

# **Statement of Basis**

**Permit to Construct No. P-2019.0045  
Project ID 62285**

**Gas Transmission Northwest, LLC - Compressor Station 05, Athol  
Athol, Idaho**

**Facility ID 055-00033**

**Final**

**September 4, 2019**  
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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

Btu	British thermal units
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
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 <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
U.S.C.	United States Code
VOC	volatile organic compounds

## **FACILITY INFORMATION**

### ***Description***

Gas Transmission Northwest, LLC – Compressor Station 05, Athol operates a compressor station located along a natural gas pipeline which is designed for remote unattended operation. The compressor station consists of two turbine-driven compressors that move the natural gas through the pipeline. The turbines use the natural gas in the pipeline as fuel and provide energy for the compressors to induce the flow of the gas. The turbines are referenced as Unit 5B and Unit 5C. Unit 5B is a Cooper-Rolls Coberra 125 gas fired turbine. Unit 5C is a Cooper- Rolls Coberra 6000 gas turbine with dry low emissions combustor.

### ***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).

March 20, 1992	PTC No. 0860-0033, Then known as Pacific Gas Transmission Company, issued an initial PTC, permit status (S)
October 7, 1992	PTC No. 055-00033, Permit modification for the construction of Unit 5C and number changed, permit status (S)
December 27, 1994	PTC No. 055-00033, Permit amended for the installation of DLE combustor on Unit 5C, permit status (S)
February 21, 1997	PTC No. 055-00033, Permit amended for monitoring via fuel consumption, permit status (S)
June 14, 2000	PTC No. P-000108, Permit amended, permit status (S by this permit action)

### ***Application Scope***

This PTC is a revision of an existing PTC. The facility is changing its name from PG&E Gas Transmission - Northwest to Gas Transmission Northwest, LLC – Compressor Station 05, Athol.

### ***Application Chronology***

August 13, 2019	DEQ received an application.
August 28, 2019	DEQ made available the draft permit and statement of basis for regional office review.

## **TECHNICAL ANALYSIS**

The only change is to the facility is its name. The emission inventory and regulatory review does not change from that included in the June 14, 2000, statement of basis that supported the issuance of the existing permit that is now being revised.

### ***Permit Conditions Review***

The following PTC conditions were revised. Even though the PTC conditions are revised they do not change from what is currently in the Tier I permit. The following permit revisions are not substantive changes.

Existing Permit Condition 1.1

“Oxides of nitrogen (NO<sub>x</sub>) emissions from Unit 3B equipped with a dry low emissions (DLE) combustor shall not exceed forty-two parts per million by volume (42 ppmvd), corrected to 15% oxygen and on a dry basis, annual average; nor shall NO<sub>x</sub> emissions exceed one hundred ninety-seven tons per any consecutive twelve-month period (197 T/yr).”

This permit condition needed clarification of the form of the standard for the 42 ppm emission limit. This limit is not an NSPS emission standard because it is an annual average standard. The 42 ppm limit is stated to be parts per million by volume, dry basis at 15% oxygen, at International Organization for Standardization (ISO) standard conditions, as determined by EPA Method 20 or DEQ approved alternative (consistent with the exiting Tier I operating permit condition). This permit condition has been revised to the following two permit conditions:

2.3 Annual average NO<sub>x</sub> emissions from Unit 3B shall not exceed 42 ppm by volume corrected to 15% O<sub>2</sub> on a dry ISO standard conditions basis as determined by EPA Method 20 or DEQ approved alternative.

2.4 NO<sub>x</sub> emissions from Unit 3B shall not exceed 197 tons per any consecutive 12-month period (T/yr).

#### Existing Permit Condition 1.2

This permit condition includes the visibility standard of Section 625, it is now included in the Tier I operating permit general provisions.

#### Existing Permit Condition 2.1

“No fuel containing sulfur in excess of 0.8 percent by weight shall be burned in the gas turbine in accordance with 40 CFR 60.333(b).”

This permit condition has been revised as it appears in the current Tier I operating permit:

No fuel containing sulfur in excess of 0.8% by weight shall be burned in Unit 3B.

The NSPS provides for two options for compliance with standards for SO<sub>2</sub>, one of which is to limit sulfur to 0.8%. In affect the underlying PTC selected which option the source must comply with, as opposed to be strictly “in accordance with 40 CFR 60.333(b)”. Therefore the “in accordance with 40 CFR 60.333(b)” has been deleted from this permit to construct and matches the current Tier I operating permit.

#### Existing Permit Condition 3.1

This permit condition required an initial source test within 180 days of initial startup for NO<sub>x</sub> and SO<sub>2</sub>. That requirement is an obsolete permit condition from nearly two decades ago. It is not repeated in the revised permit.

#### Existing Permit Condition 3.2

“ The permittee shall monitor and record the amount of natural gas combusted in Unit 3B on a monthly and annually basis. The quantity of natural gas combusted shall be recorded as standard cubic feet and kept in a log at the facility for the most recent two (2) year period. The log shall be available to DEQ representatives upon request.”

This permit condition has been revised to the following (as it appears in the existing Tier I permit):

The permittee shall monitor and record the natural gas throughput to Unit 3B monthly and each consecutive 12-month period. Throughput shall be measured in standard cubic feet.

These changes were made so that compliance can be determined each month as opposed to once annually and so that the record retention duration of 2 years does not conflict with the 5 year record retention requirement for Tier I sources.

#### Existing Permit Condition 3.3

“The Permittee shall monitor and record the sulfur content of the fuel being fired in the gas turbines in accordance with the approved custom fuel monitoring schedule granted to the Permittee by the Environmental Protection Agency (EPA). A copy of the semi-annual report required by EPA shall also be sent to DEQ to demonstrate compliance with 40 CFR 60.333(b) and Section 2.1 of this permit.”

This permit condition has been revised to the following (as it appears in the existing Tier I permit):

In accordance with 40 CFR 60.334(h)(3)(i), the permittee shall maintain 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

In accordance with 40 CFR 60.334(h)(3)(i) use representative fuel sampling data which show the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf.

The applicable NSPS sulfur content monitoring requirement is included in this permit condition. The permittee shall maintain 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. Assuring that the sulfur content does not exceed 20 grains/100 scf assures the concentration of sulfur does not exceed 0.8% by weight. 0.8% by weight sulfur is equivalent to 246.4 grains/100 scf (natural gas has a density of approximately 4.4 pounds per 100 cubic foot).

As an alternative, in accordance with the NSPS the permittee may conduct representative sampling to assure sulfur does not exceed 20.0 grains/100 scf.

Existing Permit Conditions 4.1 and 4.2

These permit condition include protocol and report requirements for the initial test. These conditions are obsolete and have been removed from the permit.

Existing Permit Condition 4.3 and 4.4 include excess emissions reporting requirements. These are included in the Tier I operating Permit Condition 3.10 through 3.14 and Table 3.2 (General Provisions for NSPS sources).

All other permit conditions remain unchanged.

## **PUBLIC REVIEW**

### ***Public Comment Opportunity***

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04. There is not an increase in allowable emissions.

### ***Public Comment Period***

A public comment period is not required for this permit revision.

### ***Public Hearing***

A public hearing is not required for this permit revision.