) (**2.00** pounds per hour).
 - (c) The discharge of carbon monoxide (CO) to the atmosphere shall not exceed **3.5** grams/kW-hr (2.6 gram/hp-hr) (**1.75** pounds per hour).

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 1090.305)

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

F. Emission Unit S2.006 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) The Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 1039. (40 CFR 60.4211(a))
- (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **F.5.d.(5)** of this section. (40 CFR 60.4211(c))
- (4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **F.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **F.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **F.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **F.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))
 - (c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **F.5.d.(4)(b)** of this section. Except as provided in paragraph **F.5.d.(4)(c)** of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))
 - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

F. Emission Unit S2.006 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211) (continued)

(5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))

(a) For CI ICE greater than or equal to 100 HP and less than or equal to 500 hp, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee change emission-related settings in a way that is not permitted by the manufacturer. (40 CFR 60.4211(g)(2))

e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

**Bureau of Air Pollution Control****Facility ID No. A1271****Permit No. AP4911-4212.01****CLASS I AIR QUALITY OPERATING PERMIT****Issued to:** ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)**Section IV. Specific Operating Conditions (continued)****G. Emission Unit S2.007**

System 07 – MHIIIA Emergency Diesel Generator		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.007	MHIIIA 567 kW Emergency Diesel Generator (760 HP Detroit Diesel; Model #TBD; Serial #: TBD; Year Build: 2007+)	4,381,762	507,840

1. Air Pollution Control Equipment (NAC 445B.3405)a. **S2.007** has no add-on controls.b. Descriptive Stack Parameters

Stack Height: 10.0 feet

Stack Diameter: 0.67 feet

Stack Temperature: 800 °F

2. Operating Parameters (NAC 445B.3405)a. **S2.007** may consume only **diesel**.b. The maximum allowable fuel consumption rate for **S2.007** shall not exceed **36.2 gallons** per hour, averaged over a calendar day, nor more than **3,620.0 gallons** per 12-month rolling period of non-emergency use.c. Hours(1) **S2.007** may operate a total of **24 hours** per day.(2) **S2.007** may operate a total of **100 hours** per year of non-emergency use. There is no time limit on operation in emergency situations.3. Emission Limits (NAC 445B.305, NAC 445B.3405)The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from **S2.007** the following pollutants in excess of the following specified limits:a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.b. The discharge of **PM₁₀** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.c. The discharge of **PM_{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **0.10 pounds** per hour, nor more than **0.0050 tons** per 12-month rolling period.d. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed **0.0092 pounds** per hour, nor more than **0.00046 tons** per 12-month rolling period.e. The discharge of **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed **7.71 pounds** per hour, nor more than **0.39 tons** per 12-month rolling period.f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **0.86 pounds** per hour, nor more than **0.043 tons** per 12-month rolling period.g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **0.084 pounds** per hour, nor more than **0.0042 tons** per 12-month rolling period.h. NAC 445B.22017 – The opacity from the **S2.007** shall not equal or exceed **20 percent**.i. NAC 445B.2203 – The maximum allowable discharge of **PM₁₀** to the atmosphere from **S2.007** shall not exceed **0.60 pounds** per MMBtu.j. NAC 445B.22047 – The maximum allowable discharge of **sulfur** to the atmosphere from **S2.007** shall not exceed **3.55 pounds** per hour.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

G. Emission Unit S2.007 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

- a. Monitor and record the consumption rate of **diesel** for each calendar day for **S2.007** (in gallons) by multiplying the hourly fuel consumption rate as stated in **G.2.b.** of this section and the total daily hours of operation. The corresponding average hourly fuel consumption rate in gallons per hour as provided on the manufacturer's specification, to be kept onsite with records.
- b. Record the consumption rate of **diesel**, in gallons, on a cumulative monthly basis, for each 12-month rolling period.
- c. Monitor and record the total daily hours of operation for **S2.007** for each calendar day of operation. The Permittee shall note which hours of operation are emergency hours, and which hours of operation are hours for non-emergency use.
- d. Record the monthly hours of operation and the corresponding annual hours of operation for the year. The monthly hours of operation shall be determined at the end of each month as the sum of daily hours of operation for each day of the month. The annual hours of operation shall be determined at the end of each month as the sum of the monthly hours of operation for the year.
- e. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))

5. Federal Requirements

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

a. Emissions Standards (40 CFR 60.4205)

The Permittee must comply with the emission standards for new non-road CI (compression ignition) ICE (internal combustion engine) in 40 CR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. (40 CFR 60.4205(b))

- (1) For a 2007 model year and later Tier 2 non-road engine with a rated power greater than 560 kW : (40 CFR 60.4202(a), 40 CFR 1039 Appendix I)
 - (a) The discharge of PM to the atmosphere shall not exceed **0.20** grams/kW-hr (**0.25** pounds per hour).
 - (b) The discharge of CO to the atmosphere shall not exceed **3.5** grams/kW-hr (**4.38** pounds per hour).
 - (c) The discharge of NMHC (non-methane hydrocarbon) + NO_x to the atmosphere shall not exceed **6.4** grams/kW-hr (**8.00** pounds per hour).
- (2) Exhaust opacity must not exceed: (40 CFR 60.4202(a)(1)(i), 40 CFR 1039.105(b))
 - (a) 20 percent during acceleration mode;
 - (b) 15 percent during the lugging mode; and
 - (c) 50 percent during the peaks in either the acceleration or lugging modes.



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

G. Emission Unit S2.007 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

b. Fuel Requirements (40 CFR 60.4207)

The Permittee must meet the following diesel requirements for non-road engine: (40 CFR 60.4207(b), 40 CFR 1090.305)

- (1) Sulfur content to be 15 parts per million (ppm) maximum.
- (2) A minimum cetane index of 40; or
- (3) A maximum aromatic content of 35 volume percent.

c. Monitoring Requirements (40 CFR 60.4209)

If the CI ICE does not meet the standards applicable to non-emergency engines, the Permittee must install a non-resettable hour meter prior to startup of the engine. (40 CFR 60.4209(a))

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

- (1) The Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. (40 CFR 60.4206)
- (2) The Permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Part 1068. (40 CFR 60.4211(a))
- (3) The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **G.5.d.(5)** of this section. (40 CFR 60.4211(c))
- (4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **G.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **G.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))
 - (a) There is no time limit on the use of emergency stationary ICE in emergency situations. (40 CFR 60.4211(f)(1))
 - (b) The Permittee may operate the Permittee's emergency stationary ICE for any combination of the purposes specified in paragraphs **G.5.d.(4)(b)** of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **G.5.d.(4)(c)** of this section counts as part of the 100 hours per calendar year. (40 CFR 60.4211(f)(2))
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (40 CFR 60.4211(f)(2)(i))



Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: ORNI 39 LLC/ORNI 41 LLC – MCGINNESS HILLS GEOTHERMAL DEVELOPMENT PROJECT
(AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

G. Emission Unit S2.007 (continued)

5. Federal Requirements (continued)

New Source Performance Standards (NSPS) – 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (continued)

d. Compliance Requirements (40 CFR 60.4206, 40 CFR 60.4211)

(4) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs **G.5.d.(4)(a) through (c)** of this section, is prohibited. If the Permittee do not operate the engine according to the requirements in paragraphs **G.5.d.(4)(a) through (c)** of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR 60.4211(f))

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **G.5.d.(4)(b)** of this section. Except as provided in paragraph **G.5.d.(4)(c)** of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))

i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions in 40 CFR 60.4211(f)(3)(i)(A) through (E) are met. (40 CFR 60.4211(f)(3)(i))

(5) If the Permittee does not install, configure, operate, and maintain the Permittee's engine and control device according to the manufacturer's emission-related written instructions, or the Permittee change emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows: (40 CFR 4211(g))

(a) For CI ICE greater than 500 hp, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee change emission-related settings in a way that is not permitted by the manufacturer. The Permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. (40 CFR 60.4211(g)(3))

e. National Emission Standards for Hazardous Air Pollutants for Source Categories – 40 CFR Part 63, Subpart ZZZZ – Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

If the compression ignition engine meets the requirements of 40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ requirements are also met. (40 CFR Part 63.6590(c))

******End of Specific Operating Conditions******



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Facility ID No. A1271

Permit No. AP4911-4212.01

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(AS PERMITTEE)

Section V. Emission Caps

A. Not Applicable.

******End of Emission Caps******

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Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

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(AS PERMITTEE)

Section VI. Surface Area Disturbance Conditions

The surface area disturbance for **McGinness Hills Geothermal Development Project** is **150** acres.

A. Fugitive Dust (NAC 445B.22037)

1. The Permittee may not cause or permit the handling, transporting, or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.
2. Except as otherwise provided in NAC 445B.22037(4), the Permittee may not cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in NAC 445B.22037, “best practical methods” includes, but is not limited to, paving, chemical stabilization, watering, phased construction, and revegetation.
3. Except as provided in NAC 445B.22037(4), the Permittee may not disturb or cover 5 acres or more of land or its topsoil until Permittee has obtained an Operating permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.
4. The provisions of NAC 445B.22037(2) and (3) do not apply to:
 - a. Agricultural activities occurring on agricultural land; or
 - b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

******End of Surface Area Disturbance Conditions******



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Facility ID No. A1271

Permit No. AP4911-4212.01

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(AS PERMITTEE)

Section VII. Schedules of Compliance

A. Not Applicable

*****End of Schedule of Compliance *****

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Bureau of Air Pollution Control

Facility ID No. A1271

Permit No. AP4911-4212.01

CLASS I AIR QUALITY OPERATING PERMIT

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(AS PERMITTEE)

Section VIII. Amendments

This permit:

1. Shall be posted conspicuously at or near the stationary source. (NAC 445B.318(5))
2. Shall expire and be subject to renewal five (5) years from: May 5, 2025 .
(NAC 445B.315(3)(a))
3. A completed application for renewal of an operating permit must be submitted to the Director on the form provided by the Director with the appropriate fee at least 240 calendar days before the expiration date of this operation permit (NAC 445B.3443(2)). The Director shall determine whether the application is complete within 60 days of receipt of the application (NAC 445B.3395).
4. Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)

THIS PERMIT EXPIRES ON: May 5, 2030

Signature: _____

Issued by: Jaimie Mara, P.E.
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: (775) 687- 9343 **Date:** DRAFT



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Facility ID No. A1271

Permit No. AP4911-4212.01

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Class I Non-Permit Equipment List

Appended to Permit #AP4911-4212.01

Emission Unit #	Emission Unit Description
IA1.001	MHI 520 Gallon Diesel Fuel Tank #1 – Vehicles
IA1.002	MHI 1,000 Gallon Diesel Fuel Tank #2 – Emergency Generator
IA1.003	MHI 520 Gallon Diesel Fuel Tank #3 – Fire Pump
IA1.004	MHII 1,000 Gallon Diesel Fuel Tank #4 – Emergency Generator
IA1.005	MHIII 520 Gallon Diesel Fuel Tank #5 – Fire Pump
IA1.006	MHIII 1,000 Gallon Diesel Fuel Tank #6 – Emergency Generator