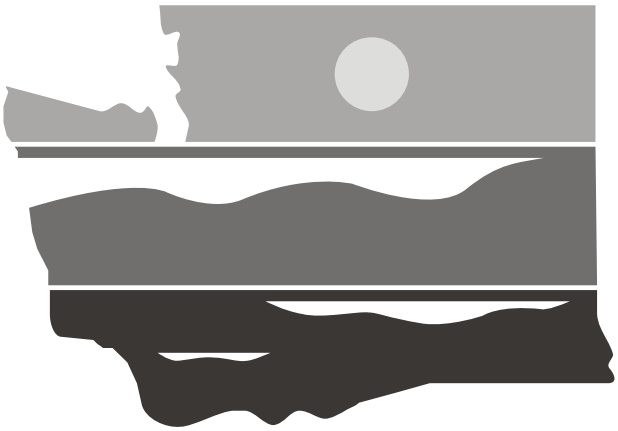

DEPARTMENT OF
ECOLOGY
State of Washington

WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

FINAL STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER 08AQ-E251
GAS TRANSMISSION NORTHWEST CORPORATION
COMPRESSOR STATION #8
NEAR
WALLULA, WASHINGTON

TABLE OF CONTENTS

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
NGG	Gas generator speed in a natural gas turbine
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]

Emission Units	PM-10	CO	NO_X	SO_2	VOC
Combustion Turbine 8A	4.4	93.3	88	1.9	1.4
Combustion Turbine 8B	4.4	83.0	88.3	1.9	1.4
Combustion Turbine 8C	1.5	350	182	1.9	7.5

Auxiliary Generator – Annual Potential To Emit in Tons Per Year (tpy)[2]

Emission Units	PM-10	CO	NO_X	SO_2	VOC
Auxiliary Generator	0.1	0.40	0.5	0.01	0.1

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 Wallula, 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

2.1 Company Name ---------- Gas Transmission Northwest Corporation

2.2 Facility Name ----------Compressor Station #8 – Wallula

2.3 Unified Business Identification Number---------- 409-012-561

2.4 Facility Address ----------638 Lambdin Road, 3 miles east of Wallula Junction on U.S. Hwy 12

2.5 Responsible Official ---------- Mr. Ross Parker, Regional Director

Mailing Address ----------1400 5th Ave., Suite 900, Portland, OR 97201

2.6 Facility Contact ---------- Mr. Stanley D. Barry, Environmental Specialist

2.7 Facility Contact Phone Number---------- (509) 533-2834

3.0 Basis for Title V Applicability

Gas Transmission Northwest Corporation, Compressor Station #8 – Wallula, 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 PM-10 and all other criteria pollutants as of May 2008.

[1] Annual potential to emit values as submitted by the permittee as part of the AOP application or as allowed by the applicable Order.
[2] PTE based on permit limit of 150 hours/year.

5.0 Title V Facility Timeline

5.1 December 9, 1994 ---------- Initial Notification of Inclusion in Title V AOP Program

5.2 December 4, 1997 ---------- Original Title V AOP issued (Order No. DE 97AQ-E129)

5.3 June 27, 2003 ---------- Final Renewal Permit Issued (Order No. 03AQER-5612)

5.4 July 1, 2003 ---------- Order No. 03AQER- 5612 Effective Date

5.5 December 3, 2003 ---------- Final Order No. 03AQER-5612, 1st Revision Issued

5.6 November 17, 2004 ---------- Issuance of NOC Order triggering Re-opening for Cause

5.7 March 18, 2005 ---------- Draft Order No. 03AQER-5612, 2nd Revision Issued

5.8 June 23, 2005 ----------Final Order No. 03AQER-5612, 2nd Revision Issued & Effective

5.9 October 17, 2005 ----------Request for Administrative Amendment Received by Ecology

5.10 February 2, 2006 ---------- Final Order No. 03AQER-5612, 3rd Revision Issued & Effective

5.11 July 1, 2008 ----------Order No. 03AQER- 5612 Expiration Date

5.12 April 14, 2008 ----------Draft Order No. 08AQ-E251 issued

5.13 May 21, 2008 ----------Proposed Order No. 08AQ-E251 issued

5.14 June 25, 2008 ----------Final Order No. 08AQ-E251 issued

6.0 Company Overview and Facility Description

6.1 Gas Transmission Northwest Corporation (GTN) is a natural gas transmission company operating a pipeline from the Canadian border through the states of Idaho, Washington, and Oregon. GTN's dual mainline is 612.5 miles in length. Energy to move the gas is provided by 12 compressor stations spaced approximately 50 miles apart.

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 customer demand, weather conditions, availability of compressor units at adjacent stations, downstream pressure requirements, and receiving pressures and volumes. Normal operation includes operation of units individually or together.

The major sources of air emissions at Station 8 are the three gas turbine units, Units 8A, 8B, and 8C. Natural gas can be diverted through any combination of compressors, or the station can be bypassed entirely. Other emission units at Station 8 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 all three compressor units unless otherwise noted.

6.1.2 *Compressor Unit 8A* – Unit 8A is a Solar Titan Gas Turbine, 19,500 horsepower (ISO), in operation since 2001. A NSR/PSD review was done prior to the installation

and operation of Unit 8A, and BACT was determined to be dry low NO_x combustors. Testing derived emission factors with fuel consumption, operating hours, and periodic source tests are used to monitor NO_X emissions from Unit 8A. Unit 8A is also equipped with monitoring which records when the unit is operating in or out of $SoLoNO_X$ mode. Unit 8A is subject to 40 CFR 60, subpart GG – Standards Of Performance For Gas Turbines constructed after October 3, 1977.

6.1.3 *Compressor Unit 8B* –Unit 8B is a 19,500 hp (ISO) Solar Titan Gas Turbine identical to Unit 8A. The original Unit 8B was a Solar Titan Gas Turbine, 17,800 horsepower (ISO), placed in operation in 1997. A NSR review was done prior to the installation and operation of Unit 8B, and BACT was determined to be dry low NO_x combustors. In August 2006, GTN submitted an application for replacement of Unit 8B with a new SoLoNOx Solar Titan natural gas-fired turbine rated at 19,500 hp (ISO). The new turbine is more efficient than the unit installed in 1997, and GTN proposed new emission limits that result in no increase in emissions from the replacement. The new turbine qualifies as a new emission unit under WAC 173-400-110(2)(b)(i). Because the new emission limits result in no net emission increase, the replacement is not subject to new source review. The new Unit 8B began operation on May 25, 2007. Unit 8B is subject to 40 CFR 60, subpart KKKK - Standards of Performance for Stationary Combustion Turbines constructed after February 18, 2005.

6.1.4 *Compressor Unit 8C* – Unit 8C is a Cooper Rolls Coberra 125 Avon, 14,300 hp, in operation since 1970. Since Unit 8C was installed prior to 1977, it is not subject to the underlying regulatory requirements of New Source Performance Standards (NSPS) or Prevention of Significant Deterioration (PSD).

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. Pipeline 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 turbines. Fuel-bound nitrogen rarely exists in natural gas and then only as an impurity. GTN's current Federal Energy Regulatory Commission (FERC) Gas Tariff requires that gas delivered to GTN for transport:

- "...shall 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..."
- "...shall not have a hydrocarbon dew point in excess of fifteen degrees Fahrenheit at pressures up to eight hundred (800) psig."
- "…shall not contain more than 10 grains of total sulfur per 100 standard cubic feet.

Representative Fuel Analysis

Constituent	
Hydrogen sulfide	4.2 ppm
Total Sulfur	0.26 grains/100 scf
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 (ft^3/lb):	22.21
Calculated gross heating value (Btu/ft^3):	1,002
Calculated lower heating value (Btu/ft^3):	903

6.2 Permitting History

- 9/9/1986: PSD-8 issued for replacement of one of two Cooper- Rolls Avon 14,300 hp turbines with a Cooper-Rolls Spey turbine rated at 16,350 hp (ISO) and designated as unit 8D. The Avon turbines were installed in 1970.
- 8/27/1997: Order No. DE97AQ-E134 issued for the 1986 replacement of one 14,300 hp Avon turbine with Unit 8D. The permitting agency in 1986 – the Benton-Franklin-WallaWalla Counties Air Pollution Control Agency – had not issued a construction permit.
- 8/27/1997: Order No DE97AQ-E135 issued for the addition of one SoLoNOx Solar Titan 17,800 hp turbine designated Unit 8B. Resulting station configuration:
  - Unit 8C – Cooper-Rolls 14,300 hp Avon turbine installed in 1970
  - Unit 8D – Cooper-Rolls 16,350 hp Spey turbine installed in 1986
  - Unit 8B – Solar Titan 17,800 hp turbine

  In order to avoid a significant increase in NOx triggering PSD applicability, the permit limited operations to two turbines at a time.
- 10/11/2001: Unit 8D decommissioned.
- 4/29/2002: PSD-01-06 issued for a 19,500 hp Solar Titan turbine designated Unit 8A and a 1,462 hp emergency generator. Increase in NOx constitutes major modification.
- 6/19/2002: Order No. 02AQER-3949 issued for installation of Unit 8A and emergency generator. 40 CFR 60, Subpart GG applicable to turbine. Resulting station configuration:
  - Unit 8A – Solar Titan 19,500 hp turbine
  - Unit 8B – Solar Titan 17,800 hp turbine installed in 1997
  - Unit 8C – Cooper-Rolls 14,300 hp Avon turbine installed in 1970
  - Caterpillar Model G3516 natural gas-fired emergency generator, 1,462 hp.

- 1/11/2007: Order No. DE97AQ-E135, First Amendment issued for replacement of Unit 8B with a new Solar Titan 19,500 hp turbine. Requirements based on 40 CFR 60, subpart GG. Resulting station configuration:
  - Unit 8A – Solar Titan 19,500 hp turbine, installed in 2002.
  - Unit 8B – Solar Titan 19,500 hp turbine
  - Unit 8C – Cooper-Rolls 14,300 hp Avon turbine installed in 1970
  - Caterpillar Model G3516 natural gas-fired emergency generator, 1,462 hp.

- 4/9/2008: Order No. 08AQER-249 rescinds and replaces Order No. DE97AQ-E135 and its First Amendment. The replacement Unit 8B was constructed after February 18, 2005, and is subject to 40 CFR 60, subpart KKKK instead of subpart GG.

7.0 Facility Emission Units/Processes

7.1 Facility Wide (Section 2.1 in AOP)

7.2 Compressor Unit 8A (Section 2.2 in AOP)

7.3 Compressor Unit 8B (Section 2.3 in AOP)

7.4 Compressor Unit 8C (Section 2.4 in AOP)

7.5 Auxiliary Generator (Section 2.5 in AOP)

8.0 Insignificant Emission Units and Activities

8.1 The permittee proposed numerous insignificant emission units as categorically insignificant based on the requirements outlined in WAC 173-401-532. A list of these units is on file with the Department of Ecology's Eastern Region Office, Air Quality Program in Spokane, Washington.

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 WAC 173-401-533(2)(e) and (r) - Three natural gas boilers for space and water heating, rated at 1,564,000 BTU/hr, 142,000 BTU/hr, and 36,000 BTU/hr. Combustion sources less than five million BTU/hr exclusively using natural gas, butane, propane, and/or LPG fuel are insignificant based on size.

8.2.2 WAC 173-401-533(2)(i) – Welding using not more than one ton per day of welding rod.

8.2.3 WAC 173-401-533(2)(q) – Surface coating, using less than two gallons per day.

8.2.4 WAC 173-401-533(2)(y) – Surface coating, aqueous solution or suspension containing less than one percent VOC's.

8.2.5 WAC 173-401-533(2)(z) – Cleaning and stripping activities and equipment, using solution having less than one percent VOC's by weight. On metallic substrate, acid solutions are not considered for listing as insignificant.

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 The emergency auxiliary power generator is subject to Order No. 02AQER-3949, Amendment 2, as well as the requirements of Section 2.5 of the AOP.

9.0 Comments and Corresponding Responses: Any comments received during the public comment period and EPA review period will be kept 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. This list identifies only requirements that post-date those identified in Section 10.1 of the Statement of Basis for Order No. 03AQER-5612, 3rd revision, dated 2/12/2006.

10.1.1 Order No. 08AQ-E249, Approval Condition 6.1 and 40 CFR 60.7(a)(1): Submit notice of commencement of construction within 30 days..
Construction of Unit 8B commenced on 5/17/2007. Notification was received on 5/22/2007.

10.1.2 Order No.08AQ-E249, Approval Condition 6.2 and 40 CFR 60.7(a)(2): Notify of anticipated startup date no less than 60 days in advance.
Notification was received on 3/21/2007, 58 days prior to anticipated startup.

10.1.3 Order No. 08AQ-E249, Approval Condition 6.3 and 40 CFR 60.7(a)(3): Submit notification of actual startup within 15 days.
Unit 8B startup was on 5/18/2007. Notification was received on 5/22/2007, 5 days from startup.

10.1.4 Order No. Order No. 08AQ-E249, Approval Condition 6.4 & 40 CFR 60.8(d): submit notice of initial stack testing no later than 30 days prior to stack test.
Initial stack testing of Unit 8B was scheduled for 6/20/2007. Notification was received on 5/16/2007, 30 days in advance.

10.1.5 Order No. Order No. 08AQ-E249, Approval Condition 4.2.1, 4.4.1 and 40 CFR 60.8(a): Conduct initial Unit 8B stack test for NOx within 60 days of achieving maximum fuel consumption, but no later than 180 days after initial startup.
Unit 8B startup was on 5/18/2007. The unit was immediately shutdown due to high vibration and compressor differential pressure without reaching maximum fuel consumption. Troubleshooting and repairs were completed in early July. The initial source test was begun on 8/23/2007 – 97 days from initial startup and less than 60 days from completion of repairs.

10.1.6 Order No. Order No. 08AQ-E249, Approval Condition 6.7: Complete O&M manual within 60 days of initial startup.
GTN reported completion of the O&M manual on 6/12/2007 – 25 days from initial startup.

10.1.7 Order No. Order No. 08AQ-E249, Approval Condition 9.2: Order void if construction not commenced within 18 months, or construction discontinued for 18 months.
Order No. DE97AQ-E13, First Amendment (superseded by 08AQ-E249) issued on

1/11/2007. Construction of unit 8B commenced on 5/17/2007 — 126 days from issuance. Initial startup on 5/18/07.

10.1.8 Order No. 02AQER-3949, 2nd Amendment, Approval Condition 3.6.1: PM emissions testing for Unit 8A. Condition 3.6.1 required initial performance testing for PM. *PM testing was conducted in October, 2002. No ongoing PM testing is required.*

10.1.9 Conditions 9) b) i) of Order No. PSD-01-06, Amendment 1 and 3.6.3.1.1 of Order No. 02AQER-3949, Amendment 2 require quarterly source testing for NOx and CO from Unit 8A for the first two years of operation. *The two year period is over, and the quarterly testing requirement no longer applies.*

10.2 The following NOC requirements clarified miscellaneous issues or included explanatory statements with regard to the applicable emission unit and are not 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. 02AQER-3949 Second Amendment – Approval Conditions 3.2, 3.2.1, T-BACT.
This approval condition describes the T-BACT regulations generally and also discusses the method used to estimate the emissions from the turbine and auxiliary generator.

10.2.2 Order No. 02AQER-3949 Second Amendment – Approval Condition 3.2.2.
This approval condition gives the results of the air pollution dispersion modeling that was done for toxic air pollutants emitted from unit 8A and the auxiliary generator.

10.2.3 Order No. 02AQER-3949 Second Amendment – Approval Condition 3.3.1.
This approval condition describes the three different operating scenarios under which the turbine (unit 8A) will operate. The first operating scenario is at ambient temperatures between 0 °F and 100 °F and NGG greater than 94%. This scenario results in the lowest emissions. The second scenario is at ambient temperatures between 0 °F and 100 °F and NGG between 90% and 94%. The third scenario is at ambient temperatures between -40 °F and 0 °F and NGG between 90% and 100%. This last scenario will have the greatest emissions.

10.2.4 Order No. 02AQER-3949 Second Amendment – Approval Condition 3.7.1.
A portion of this approval condition provides the following explanatory information. The condition states that the permit application stated that annual emissions of CO from transient conditions would equal 14.76 tons. The condition also explained that if the pilot light on the turbine is on, this indicates that the unit is firing auxiliary fuel to stabilize the flame and thus, the turbine is not operating in $SoLoNO_X$ mode. As required under 1) b) of 10M in the AOP, the pilot light is monitored by a counter which produces data used to calculate emissions based on the duration that the turbine operates in and out of $SoLoNO_X$ mode.

10.2.5 Order No. 02AQER-3949 Second Amendment – Approval Condition 3.8.1.
This approval condition requires that "Records shall be kept of all periods of downtime of the monitors required by Condition 3.6.2". Condition 3.6.2 does not require any monitors. It is clear that a typographical mistake was made, and that condition 3.8.1 refers to the monitors required under conditions 3.7.1 and 3.7.2 of the Order. The requirement to keep records of the downtime of these monitors has been included in MRRR 10M(2)(a) as a requirement of the AOP under the authority of WAC 173-401-630(1).

10.3 The following requirements were listed as inapplicable by the source, but have been found to be applicable by Ecology.

10.3.1	WAC 173-400-045	Control Technology Fees – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.21 of the AOP.
10.3.2	WAC 173-400-060	Emission Standards for General Process Units – This section of the WAC includes some requirements that potentially require action on the part of the source. See Condition 2.1.2 of the AOP.
10.3.3	WAC 173-400-105	Records, Monitoring and Reporting Requirements – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.6 of the AOP.
10.3.4	WAC 173-400-107	Excess Emissions – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.12 of the AOP.
10.3.5	WAC 173-400-110	New Source Review – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.20 of the AOP.
10.3.6	WAC 173-400-113	Requirements for New Sources in Attainment or Unclassifiable Areas – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.20 of the AOP.
10.3.7	WAC 173-400-114	Requirements for Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.21 of the AOP.
10.3.8	WAC 173-400-115	Standards of performance for new sources – Since some sections of 40 CFR 60 (Standards of Performance for New Sources), including 60.7(a), (b), (f), 60.8, 60.11(d), 60.48c(g), (i)) do apply to the permittee, this Washington State regulation, which incorporates 40 CFR 60 by reference, is applicable to the permittee for those specific sections of 40 CFR 60 which apply.
10.3.9	WAC 173-400-116	New Source Review Fees – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.20 of the AOP.
10.3.10	WAC 173-400-141	Prevention of Significant Deterioration – This section of the WAC includes some requirements that potentially

require action on the part of the source. See Standard Condition 1.20 of the AOP.

10.3.11	WAC 173-460	Controls for New Sources Of Toxic Air Pollutants – This section of the WAC includes some requirements that potentially require action on the part of the source. See Standard Condition 1.20 of the AOP.
10.3.12	40 CFR 60	Standards of Performance for New Stationary Sources – The NSPS includes some requirements that require action on the part of the source. (See sections 2.2 and 2.3 of the AOP.)
10.3.13	40 CFR 61	National Emission Standards for Hazardous Air Pollutants – Subpart M, National Emission Standards for Asbestos, Section 61.415, Standards for Demolition and Renovation is potentially applicable.
10.3.14	WAC 173-400-075	Emission Standards for Sources Emitting Hazardous Air Pollutants adopts 40 CFR 61 by reference.
10.3.15	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

10.4 The permittee included in their application a list of requirements for which they requested Ecology to determine inapplicability and grant the permit shield. Except for the requirements listed in section 4 of the AOP and section 10.3 of this Statement of Basis, Ecology has not included any of the other requirements in the permit either as applicable or inapplicable. Section 4 of the AOP includes only requirements for which applicability is based on determination of size, age, emissions or other characteristics of an emission unit with respect to the applicability criteria of the requirement. Other requirements are considered inherently inapplicable, and are not included in Section 4.

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 and odors 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 includes conditions in 40 CFR 60 applying to all required source testing

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 8A. 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.

11.11 MRRR **11M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the O&M manual for unit 8A.

11.12 MRRR **12M** – The monitoring is included specifically as required by 40 CFR 60.

11.13 MRRR **13M** – 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 8B. 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.

11.14 MRRR **14M** – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the requirements applicable to the turbine. The turbine is subject to the requirements of 40 CFR 60 Subpart KKKK, which

requires fuel monitoring for sulfur and nitrogen. The monitoring, recordkeeping and reporting requirements are mandated by Subpart KKKK .

11.15 MRRR **15M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the O&M manual for unit 8B.

11.16 MRRR **16M** – 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.

12.0 Streamlining Explanations

12.1 Order No. 02AQER-3949 Second Amendment, Issued 2/17/2004, Approval Condition 3.4.6 – Emissions of NO_X from unit 8A – This requirement limits NO_X emissions to 88.5 tons per year on a twelve-month rolling basis. This applicable requirement has not been included in the AOP due to the fact that the second amendment of the PSD permit contains an emission limitation for NO_X (condition 4) that limits emissions to 88.0 tons per year on a twelve-month rolling basis. Since the condition included in the first amendment to the PSD Order is more stringent than the condition included in the first amendment to the NOC Order, it is appropriate to apply streamlining to this requirement.

12.2 40 CFR 60.332, Emission Standard for Nitrogen Oxides – Based on 40 CFR 60.333(a)(2) the NOx standard subpart GG would be 108.5 ppmv. This applicable requirement has not been included in the AOP due to the fact that the first amendment of Order PSD-01-06 (for unit 8A) contains NO_X emission limits of 25 ppm (at temperatures $>0^oF$) and 42 ppm (at temperatures $<0^oF$). Since the conditions included in the first amendment to the PSD Order are more stringent than any limit imposed by subpart GG, it is appropriate to apply streamlining to this requirement.

12.3 40 CFR 60.333, Emission Standards for Sulfur Dioxide – limits the sulfur content of natural gas burned to less than 0.8 percent by weight. Order No 02AQER-3949, Third Amendment, Condition 3.1.4 limits SO2 emissions to no more than 0.5 lb/hour. Based on source test data, combustion of natural gas containing more than 1 grain/100 standard cubic feet (0.003 percent by weight) will result in SO2 emissions greater than 0.5 lb/hour. The limit in the NOC order is more stringent than that in subpart GG, and it is appropriate to apply streamlining.

13.0 Clarifications and Interpretations

13.1 Section 1 - Standard Conditions – For permit conditions required by Washington State regulations that have been included in the SIP, two dates are given. The first date is the date for the regulation that was adopted into the SIP. The second date is for the current version of the regulation. State-only enforceable permit conditions are identified with the symbol (S).

13.2 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.

13.3 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% opacity for no longer than three (3) 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**.

13.4 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.

13.5 NGG – Gas Generator Speed – Gas generator speed is the unit given to quantify the production output of a natural gas turbine generator. NGG is expressed in revolutions per minute (rpm), but is not constant for any one turbine/generator combination. The maximum power that a certain turbine/generator can impart to a gas stream depends on several conditions, primarily the temperature of the ambient air stream. Because of this, maximum NGG varies depending on conditions. Many permit conditions have been written in terms of "%" of maximum NGG. This means the percent of the maximum under the conditions that exist at a given time.

13.6 Concurrent Operation of the Units at Station 8 – Prior to installation and permitting of unit 8A, only two compressor/turbine units were permitted to operate simultaneously at station 8. This limitation was introduced during the original permitting of unit 8B. Correspondence received by Ecology on October 11, 2001 from the permittee stated that unit 8D had been permanently removed from service. The original unit 8C remains onsite. When unit 8A was installed, the project went through all necessary permitting (NSR/PSD) to allow operation of all three compressor units currently installed (units 8A, 8B, and 8C) simultaneously.

13.7 Monitoring the nitrogen content of natural gas (Unit 8A only) - 40 CFR 60.334(h)(2) requires monitoring the nitrogen content of natural gas fuel combusted if the owner claims an allowance for fuel bound nitrogen in calculating the NOx emission limit under 40 CFR 60.332. GTN is not claiming an allowance for fuel bound nitrogen, so monitoring is not required. Should GTN choose to claim a fuel bound nitrogen allowance in the future; monitoring natural gas nitrogen content will be required by 40 CFR 60.334(h)(2).

However, 40 CFR 60.334(h)(4) allows the continued use of a previously approved custom fuel monitoring schedule. On July 8, 1994, EPA Region 10 approved a custom fuel monitoring schedule for Station #8 which specified that no NOx monitoring was required for pipeline-quality natural gas. Claiming a fuel bound nitrogen allowance would require NOx monitoring per 40 CFR 60.334(h)(2), regardless of the custom fuel monitoring schedule approved in 1994.

13.8 Order No. 02AQER-3949, 2nd Amendment, - emission limits in conditions 3.4.3, 3.4.6, 3.4.7, 3.4.8, 3.4.9 and 3.4.10 state that "Emissions…shall not exceed…tons per year (12 month rolling average)". The word "average" is inappropriate in this context. The intent was to limit total emissions over any 12 consecutive months. Accordingly, the wording in AOP conditions 2.2.2, 2.2.3, 2.2.4, 2.2.5 and 2.2.6 has been changed to "12-month rolling total".

13.9 Unit 8A – tracking operating modes:

Order No. PSD-01-06, approval conditions 12 c)iv), v) and vi) require monitoring and reporting hours of operation at temperatures $\geq 0^{o}$F, hours of operation at temperatures $\leq 0^{o}$F and hours of operation out of SoLoNOx mode for NOx emissions.

Order No. 02AQER-3949, Amendment 2, condition 3.8.2 requires logs of "hours of routine operation (90-100% NGG) and the hours of operation dealing with startup and shutdown" This contradicts condition 3.8.1, which specifies that for purposes of CO monitoring, hours of startup, shutdown, idle and load change are those in which the unit is operating out of SoLoNOx mode.

It is clear that for NOx and CO monitoring, "normal operation" means operating in SoLoNOx mode. Accordingly, we have changed the wording in MRRR 10M to require monitoring and total turbine operating time and out of SoLoNOx mode.

13.10 Order No. 02AQER-3949, 2nd Amendment, Approval Condition 3.1.1 expresses NOx emissions from Unit 8A at 15% O_2 and ISO conditions. 40 CFR 60, subpart GG does not require conversion to ISO conditions. NOx limits in PSD-01-06, Amendment 1 are not corrected to ISO conditions. The requirement for ISO correction has not been included in the AOP.

13.11 Performance tests for sulfur, Unit 8B – 40 CFR 60.4415(a) requires initial and periodic performance tests for sulfur. A source has the option of testing the sulfur content of the fuel or measuring the SO_2 concentration of stack gas. If a source chooses to determine the sulfur content of natural gas fuel, a representative sample must be collected per ASTM D5287 (a standard for automated sampling of gaseous fuels). The sample may be analyzed using ASTM D4084 or ASTM D4468 (automated methods for determining the H_2S content of fuel). GTN operates an automated sulfur sampling/testing system at the Stanfield, Oregon meter station about 22 pipeline miles south of Station 8. Automated sampling/analysis at the Stanfield meter station was previously approved by the EPA in a custom fuel monitoring schedule for Station 8, and is considered acceptable for Unit 8B.

13.12 Appendix A – GTN Station #8 location map