



DEPARTMENT OF
ECOLOGY
State of Washington

WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 N. MONROE ST.
SPOKANE, WASHINGTON 99205-1295

PROPOSED STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER **Draft**
GAS TRANSMISSION NORTHWEST CORPORATION
COMPRESSOR STATION #7
NEAR
STARBUCK, WASHINGTON

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LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
E.I.T.	Engineer in Training
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
ft ³	Cubic foot
gr/dscf	Grains per dry standard cubic foot
hr	Hour
lb	Pound
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
NOC	Notice of Construction
NO _x	Oxides of Nitrogen
NSPS	New Source Performance Standard
O ₂	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM-10	Particulate Matter with aerodynamic diameter ≤ 10 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
T	Temperature
TAP	Toxic Air Pollutant
TPD	Tons Per Day
TPY	Tons Per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
w%	Percentage by Weight
yr	Year

Natural Gas Combustion Turbines – Annual Potential To Emit in Tons Per Year (tpy)¹

Source	Capacity		Annual Emissions (tpy)							
			NO _x	CO	CO _{2e}	PM ₁₀ /PM _{2.5}	VOC	SO ₂	CH ₂ O	Total HAP
Unit 7D Solar Titan 130 Turbine ³	22,205	hp (32 °F)	44.53	48.26	96,418	5.43	5.89	0.59	0.58	0.85
Unit 7E Solar Titan 130 Turbine ³	22,205	hp (32 °F)	44.53	48.26	96,418	5.43	5.89	0.59	0.58	0.85
IA - Fuel Gas Heater	2.00	MMBtu/hr	0.86	0.72	1,026	0.07	0.05	0.006	0.0006	0.02
IA - Space Heaters	0.63	MMBtu/hr	0.27	0.23	323	0.02	0.01	0.002	0.0002	0.005
AUX GEN2 Caterpillar G3512 Emergency Generator	13.05	MMBtu/hr	2.01	4.03	382	0.03	1.01	0.002	0.2618	0.236
Equipment Leaks (fugitive emissions) ¹					3,833		1.39			
Venting					15,193		5.52			
Proposed Facility PTE²			92.20	101.49	209,759	10.99	18.37	1.19	1.43	1.95

1. Fugitive emissions are not part of PSD applicability analysis.

2. Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).

3. Turbine emissions based on 150 Start up / shut down cycles per year, 18 low-load hours per year and 50 low-temperature hours per year.

1.0 Introduction

This document sets forth the legal and factual basis for the permit conditions in a Final AOP issued by the State of Washington Department of Ecology for a natural gas compressor station located near the town of Starbuck, Washington in Walla Walla County. This document is called a “statement of basis” and is required by Washington State regulations [chapter 173-401 WAC]. A statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

2.0 Facility Identifying Information

Company Name ----- Gas Transmission Northwest Corporation
 Facility Name ----- Compressor Station #7
 Unified Business Identification Number----- 409-012-561
 Facility Address ----- Barstow Road, 10 miles south of Ayer Junction, near Starbuck, WA
 Responsible Official ----- Dale Bromaghin, Manager
 Parent Company ----- TransCanada Pipelines Ltd.
 Mailing Address ----- 201 West North River Drive, Suite 505, Spokane WA, 99201
 Facility Contact-----Melinda Holdsworth
 Facility Contact Phone Number----- (509) 534-0657
 AQPID Number ----- A0710026

3.0 Basis for Title V Applicability

¹ Annual potential to emit values as submitted by the permittee as part of the AOP application.

Gas Transmission Northwest Corporation, Compressor Station #7 – Starbuck, is subject to Title V, Air Operating Permit Regulations, due to the emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) in excess of 100 tons per year. WAC 173-401-200(17)(b) identifies any source that directly emits or has the potential to emit one hundred tpy or more of any air pollutant as a major source. Major sources are required to obtain Title V permits under 173-401-300(1)(a)(i).

4.0 Attainment Classification

The facility is located in an area that is classified as attainment for all criteria pollutants as of November 2007.

5.0 Title V Facility Timeline

- 5.1** December 9, 1994 Source Initial Notification of Inclusion in Title V AOP Program
- 5.2** July 1, 1997 ----- Original Title V AOP is issued (Order No. DE 97AQ-E129)
- 5.3** July 1, 2002 ----- Order No. DE 97AQ-E129 expires
- 5.4** December 16, 2002 ----- Order No. 02AQER-5105 issued
- 5.5** November 25, 2003 Request for Administrative Amendment Received by Ecology
- 5.6** December 3, 2003 ----- Order No. 02AQER-5105, 1st Revision Issued
- 5.7** January 1, 2008 ----- Order No. 02AQER-5105 expires
- 5.8** December 26, 2007 ----- Order 07AQ-E238 issued
- 5.9** January 1, 2008 ----- Order No. 07AQ-E238 effective
- 5.10** January 1, 2013 ----- Order No. 07AQ-E238 expires
- 5.11** August 14, 2014 ----- Order No. 14AQ-E545 issued
- 5.12** August 14, 2014 ----- Order No. 14AQ-E545 effective
- 5.13** August 13, 2019 ----- Order No. 14AQ-E545 expires

6.0 Company Overview and Facility Description

6.1 Gas Transmission Northwest (GTN) is a natural gas transmission company operating a pipeline from the Canadian border through the states of Idaho, Washington, and Oregon to California. GTN's dual mainline is 612.5 miles in length and includes 638.9 miles of 36-inch and 589.4 miles of 42-inch pipeline. Energy to move the gas is provided by 12 compressor stations located along the pipeline all of which are designed for remote, unattended operation from GTN's Gas Control Center. The facility is in Walla Walla County, north of Barstow Road, in the NW1/4 of the SW1/4, Section 10, T12N, R36E.

The function of a natural gas compressor station is to produce gas horsepower, i.e., impart energy to the stream of gas in the pipeline in order to induce flow. The horsepower requirement at a station can vary frequently due to factors such as customer demand, weather conditions, availability of compressor units at adjacent stations, downstream pressure requirements, and receiving pressures and volumes.

Consequently, normal operation includes operation of units individually or together.

The major sources of air emissions at Station 7 are the three gas turbine units, Unit 7C, 7D and Unit 7E. Through valving, natural gas can be routed through any of the compressors. In addition, the station can be bypassed entirely. The other stationary fuel combustion units at Station 7 include boilers used for domestic hot water or space heating and an emergency auxiliary power generator used exclusively for backup power in the event of failure of the outside electrical power supply.

- 6.1.1** *General Facility Process Description* – General process facilities (Section 2.1 of the AOP) include plant-wide emissions, such as fugitive dust from vehicle/equipment travel on-site, vented natural gas from piping and equipment, and emissions related to plant-wide support services such as the boilers for space heating, the emergency generator, metal cutting and welding, and other maintenance, housekeeping and miscellaneous insignificant emissions activities. General facility emission limits, work practice standards and order conditions also apply to Unit 7C, 7D, and Unit 7E unless otherwise noted.
- 6.1.2** *Removed - Compressor Unit 7B* – Unit 7B was a Rolls Royce Avon 1533-76G gas turbine, 14,300 horsepower (ISO), in operation since 1970. Since Unit 7B was installed prior to 1977, it is therefore not subject to the underlying regulatory requirements of New Source Performance Standards (NSPS) or Prevention of Significant Deterioration (PSD). *Updated* – Unit 7B was removed with Order Number 21AQ-E021, Issued 3/8/2021. Information regarding PSD and any requirements therein are documented in the Technical Support Document for Order Number 21AQ-E021.
- 6.1.3** *Compressor Unit 7C* – Unit 7C is a Rolls Royce RB-211 gas turbine, 39,700 horsepower (ISO), in operation since 1993. Unit 7C is subject to 40 CFR 60, Subpart GG – Standards of Performance for Stationary Gas Turbines. A PSD review was done prior to the installation and operation of Unit 7C, and BACT was determined to be retrofit of dry low NO_x combustors when commercially available. Unit 7C is currently operating with a production DLE combustor and is subject to design changes to improve durability, emissions characteristics, and reliability. Verifiable emission factors with fuel consumption, operating hours, and periodic source tests are used to monitor NO_x emissions from Unit 7C.
- 6.1.4** *Compressor Units 7D and 7E* – Units 7D and 7E are Solar Titan 130 gas turbines, 22,605 horsepower, dry-low NO_x, in operation since 2021. PSD avoidance is a voluntary limit to emissions and to avoid PSD limits are determined for each operating mode: Normal Load and Start-up/Shutdown. Order Number 21AQ-E021, Issued 3/8/2021 details each condition.
- 6.1.5** *Fuel Specifications* – The pipeline-quality natural gas received from Canada and transported by GTN has been processed and stripped of impurities (e.g., hydrogen sulfide) prior to entering the United States.

The table below presents a typical fuel analysis for natural gas transmitted through the GTN pipeline system. This pipeline-quality gas is also used to power the gas turbine-driven compressors. Because essentially all sulfur and other impurities are removed from the pipeline gas in Canada, emissions of sulfur compounds are not generated in significant amounts when the gas is burned as fuel by the pipeline gas turbines. Fuel-bound nitrogen rarely exists in natural gas and then only as an impurity.

After the natural gas is removed from the ground, the longer chain hydrocarbon impurities condense due to their higher dew point and are extracted at Canadian gas processing facilities. GTN's current Federal Energy Regulatory Commission (FERC) Gas Tariff, gas delivered to GTN for transport specifies that natural gas.

- "...must be commercially free from sand, dust, gums, crude oil, impurities, and other objectionable substances which may be injurious to pipelines or which may interfere with its transmission through pipelines or its commercial utilization..."
- "...must not have a hydrocarbon dew point in excess of fifteen degrees Fahrenheit at pressures up to 800 psig."
- "...must not contain more than 10 grains of total sulfur per 100 standard cubic feet.

Representative Fuel Analysis¹

Constituent	
Hydrogen Sulfide	4.2 ppm
Total Sulfur	0.26 grains/100scf
Methane	88.046 w%
Ethane	5.202 w%
Propane	0.232 w%
IsoButane	0.027 w%
n-Butane	0.037 w%

Calculated specific gravity (Air = 1): 0.590
 Calculated specific volume (ft³/lb): 22.21
 Calculated gross heating value (Btu/ft³): 1,002
 Calculated lower heating value (Btu/ft³): 903

7.0 Facility Emission Units/Processes

- 7.1 Facility Wide (Section 2.1 in AOP)
- 7.2 Compressor Unit 7D and 7E (Section 2.2 in AOP)
- 7.3 Compressor Unit 7C (Section 2.3 in AOP)
- 7.4 Auxiliary Generator (Section 2.4 in AOP)

¹ Source: Zalco Laboratories, Inc., July 3, 2006.

8.0 Insignificant Emission Units and Activities

- 8.1** The permittee submitted a list of all emission units designated as categorically insignificant in WAC 173-401-532.¹
- 8.2** The following insignificant emission units were proposed by the permittee in the Title V Renewal Application materials submitted to Ecology and have been found by Ecology to meet the requirements outlined in WAC 173-401-533 as insignificant on the basis of size or production rate.
- 8.2.1** Two natural gas boilers for space and water heating (WAC 173-401-533(2)(e), rated at 2.00 MM BTU/hr and 39,999 BTU/hr.
- 8.3** The following emission units and processes were proposed by the permittee in the Title V Renewal Application materials submitted to Ecology as insignificant. Ecology has determined that the units cannot be designated as insignificant emission units under Title V since each of the units has specific requirements that are applicable and include associated monitoring, recordkeeping, and reporting requirements. Insignificant emission units are exempt from monitoring, recordkeeping, and reporting requirements under Title V.
- 8.3.1** Sources of fugitive dust are subject to the requirements of Section 2.1 of the AOP. The auxiliary power generator is permitted under Notice of Construction Approval Order No. 01AQER-3222, and does not qualify as an insignificant emission unit.

9.0 Comments and Corresponding Responses

- 9.1** Comments received during the public comment period and EPA review period are on file at Ecology's Eastern Region Office in Spokane, along with Ecology's response to the comments.

10.0 Applicable and Inapplicable Requirements Determinations/Explanations

- 10.1** Initial or one-time NOC requirements that have not been included in the AOP as ongoing applicable requirements.
- 10.1.1** Orders No. DE 99AQ-E108, Approval Condition 3.2 and No. PSD-92-02 Amendment #2, Approval Condition 1, Lines 63-64, Within 90 days of placing the upgraded Unit 7C online for service source testing must be conducted for carbon monoxide (using RM 10) and nitrogen oxides (using RM 20).
This testing occurred on August 11, 2001. The test report was received by Ecology on September 3, 2001 and is located in the facility source testing file at Ecology's Eastern Regional Office in Spokane, Washington.
- 10.1.2** Order No. PSD-92-02, Approval Conditions 3, 4, and 11, Order No. PSD-92-02 First Amendment, Approval Condition 9, Order No. PSD-92-02, Second Amendment, Approval Condition 5, Maintenance and operation manuals for all equipment that has the potential to affect

¹ The permittee is not required to list specific units designated categorically exempt in the application (WAC 173-401-532(1)).

emissions to the atmosphere must be developed.

No record was found in the facility files documenting the completion of the O&M manuals. However, no initial reporting requirement was included in the PSD permit.

- 10.1.3** Order No. PSD-92-02, Second Amendment, Approval Condition 7, Order No. PSD-92-02 shall become void if construction of the project is not commenced within 18 months of issuance of the final approval Order.
No record was found in the facility files documenting the date of project commencement. However, the PSD permit did not require this notification.
- 10.1.4** Order No. PSD-92-02, Second Amendment, Approval Condition 9, The permittee must notify Ecology in writing at least 30 days prior to the startup of Unit 7C.
This notification was received by Ecology on May 17, 1999 and the correspondence is located in the facility general file at Ecology's Eastern Regional Office in Spokane, Washington.
- 10.1.5** Order No. PSD-92-02, Approval Condition 1 and Order No. PSD-92-02 First Amendment, Approval Condition 1, NO_x emissions from Unit 7C shall be limited to 200 ppm and 924 tons per year.
This requirement was included in the original PSD permit to apply until installation of the dry low NO_x combustor. These limits were subsequently superseded by lower limits.
- 10.1.6** Order No. PSD-92-02, Approval Condition 2, Order No. PSD-92-02 First Amendment, Approval Condition 2, NO_x emissions from Unit 7C shall be limited to 205 tons per year and 42 ppm after July 1, 1995.
This limit was superseded by a new limit in the second amendment to the PSD permit. Unit 7C underwent PSD permitting to amend the permit and allow for an increase in horsepower. The new limit as included in the second amendment to the permit is 236 tons per year.
- 10.1.7** Order No. PSD-92-02, Approval Condition 2, Order No. PSD-92-02 First Amendment, Approval Condition 2, The permittee shall install a dry low NO_x combustor no later than January 1, 1995.
No record was located in the facility files documenting the date that the dry low NO_x combustor was installed. However, the subsequent performance testing was conducted on May 23, 1995, and the unit was found to be in compliance with emission limitations.
- 10.1.8** Order No. PSD-92-02, Approval Condition 7, Performance testing for NO_x and CO shall be conducted on Unit 7C after July 1, 1995.
Performance testing for NO_x and CO was conducted on Unit 7C on both May 23, 1995 and August 11, 1999.
- 10.1.9** Order No. PSD-92-02, Approval Condition 3, Order No. PSD-92-02, Approval Condition 3, CO emissions from Unit 7C shall be limited to 90 ppm and 268 tons per year.
This requirement was included in the original PSD permit to apply until

installation of the dry low NO_x combustor. These limits were subsequently superseded by lower limits.

- 10.1.10** Order No. PSD-92-02, Approval Condition 4, Order No. PSD-92-02, Approval Condition 4, CO emissions from Unit 7C shall be limited to 150 tons per year after July 1, 1995.
This limit was superseded by a new limit in the second amendment to the PSD permit. Unit 7C underwent PSD permitting to amend the permit and allow for an increase in horsepower. The new limit as included in the second amendment to the permit is 173 tons per year.
- 10.1.11** Order No. PSD-92-02, Approval Conditions 3, 4, and 6, Order No. PSD-92-02 First Amendment, Approval Condition 5, Initial compliance testing for CO and NO_x shall be performed on Unit 7C not later than 60 days after achieving maximum production.
The initial performance testing occurred on June 4, 1993. A copy of the test report is located in the facility test report file at Ecology's Eastern Regional Office in Spokane, Washington.
- 10.1.12** Order No. PSD-92-02, Approval Conditions 3 and 4, Order No. PSD-92-02, First Amendment, Approval Condition 2, Compliance testing shall be conducted annually for CO and NO_x emissions.
The annual testing requirement was subsequently replaced by alternate testing frequency requirements in amendments to the PSD permit.
- 10.1.13** Order No. PSD-92-02, Approval Condition 9, Order No. PSD-92-02 First Amendment, Approval Condition 7, By January 1, 1995, the permittee shall install a Continuous Emission Monitoring System for NO_x.
The EPA issued an alternative monitoring schedule for all Pacific Gas Transmission Company compressor stations in Oregon, Washington and Idaho on May 7, 1996. NO_x monitoring was waived for natural gas combustion.
- 10.1.14** Order No. PSD-92-02, Approval Condition 10, Order No. PSD-92-02 First Amendment, Approval Condition 8, Required monitoring data shall be submitted to Ecology at least monthly.
An alternate reporting schedule was included in subsequent amendments to the PSD permit.
- 10.1.15** Order No. PSD-92-02, Approval Condition 15, Order No. PSD-92-02 First Amendment, Approval Condition 13, The permittee shall notify Ecology at least 30 days prior to the startup of Unit 7C.
While no correspondence was located that specifically identifies the startup date of Unit 7C, the initial source testing report submitted to Ecology on August 2, 1993 implies that the unit was started up prior to this date.
- 10.1.16** Order No. PSD-92-02, Approval Condition 16 Order No. PSD-92-02 First Amendment, Approval Condition 14, The (pre)existing unit 7A shall be removed from service within 60 days of the startup of Unit 7C.
No correspondence was located documenting the date that unit 7A was removed from service. However, it is clear from several documents

including the AOP renewal application that the unit 7A has been removed permanently from service.

- 10.1.17** Order No. PSD-92-02, Approval Condition 16 Order No. PSD-92-02 2nd Amendment, issued January 7, 1999. Condition 5 states that “Maintenance and operation manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed and followed.” It is not clear whether this refers only to NOx emissions, or emissions of any regulated air pollutant. It is also not clear if “all equipment” refers to all equipment related to Unit 7C, all equipment onsite, or all equipment in place when the permit was written.

The order approved the installation of Unit 7C. There are no references to any other emission units. Absent any evidence to the contrary, this Air Operating Permit assumes that the references to “equipment” mean equipment directly related to turbine 7C.

- 10.1.18** 40 CFR 60.7(a)(3), A notification of the actual date of startup of the affected facility shall be submitted postmarked within 15 days after such date.

Notification documenting the original date of startup could not be located within the facility files at Ecology’s Eastern Regional Office in Spokane.

- 10.1.19** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 6.1, The permittee shall provide written notification to Ecology of completion of the O&M manual for the auxiliary generator within 60 days of installation of the unit.

Correspondence received December 12, 2001 provides notification to Ecology that the O&M manual for the unit is complete.

- 10.1.20** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 5, The permittee shall develop an O&M manual for the auxiliary generator. *Correspondence received December 12, 2001 provides notification to Ecology that the O&M manual for the unit is complete.*

- 10.1.21** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 6.2, The permittee shall provide written notification to Ecology of installation of the auxiliary generator within 15 days of such date.

Correspondence received December 12, 2001 provides notification to Ecology that the generator was installed on November 28, 2001.

- 10.1.22** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 9.1, Order No. 01AQER-3222 shall become void if installation of the generator is not commenced within 18 months of receipt of this Order. *Correspondence received December 12, 2001 provides notification to Ecology that the generator was installed on November 28, 2001.*

- 10.2** The following NOC requirements clarified miscellaneous issues or included explanatory statements with regard to the applicable emission unit and were not, in actuality, approval conditions that require any action on the part of the permittee. These NOC requirements therefore have not been included in the AOP as ongoing applicable requirements.

- 10.2.1** Order No. DE 99AQ-E108 – Approval Condition 3.1, Opacity observation.
The approval condition states that opacity observation using RM 9 may be conducted by Ecology during compliance inspections. Ecology may conduct opacity observations at any time.
- 10.2.2** Order No. PSD-92-02 – Approval Condition 2, Order No. PSD-92-02, First Amendment, – Approval Condition 2, Order No. PSD-92-02, Second Amendment – Approval Condition 1, NO_x concentration standard.
These conditions state that the permittee may submit, for Ecology approval, an alternate NO_x concentration standard outside the range of 70 to 100 percent of base load.
- 10.2.3** Order No. PSD-92-02 – Approval Condition 2, Order No. PSD-92-02 – Approval Condition 2, NO_x continuous monitoring.
This condition states that the permittee may propose alternate monitoring methods in place of the originally required continuous emission monitor.
- 10.2.4** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 2.
This condition states that Ecology may require initial or periodic performance testing on the auxiliary power generator upon written notification to the permittee.
- 10.2.5** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 9.2.
This condition did not exist in the Order. Due to a typographical error, the condition number skips from 9.1 to 9.3.
- 10.2.6** Order No. 01AQER-3222, Issued 09/04/01, Approval Condition 9.6.
This condition did not exist in the Order. Due to a typographical error, the condition number skips from 9.5 to 9.7.
- 10.2.7** Order No. PSD-92-02 was issued on 6/16/1992 and amended on 5/18/1997 and 1/7/1999. Neither of the amendments stipulated that the previous version of the Order was superseded or replaced.
- 10.3** The permittee included in their application a list of 138 of requirements which they believed inapplicable and a request to grant the permit shield for the listed requirements. We have grouped these into three categories.
- 10.3.1** Inapplicable requirements. Section 4 of the AOP lists requirements that are not applicable to the source at the time of issuance. Some of these requirements may become applicable during the term of the permit due to an invoking event. The permit shield applies to the requirements listed.
- 10.3.2** Requirements listed as inapplicable by the permittee, but determined to be applicable by Ecology. The following requirements have been determined to be applicable by Ecology because they include conditions that may, under certain circumstances, require action by the permittee.
- 10.3.2.1** WAC 173-400-045: Control Technology Fees. *See standard condition 1.21 of the AOP.*

- 10.3.2.2 WAC 173-400-060: Emission Standards for General Process Units. *See Condition 2.1.2 of the AOP.*
 - 10.3.2.3 WAC 173-400-105: .Records, Monitoring and Reporting Requirements. *See Standard Condition 1.6 of the AOP.*
 - 10.3.2.4 WAC 173-400-107: Excess Emissions. *See Standard Condition 1.12 of the AOP.*
 - 10.3.2.5 WAC 173-400-110: New Source Review. *See Standard Condition 1.20 of the AOP.*
 - 10.3.2.6 WAC 173-400-113: Requirements for New Sources in Attainment or Unclassifiable Areas. *See Standard Condition 1.20 of the AOP.*
 - 10.3.2.7 WAC 173-400-114: Requirements for Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source. *See Standard Condition 1.21 of the AOP.*
 - 10.3.2.8 WAC 173-400-115: Standards of performance for new sources. *Some sections of 40 CFR 60 (Standards of Performance for New Sources, 40 CFR 60.7(a), (b), (f), 60.8, 60.11(d), 60.48c(g), (i)) apply to the permittee. WAC 173-400-115 incorporates 40 CFR 60 by reference, and is applicable for these sections.*
 - 10.3.2.9 WAC 173-400-116: New Source Review Fees. *See Standard Condition 1.20 of the AOP.*
 - 10.3.2.10 WAC 173-400-141: Prevention of Significant Deterioration. *See Standard Condition 1.20 of the AOP.*
 - 10.3.2.11 WAC 173-460: Controls for New Sources Of Toxic Air Pollutants. *See Standard Condition 1.20 of the AOP.*
 - 10.3.2.12 40 CFR 60: Standards of Performance for New Stationary Sources. *See Standard Conditions 1.6, 1.13, and 1.27 and Conditions 2.3.3, 2.3.5, 2.3.9, 2.3.11, and 2.3.13 of the AOP.*
- 10.3.3** Requirements which are inherently inapplicable to the source. Many of the regulations listed as inapplicable by the permittee are inapplicable because they apply only to regulatory agencies, contain no requirements for action by the permittee, or are inherently irrelevant to a natural gas compressor station. Including all of these in Section 4 of the AOP could make it difficult for the public, regulators or the permittee to identify requirements which might truly be in question.

We have listed requirements for which there might be a question of applicability below, along with a brief discussion of inapplicability of each.

- 10.3.3.1 40 CFR 50: National Primary and Secondary Ambient Air Quality Standards – *This regulation does not include requirements which apply directly to the permittee.*

- 10.3.3.2** 40 CFR 51: Requirements for Preparation, Adoption, and Submittal of Implementation Plans – *Applies only to state agencies and the EPA.*
- 10.3.3.3** 40 CFR 53: Ambient Air Monitoring Reference and Equivalent Methods – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.4** 40 CFR 54: Prior Notice of Citizen Suits – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.5** 40 CFR 58: Ambient Air Quality Surveillance – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.6** 40 CFR 62: Approval and Promulgation of State Plans for Designated Facilities and Pollutants – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.7** 40 CFR 65: Consolidated Federal Air Rule – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.8** 40 CFR 69: Special Exemptions from Requirements of the CAA – *None of the exemptions apply to the continental United States.*
- 10.3.3.9** 40 CFR 72: Permits Regulation – *This facility is not subject to the acid rain program.*
- 10.3.3.10** 40 CFR 73: Sulfur Dioxide Allowance System – *This facility is not subject to the acid rain program.*
- 10.3.3.11** 40 CFR 75: Continuous Emission Monitoring – *This facility is not subject to the acid rain program.*
- 10.3.3.12** 40 CFR 76: Acid Rain Nitrogen Oxides Emission Reduction Program – *This facility is not subject to the acid rain program.*
- 10.3.3.13** 40 CFR 77: Excess Emissions – *This facility is not subject to the acid rain program.*
- 10.3.3.14** 40 CFR 78: Appeal Procedures for Acid Rain Program – *This facility is not subject to the acid rain program.*
- 10.3.3.15** 40 CFR 79: Registration of Fuels and Fuel Additives – *The permittee does not manufacture fuel or fuel additives.*
- 10.3.3.16** 40 CFR 80: Regulation of Fuels and Fuel Additives – *The permittee does not refine, distribute or sell gasoline.*
- 10.3.3.17** 40 CFR 82: Protection of Stratospheric Ozone – *The majority of the requirements included in this part do not apply to the permittee. However, subparts E (Labeling of Products using*

Ozone Depleting Substances) and F (Recycling and Emissions Reduction) apply generally nationwide.

- 10.3.3.18** 40 CFR 89: Control of Emissions from New and In-use Non-road Engines – *This regulation does not include requirements which apply directly to the permittee.*
- 10.3.3.19** WAC 463-39: Energy Facility Site Evaluation Council (EFSEC): General and Operating Permit Regulation for Air Pollution Sources – *The permittee is not currently under EFSEC jurisdiction.*
- 10.3.3.20** WAC 246-247: DOH: Radioactive Air Emissions - *The permittee is not currently required to take any action under this regulation.*
- 10.3.3.21** WAC 173-492: Motor fuel specifications for oxygenated gasoline – *This regulation inherently does not apply to the permittee.*
- 10.3.3.22** WAC 173-491: Emissions Standards and Controls for sources emitting gasoline vapors – *The permittee does not operate any gasoline marketing operations.*
- 10.3.3.23** WAC 173-490: Emission Standards and Controls for Sources Emitting VOC's – *The permittee is not located in an ozone nonattainment area or included in the WAC 173-490-030 listing.*
- 10.3.3.24** WAC 173-480: Ambient Air Quality Standards and Emission Limits for Radionuclides – *The permittee is not currently required to take any action under this regulation.*
- 10.3.3.25** WAC 173-435: Emergency Episode Plans – *The permittee is not currently required to take any action under this regulation.*
- 10.3.3.26** WAC 173-401: Operating Permit Regulation – *The regulations included in Chapter 173-401 WAC are the guidelines apply to Washington State's Operating Permit Program and do not include specific requirements that apply to the source. This can be a source of confusion because Operating Permits include requirements that are authorized by Chapter 173-401 WAC. However, these requirements technically do not apply to the source until they are included in an Operating Permit.*
- 10.3.3.27** WAC 173-400-040(3)(b): RACT for emissions units identified as significant contributors to non attainment status of the region – *Source is not currently located in a nonattainment area.*
- 10.3.3.28** WAC 173-400-040(8)(b): RACT for emissions units identified as significant contributors to the PM-10 non

- attainment status of the region – *Source is not currently located in a nonattainment area.*
- 10.3.3.29** WAC 173-400-070: Emission standards for certain source categories – *The facility is not one of the listed categories.*
- 10.3.3.30** WAC 173-400-075: Emission Standards for Sources Emitting Hazardous Air Pollutants – *The source does not emit significant amounts of any hazardous air pollutant.*
- 10.3.3.31** WAC 173-400-081: Startup and Shutdown – *Contains no requirement for any action by the permittee.*
- 10.3.3.32** WAC 173-400-091: Voluntary Limits on Emissions – *Contains no requirement for any action by the permittee.*
- 10.3.3.33** WAC 173-400-100: Source Classifications – *AOP sources are exempt from registration (WAC 173-400-101(7)).*
- 10.3.3.34** WAC 173-400-101: Registration Issuance – *AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would not apply should the source’s AOP status change.*
- 10.3.3.35** WAC 173-400-112: Requirements for new sources in nonattainment areas – *Source is not currently located in a nonattainment area.*
- 10.3.3.36** WAC 173-400-120: Bubble rules – *The permittee is not currently utilizing the option provided by these rules.*
- 10.3.3.37** WAC 173-400-131: Issuance of emission reduction credits – *The permittee is not currently utilizing the option provided by these rules.*
- 10.3.3.38** WAC 173-400-136: Use of emission reduction credits – *The permittee is not currently utilizing the option provided by these rules.*
- 10.3.3.39** WAC 173-400-151: BART for sources Impacting Class I Areas – *The facility is not in or near any Class I area.*
- 10.3.3.40** WAC 173-400-161: Compliance Schedules – *This source is not currently subject to a compliance schedule.*
- 10.3.3.41** WAC 173-400-180: Variance – *The permittee has not applied for a variance. This requirement will become applicable upon request for a variance by the permittee.*
- 10.3.3.42** WAC 173-400-190: Requirements for nonattainment areas – *Source is not in a non-attainment area.*
- 10.3.3.43** WAC 173-400-210: Emission Requirements of Prior Jurisdictions – *The source is not subject to any requirements of prior jurisdictions.*
- 10.3.3.44** WAC 173-400-250: Appeals – *Contains no requirement for any action by the permittee.*

11.0 Monitoring, Recordkeeping, and Reporting Requirement (MRRR) Sufficiency Explanations

The following section provides brief discussions regarding the reasoning behind the MRRR's included as part of the AOP. The criterion is that each MRRR must be sufficient to assure compliance with the associated condition, emission standard or work practice.

- 11.1 MRRR 1M** – No specific monitoring can reasonably be required for these requirements. The nature of the requirements makes it necessary to rely on the good faith of the permittee to conscientiously monitor site operations and to promptly report any deviations.
- 11.2 MRRR 2M** – This monitoring is used for conditions that require the source to maintain a certain status quo (e.g., O&M manual accessible to employees in operation of the equipment; maintaining replacement parts for routine repairs to monitoring equipment). To assure compliance with these provisions, the permittee is simply required to check that there has been no change in the status quo. Since such a change is unlikely, an annual inspection was deemed adequate.
- 11.3 MRRR 3M** – This MRRR was designed to provide sufficient response to complaints regarding facility emissions affecting the landowners neighboring or in the affected vicinity of the facility. Timeframes were chosen to provide the permittee with adequate time to respond appropriately as well as ensuring that complaints not go unnoticed.
- 11.4 MRRR 4M** – The monitoring has been designed to require periodic reviews of Operation and Maintenance manuals and other documents in order to evaluate whether current operational practices are being conducted in a manner consistent with the information upon which permitting has been based. The recordkeeping and reporting required ensure that practices which are not consistent with the submitted information will be addressed in a timely manner.
- 11.5 MRRR 5M** – The monitoring has been designed to require periodic walk-around surveys as the most simple and direct method to determine the presence of excess emissions. The surveys include the requirement to perform RM 9 if visible emissions are observed and are not eliminated within a reasonable time frame. These surveys, in conjunction with a good faith effort on the part of the permittee to operate in accordance with the conditions of the AOP, are considered sufficient monitoring.
- 11.6 MRRR 6M** – The monitoring as specified has been designed based on the condition that all associated equipment is maintained in proper working condition. Using emission factors in conjunction with operational parameters is a feasible method of estimating emissions from an emission unit for which performance testing may not be feasible. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant environmental degradation.
- 11.7 MRRR 7M** – This monitoring has been specified to include the estimation of emissions based on the use of emission factors, as described in 11.6 above. In addition, periodic source testing has been added to the monitoring due to the size of the emission unit.

- 11.8** MRRR 8M - This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the Unit 7D and 7E. Source testing is the most reliable method for determining emissions, and due to the size of the emission units and the requirements that apply, testing is deemed reasonable.
- 11.9** MRRR 9M – This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the Unit 7C. Source testing is the most reliable method for determining emissions, and due to the size of the emission unit and the requirements that apply, testing is deemed reasonable.
- 11.10** MRRR 10M – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the turbine. The turbine is subject to the requirements of 40 CFR 60 Subpart GG, which requires fuel monitoring for sulfur and nitrogen. Subpart GG contains a provision allowing the approval of a custom fuel monitoring schedule by EPA. The permittee has requested and obtained approval for such a schedule. The requirements of the custom fuel monitoring schedule have been included in this MRRR.
- 11.11** MRRR 11M – The required response time and information required to be submitted as part of the reporting are in accordance with the permit condition and include the necessary information for Ecology to evaluate the deviation.
- 11.12** MRRR 12M – The monitoring is included specifically as required by 40 CFR 60.
- 11.13** MRRR 13M – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the O&M manual for compressor Unit 7C.
- 11.14** MRRR 14M – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the auxiliary generator and the auxiliary generator O&M manual.
- 11.15** MRRR 15M – This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the unit auxiliary generator. Source testing is the most reliable method for determining emissions, and due to the size of the emission units and the requirements that apply, testing is deemed reasonable.
- 12.0 Streamlining Explanations**
- 12.1** Order No. DE96AQ-E131, 1st amendment was issued on 6/3/1997 for the installation and operation of turbine 7C – rated at 35,000 hp.
- 12.2** Order DE99AQ-E108 was issued on 2/25/1999, increasing Unit 7C horsepower rating of to 39,700 hp. Order no DE96AQ-E131 was not rescinded by issuance of Order DE99AQ-E108.

13.0 Clarifications and Interpretations

- 13.1 Order No. PSD-92-02; Issued 06/16/1992, and amended on 5/8/1997 and 1/7/1999. Neither amendment rescinded or replaced the previous versions. Conditions in the 1999 amendment are more restrictive, and only the 1999 amendment is cited in the AOP.
- 13.2 Section 1.2 - Enforceability – Unless designated otherwise, all Air Operating Permit terms and conditions are enforceable by the EPA and citizens under the Federal Clean Air Act. Some conditions (identified by (S)) are enforceable only by the state (Ecology). State-only enforceable conditions are not included in the currently-approved version of the Washington State Implementation Plan (SIP). If a regulation is cited with no reference to enforceability, it is federally enforceable. For example, AOP Standard Condition 1.6.6 is followed by the reference [*WAC 173-400-105(2), (4), 8/20/93, 1/10/2005 (S)*]. This indicates that the 8/20/93 version of WAC 173-400-105 is included in the current SIP, and is federally enforceable. The 1/10/2005 version of WAC 173-400-105 is enforceable only by the state.
- 13.3 WAC 173-401-620(1) – Acid Rain Provisions. The permittee is not an affected source as specified in the referenced section of the WAC. Due to this, no permit conditions relating to the acid rain provisions of the FCAA have been included in the AOP.
- 13.4 WAC 173-401-510(2)(h)(i) – Compliance Plan. At the time of permit issuance, no ongoing applicable requirements have been identified with which the permittee is not currently in compliance. However, this does not preclude Ecology from taking future action on past non-compliance.
- 13.5 Chapter 173-425 WAC, Open Burning – The requirements restricting open burning in the State of Washington apply to the source, and therefore Chapter 173-425 has been included as an applicable requirement under Section 2.1 Facility Wide Requirements.
- 13.6 Condition 2.1.1 of AOP, Visible Emissions – WAC 173-400-040(1), (1)(a), and (1)(b) restrict visible emissions from all sources of air emissions throughout the source to 20 percent opacity for no longer than three minutes in any one hour. While it is clear from the time periods contained within the regulation that Ecology Method 9A (“Source Test Manual – Procedures for Compliance Testing”, State of Washington, Department of Ecology, 07/12/90) was the test method intended to be used to verify compliance, this permit has specified EPA Reference Method 9 as the test method utilized as part of MRRR **5M**. Ecology has determined that reasonable assurance of compliance with the regulation may be obtained by conducting RM 9 upon observance of visible emissions, as specified within **5M**.
- 13.7 Compressor Turbine 7B – Unit 7B was installed in 1970. Due to this, the unit is not subject to the requirements included under the NSPS or PSD permitting programs. The unit is only subject to general statewide standards and the associated monitoring, recordkeeping and reporting requirements.
- 13.8 Order No. DE96AQ-E131, First Amendment – While not explicitly stated within the 1999 Order, Order No. DE96AQ-E131, First Amendment was replaced by Order No. DE 99AQ-E108. The 1999 Order contained all of the conditions contained within the 1996 Order while allowing for the increase in horsepower

and adding additional conditions. The original NOC application for construction of Unit 7C was submitted in 1991.

Order No. DE96AQ-E131 was never rescinded, but all the requirements from Order No. DE96AQ-E131 were duplicated in Order No. DE 99AQ-E108. Because Order No. DE 99AQ-E108 was issued after Order DE96AQ-E131, the 1996 Order is not cited in this Air Operating Permit.

- 13.9** “ISO” Conditions – As clarified in Order No. PSD-92-02, Approval Condition 1, ISO conditions denotes standard day conditions of temperature equal to 288 degrees Kelvin, 60 percent relative humidity, and pressure of 101.3 kilo Pascals.
- 13.10** Standard Condition 1.13.4, Emission Inventory – The requirements contained in this standard condition must be met by the monitoring submittal requirements contained within the AOP provided sufficient emission information is provided.
- 13.11** MRRR 6M and 7M of AOP – The correction for oxygen content as prescribed by 6M and 7M should be performed according to the method outlined in 40 CFR 60 Appendix A, Reference Method 19.

14.0 Appendix A – GTN Compressor Station #7

14.1 Location map

