

Statement of Basis

**Permit to Construct No. P-2008.0163
Project ID 62296**

**Northwest Pipeline LLC - Lava Hot Springs
Topaz, Idaho**

Facility ID 005-00028

Final

**January 3, 2020
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Permit Writer**



The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CMS	continuous monitoring systems
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
ISO	International Organization for Standardization
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
NWPL	Northwest Pipeline LLC, Lava Hot Springs Compressor Station
O&M	operation and maintenance
O ₂	oxygen
PC	permit condition
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit

PTE	potential to emit
RICE	reciprocating internal combustion engines
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SCL	significant contribution limits
SI	Spark Ignition
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T1	Tier I operating permit
TAP	toxic air pollutants
U.S.C.	United States Code
VOC	volatile organic compounds
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

Northwest Pipeline LLC, Lava Hot Springs Compressor Station (NWPL) is a natural gas transmission compressor station, and is located at 6680 E. Old Oregon Trail Road near the intersection with south Topaz Road at Lava Hot Springs, Idaho. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit oxides of nitrogen (NO_x) and carbon monoxide (CO) above the major source threshold of 100 tons-per-year, each. The facility is not a major facility for any HAP or combination of HAPs, as defined by IDAPA 58.01.01.008.10.a. As a major facility, NWPL was required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

February 6, 2009	P-2008.0163, PTC Modification due to emission source tests, Permit status (A, but will become S upon issuance of this permit)
June 28, 2002	PTC No. 005-00028, re-permitting the new Solar Centaur T-4700S gas turbine installed at the facility, in addition to permitting the existing Solar Centaur T-4002 and Solar Saturn T-1300 (S).
March 19, 2002	PTC No. 005-00028, permitting the new Solar Centaur T-4700S gas turbine, in addition to permitting the existing Solar Saturn T-1300 and Solar Centaur T-4002 gas turbines (S).
August 23, 2001	PTC No. 005-00028, permitting the new Solar Saturn T-1300 gas turbine, in addition to permitting the existing Solar Centaur T-4002 (S).
August 16, 1995	PTC No. 005-00028, permitting the Solar Centaur T-4002 gas turbine, (S).
February 13, 1995	PTC No. 005-00028, permitting a natural gas-fired turbine compressor (Solar Centaur T-4002), (S).
December 12, 1994	PTC No. 005-00028, this PTC is an amendment to PTC No. 005-00028, issued on April 25, 1994, (S).
April 25, 1994	PTC No. 005-00028, permitting of initial natural gas-fired turbine compressor (Centaur T-4002), (S).

Application Scope

This PTC is for a modification at an existing Tier I facility.

The applicant has proposed to:

- Remove Solar Turbine Saturn 10-1300 from the permit

This PTC modification only removes the Saturn 10-1300 Turbine from the permit. The Wisconsin IC engine is not included in this permit and is accounted for in the Tier 1 operating permit.

Application Chronology

September 4, 2019	DEQ received an application.
September 5, 2019	DEQ received an application fee.
October 1, 2019	DEQ determined that the application was complete.

October 10, 2019 DEQ made available the draft permit and statement of basis for peer and regional office review.

October 28, 2019 DEQ made available the draft permit and statement of basis for applicant review.

November 19 –

December 19, 2019 DEQ provided a public comment period on the proposed action.

November 20, 2019 DEQ received the permit processing fee.

December 20, 2019 DEQ provided the proposed permit and statement of basis for EPA review.

January 3, 2020 DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source ID No.	Sources	Control Equipment	Emission Point ID No.
1	<u>Emissions Unit Name:</u> Manufacturer: Solar Turbines, Inc Model: 40-4002 Manufacture Date: 1978 Modification Date: 2003 Maximum Rating: 4,107 HP @ ISO Fuel: Natural Gas only	N/A	Exit height: 31.69 ft Exit diameter: 3.51 ft Exit flow rate: 72,880 acfm Exit temperature: 771.0°F
2	<u>Emissions Unit Name:</u> Manufacturer: Solar Turbines, Inc Model: 40-4700S Manufacture Date: 2003 Modification Date: N/A Maximum Rating: 4,700 HP @ ISO Fuel: Natural Gas only	SoLo NO _x Combustor	Exit height: 41.60 ft Exit diameter: 3.41 ft Exit flow rate: 83,070 acfm Exit temperature: 819.0°F

Emissions Inventories

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit an emission inventory was developed for the two gas turbines operations at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, HAP PTE were based on emission factors from AP-42, yearly operation of 8,760 hours, and process information specific to the facility for this proposed project.

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

The following table presents the pre-project potential to emit for all criteria pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 2 PRE-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Gas Turbine T4002	0.22	0.95	0.11	0.49	21.65	94.85	19.98	87.53	0.46	2.01
Gas Turbine T4700S	0.26	1.12	0.13	0.58	3.89	17.02	4.74	20.77	0.27	1.19
Gas Turbine T1300	0.09	0.38	0.04	0.20	7.88	34.51	12.80	56.04	0.37	1.61
Pre-Project Totals	0.57	2.45	0.28	1.27	33.42	146.38	37.52	164.34	1.10	4.81

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as determined by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Gas Turbine T4002	0.22	0.95	0.11	0.49	21.65	94.85	19.98	87.53	0.46	2.01
Gas Turbine T4700S	0.26	1.12	0.13	0.58	3.89	17.02	4.74	20.77	0.27	1.19
Post Project Totals	0.48	2.07	0.24	1.07	25.54	111.87	24.72	108.30	0.73	3.20

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	0.57	2.45	0.28	1.27	33.42	146.38	37.52	164.34	1.10	4.81
Post Project Potential to Emit	0.48	2.07	0.24	1.07	25.54	111.87	24.72	108.30	0.73	3.20
Changes in Potential to Emit	-0.09	-0.38	-0.04	-0.20	-7.88	-34.51	-12.80	-56.04	-0.37	-1.61

Non-Carcinogenic TAP Emissions

All changes in emissions rates for non-carcinogenic TAP were below EL (screening emissions level) as a result of this project because the emission rates decreased due to the removal of the turbine. Therefore, modeling is not required for any non-carcinogenic TAP because none of the 24-hour average non-carcinogenic screening ELs identified in IDAPA 58.01.01.585 were exceeded.

Carcinogenic TAP Emissions

All changes in emissions rates for carcinogenic TAP were below EL (screening emissions level) as a result of this project because the emission rates decreased due to the removal of the turbine. Therefore, modeling is not required for any carcinogenic TAP because none of the annual average carcinogenic screening ELs identified in IDAPA 58.01.01.586 were exceeded.

Ambient Air Quality Impact Analyses

The estimated emission rates of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, VOC, HAP, and TAP from this project were below applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline¹. Refer to the Emissions Inventories section for additional information concerning the emission inventories.

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP).

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Bannock County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

- A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.
- SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.
- SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.
- UNK = Class is unknown.

For All Other Pollutants:

- A = Use when permitted emissions of a pollutant are > 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.
- UNK = Class is unknown.

¹ Criteria pollutant thresholds in Table 2, State of Idaho Guideline for Performing Air Quality Impact Analyses, Doc ID AQ-011, September 2013.

Table 5 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	2.07	100	B
PM ₁₀	2.07	100	B
PM _{2.5}	2.07	100	B
SO ₂	1.07	100	B
NO _x	111.87	100	A
CO	108.3	100	A
VOC	3.2	100	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the modified emission sources. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4.

Fuel Burning Equipment – Particulate Matter (IDAPA 58.01.01.675)

IDAPA 58.01.01.676..... Fuel Burning Equipment – Particulate Matter

The purpose of Sections 675 through 681 of this Rule is to establish particulate matter emission standards for fuel burning equipment. IDAPA 58.01.01.006.45 defines fuel-burning equipment as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This project involves gas turbines that produce power. However, this is accomplished by using the products of combustion to power the shaft of the gas turbine which is then used to drive the natural gas compressor shaft. Therefore, this is not “indirect heat transfer” and IDAPA 58.01.01.676 does not apply.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility have a potential to emit greater than 100 tons per year for NO_x and CO as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, this facility is classified as a major facility, as defined in IDAPA 58.01.01.008.10.

The PTE for each HAP is less than 10 T/yr and the PTE for all HAP combined is less than 25 T/yr. Therefore, this facility is not a HAP Major Source subject to Tier I requirements.

Therefore, it needs to be determined if this facility is a criteria pollutant Major Source. As discussed previously the Northwest Pipeline LLC – Lava Hot Springs facility is located in Bannock County, which is designated as

unclassifiable/attainment for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, and Ozone for federal and state criteria air pollutants. Therefore, the following table compares the post-project facility-wide annual PTE for all criteria pollutants emitted by the source to the applicable criteria pollutant Major Source thresholds in order to determine if the facility is a criteria pollutant Major Source.

Table 6 PTE FOR REGULATED AIR POLLUTANTS COMPARED TO THE MAJOR SOURCE THRESHOLDS

Regulated Air Pollutants	PTE (T/yr)	Major Source Threshold (T/yr)	Exceeds the Major Source Threshold?
PM ₁₀	2.07	100	No
PM _{2.5}	2.07	100	No
SO ₂	1.07	100	No
NO _x	111.87	100	Yes
CO	108.3	100	Yes
VOC	3.2	100	No
CO _{2e}	33,291	100,000	No

As presented in the preceding table the PTE for criteria pollutants NO_x and CO are greater than 100 T/yr. Therefore, this facility is a criteria pollutant Major Source subject to Tier I requirements.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

40 CFR 60 Subpart GG..... Standards of Performance for Stationary Gas Turbines.

§ 60.330..... Applicability and designation of affected facility

(a) *The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on lower heating value of the fuel fired.*

(b) *Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraph (e) and (j) of 40 CFR 60.322.*

Per the applicant both turbines at the NWPL are subject to this subpart, as each of the gas turbines have heat input ratings greater than 10 million Btu per hour and were constructed after October 3, 1977.

§ 60.332.....Standard for Nitrogen Oxide

(a) *On and after the date on which the performance test required by §60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.*

(c) *Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.*

Per the applicant the approximate heat input of the gas turbines at this facility are 32.76 MMBtu/hr (calculated as Heat Input = 94.84 T-NO_x/yr x 2,000 lb/T ÷ 0.661 lb/MMBtu ÷ 8,760 hr/yr) for the Solar Centaur T4002 and 38.86 MMBtu/hr (calculated as Heat Input = 17.02 T-NO_x/yr x 2,000 lb/T ÷ 0.100 lb/MMBtu ÷ 8,760 hr/yr) for the Solar Centaur T4700S. Note: These values are taken from the Solar Turbines Predicted Emissions Performance data supplied with this application.

(a)(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \times (14.4 \div Y) + F$$

Where:

STD = allowable ISO corrected (if required as given in §60.335(b)(1)) NO_x emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section. For this project per the Applicant F was assumed to 0% for all three gas turbines.

With the following conversions:

$$1 \text{ Btu} = 1.055 \text{ kJ}$$

$$1 \text{ hp} = 745.699 \text{ W}$$

Calculated NO_x emissions limit for the T4002 Gas Turbine:

$$STD = 0.0150 \times (14.4 \div Y)$$

$$STD = 0.0150 \times [14.4 \div (9,134 \text{ Btu/hp-hr} \times 1.055 \text{ kJ/Btu} \div 745.699 \text{ W/hp})]$$

$$STD = \mathbf{0.0167\% @ 15\% O_2}$$

This requirement is assured by Permit Condition 2.5.

Calculated NO_x emissions limit for the T4700 Gas Turbine:

$$STD = 0.0150 \times (14.4 \div Y)$$

$$STD = 0.0150 \times [14.4 \div (9,222 \text{ Btu/hp-hr} \times 1.055 \text{ kJ/Btu} \div 745.699 \text{ W/hp})]$$

$$STD = \mathbf{0.0166\% @ 15\% O_2}$$

This requirement is assured by Permit Condition 2.6.

§ 60.333.....Standard for Sulfur Dioxide

On and after the date on which the performance test required to be conducted by §60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmw).

This facility has previously chosen to comply with the second requirement of combusting fuel with a total sulfur in of less than 0.8 percent by weight. This requirement is assured by new Permit Condition 2.8 (old Permit Condition 2.9).

§ 60.334.....Monitoring of Operations

NO_x Emissions Monitoring:

Section (a) states that except as provided in paragraph (b) of this section, the owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water or steam injection to control NO_x emissions shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine.

Section (c) goes on to state that for any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_x emissions, the owner or operator may, but is not required to, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of this section. Also, if the owner or operator has previously submitted and received EPA, State, or local permitting authority approval of a procedure for monitoring compliance with the applicable NO_x emission limit under §60.332, that approved procedure may continue to be used.

The two gas turbines located at this facility do not use water or steam injection to control NO_x emissions. Therefore, this facility does not have to monitor NO_x emissions from the three gas turbines involved with this project.

SO_x Emissions Monitoring:

Section (h) states that the owner or operator of any stationary gas turbine subject to the provisions of this subpart: (1) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in paragraph (h)(3) of this section. The sulfur content of the fuel must be determined using total sulfur methods described in §60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see §60.17), which measure the major sulfur compounds may be used.

Section (h)(3)(i) reads as follows. The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(3) Notwithstanding the provisions of paragraph (h)(1) of this section, the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

This requirement is assured by new Permit Condition 2.11 (which replaced old Permit Condition 2.12).

§ 60.335.....Test Methods and Procedures

Section (a) states that the owner or operator shall conduct the performance tests required in §60.8, using either:

(1) EPA Method 20,

(2) ASTM D6522-00 (incorporated by reference, see §60.17), or

(3) EPA Method 7E and either EPA Method 3 or 3A in appendix A to this part, to determine NO_x and diluent concentration.

This requirement is assured by new Permit Condition 2.13 (old Permit Condition 2.14).

40 CFR 60 Subpart KKKK.....Standards of Performance for Stationary Combustion Turbines

§ 60.4300..... What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

§ 60.4305.....Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

Per the applicant both turbines at the NWPL are not subject to this subpart, as each of the gas turbines were constructed before February 18, 2005 and aren't going under any modification or reconstruction.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT/GACT Applicability (40 CFR 63)

40 CFR 63 Subpart HHH.....National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities

§ 63.1270 *Applicability and designation of affected source.*

(a) This subpart applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. Emissions for major source determination purposes can be estimated using the maximum natural gas throughput calculated in either paragraph (a)(1) or (2) of this section and paragraphs (a)(3) and (4) of this section. As an alternative to calculating the maximum natural gas throughput, the owner or operator of a new or existing source may use the facility design maximum natural gas throughput to estimate the maximum potential emissions. Other means to determine the facility's major source status are allowed, provided the information is documented and recorded to the Administrator's satisfaction. A compressor station that transports natural gas prior to the point of custody transfer or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage source category. A facility that is determined to be an area source, but subsequently increases its emissions or its potential to emit above the major source levels (without first obtaining and complying with other limitations that keep its potential to emit HAP below major source levels), and becomes a major source, must comply thereafter with all applicable provisions of this subpart starting on the applicable compliance date specified in paragraph (d) of this section. Nothing in this paragraph is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

Subpart HHH (§ 63.1270 et. seq.) sets standards for glycol dehydrations at sources which are a major source of HAPs. Lava Hot Springs Station is not a major source of HAPs and does not contain a glycol dehydrator; therefore, Subpart HHH does not apply to the facility.

40 CFR 63 Subpart YYYYY.....National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

§ 63.6080.....What is the purpose of subpart YYYYY?

Subpart YYYYY establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

Subpart YYYYY establishes national emission limitations and operating limitations for HAPs emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations. Lava Hot Springs Station is not a major source of HAPs (see Appendix A for HAP emissions); therefore, Subpart YYYYY does not apply to the facility.

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Old Table 1.1 from PTC No. 005-00028 has been updated to reflect the current names and ratings of the equipment at the facility.

Old Permit Condition 2.1 from PTC No. 005-00028 has been updated to reflect the current process description for the equipment at this facility.

Old Permit Condition 2.2 from PTC No. 005-00028 has been updated with new Table 2.1 to reflect the current names of the emissions units, the emissions control devices, and the emissions point data for these emissions units.

Old Permit Condition 2.3 from PTC No. 005-00028 has been updated to reflect the correct emissions units and corresponding limits for the two gas turbines as proposed by the Applicant.

Old Permit Condition 2.7 from PTC No. 005-00028 has been removed because the T1300 gas turbine has been removed from the permit.

Previous Permit Conditions 2.8 through 2.18 from PTC No. 005-00028 have all been renumbered, decreased by 1, to new Permit Conditions 2.7 through 2.17 and address just the two gas turbines.

Old Permit Condition 2.19 from PTC No. 005-00028 has been removed because the facility has already submitted an application for an original Tier 1 operating permit.

PUBLIC REVIEW

Public Comment Opportunity

A public comment period was required and made available to the public in accordance with IDAPA 58.01.01.209.05.b. During this time, comments were not submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

APPENDIX A – EMISSIONS INVENTORIES



DEQ AIR QUALITY PROGRAM
 1410 N. Hillen, Boise, ID 83706
 For assistance, call the
 Air Permit Hotline - 1-877-SPERMIT

PERMIT TO CONSTRUCT APPLICATION
 Revision 3
 4/5/2007

Please see instructions on page 2 before filing out the form.

Company Name: Northwest Pipeline LLC

Facility Name: Lava Hot Springs Compressor Station

Facility ID No.: 005-20028

Brief Project Description: Permit to Construct modification due to the removal of a turbine from the permit

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - POINT SOURCES

1. Emissions units	2. Stack ID	3.											
		PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
		lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
		Point Source(s)											
Solar Centaur 40-4002 Turbine	T4002	0.22	0.96	0.11	0.48	21.65	94.83	19.97	87.47	0.46	2.01	N/A	N/A
Solar Centaur 40-4700S Turbine	T4700S	0.26	1.14	0.13	0.57	3.89	17.04	4.73	20.72	0.27	1.19	N/A	N/A
Back-up Air Compressor		(Insignificant Emission Unit)											
Fuel Gas Heater		(Insignificant Emission Unit)											
Space Heaters		(Insignificant Emission Unit)											
Lube Oil Tanks		(Insignificant Emission Unit)											
Used Oil Tanks		(Insignificant Emission Unit)											
Natural Gas Pipeline & Fuel System		(Insignificant Emission Unit)											
Total		0.48	2.10	0.24	1.05	25.54	111.87	24.70	108.19	0.73	3.20		

APPENDIX B – FACILITY DRAFT COMMENTS

No comments were received from the facility.

APPENDIX C – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Northwest Pipeline LLC - Lava Hot
Address: 295 Chipeta Way
City: Salt Lake City
State: Utah
Zip Code: 84108
Facility Contact: Derek Forsberg
Title: Environmental Specialist
AIRS No.: 005-00028

N Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

Y Did this permit require engineering analysis? Y/N

N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	34.51	-34.5
SO ₂	0.0	0.2	-0.2
CO	0.0	56.04	-56.0
PM10	0.0	0.38	-0.4
VOC	0.0	1.61	-1.6
Total:	0.0	92.74	-92.7
Fee Due	\$ 1,000.00		

Comments: