DEPARTMENT OF
ECOLOGY
State of Washington

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

DRAFT STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER 14AQ-E552, 1st Amendment
GAS TRANSMISSION NORTHWEST CORPORATION
COMPRESSOR STATION #8
NEAR
WALLULA, 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
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

Annual Potential to Emit in Tons per Year (tpy)[1]

	PM10	CO	NO_X	SO_2	VOC	C02e (MT)
Combustion Turbine 8A	4.4	93.3	88	1.9	1.4	70,693
Combustion Turbine 8B	4.4	83.0	88	1.9	1.4	70,693
Auxiliary Generator	0.1	0.4	0.5	0.01	0.1	102
Total	10.4	527	358	6	10.1	210,727

10.0 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.

11.0 Facility Identifying Information

11.1 Company Name ----------Gas Transmission Northwest, LLC

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

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

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

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

Mailing Address ---------- 1400 5th Ave., Suite 900, Portland Oregon, 97201 99202

11.6 Facility Contact----------Mr. Michael Antes (630)862-6300

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

12.0 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).

13.0 Attainment Classification

The facility is located in an area that is classified as attainment for PM-10 and all other criteria pollutants as of April 2013.

[1] Annual potential to emit values as submitted by the permittee as part of the AOP application or as allowed by the applicable Order.

14.0 Company Overview and Facility Description

14.1 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 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. Typically, there are two gas turbine driven compressor units at a station.

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 either unit individually or both units together.

The major sources of air emissions at Station 8 are the three gas turbine units, Units 8A, 8B, and 8C. Through valving, natural gas can be diverted through any combination of compressors. In addition, the station can be bypassed entirely. A process flow diagram and facility plot plan are presented in Appendix A. The other stationary fuel combustion 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.

14.1.1 *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.

14.1.2 *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.

14.1.3 *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 7C, and BACT was determined to be dry low NO_x combustors. In August 1996, GTN submitted and 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 resulted in no net emission increase, the replacement was not subject to new source review. The new Unit 8B began operation on May 25, 2007.

14.1.4 *Compressor Unit 8C* – Section 2.2 of the AOP consists of emissions from 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).

14.1.5 *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. These molecules are longer chain hydrocarbons typically found in the form of proteins or amines. 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 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.

14.1.6

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

15.0 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 8C – 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 any time.
- 10/11/2001: Unit 8D decommissioned.
- 4/29/2002: PSD-01-06 issued for installation of Unit 8A, 19,500 hp Solar Titan turbine and 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.
- 1/11/2007: Order No. DE97AQ-E135, First Amendment issued for replacement of Unit 8B. 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.

16.0 Facility Emission Units/Processes

16.1 Facility Wide (Section 2.1 in AOP)

16.2 Compressor Unit 8A (Section 2.2 in AOP)

16.3 Compressor Unit 8B (Section 2.3 in AOP)

16.4 Compressor Unit 8C (Section 2.4 in AOP)

16.5 Auxiliary Generator (Section 2.5 in AOP)

17.0 Insignificant Emission Units and Activities

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.

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.

17.1 Combustion sources less than five million BTU/hr exclusively using natural gas, butane, propane, or LPG).

17.1.1 One natural gas-fired boiler rated at 1.5 MM Btu/hour installed in 2013, replaced two 1.046 MM Btu/hr boilers.

17.1.2 One 40,500 Btu/hour natural gas-fired hot water heater.

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

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

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

17.5 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.

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.

17.6 Sources of fugitive dust are subject to the requirements of Section 2.1 of the AOP.

17.7 The emergency auxiliary power generator is subject to the requirements of Section 2.5 of the AOP as well as the requirements of Section 2.1 of the AOP.

18.0 Comments and Corresponding Responses

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.

19.0 Applicable and Inapplicable Requirements Determinations/Explanations

19.1 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.

19.2 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.1 & 40 CFR 60.7(a)(1): Submit notice of commencement of construction within 30 days. 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.

19.3 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.2: 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.

19.4 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.3: 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.

19.5 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.4 & 40 CFR 60.8(d): submit notice of 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.

19.6 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.5: Notify Ecology at least 24 hours in advance if any source test is cancelled. 40 CFR 60.8(d): submit notification of delay of scheduled source test by providing at least 7 days notice of rescheduled test date.

Initial source testing of Unit 8B was scheduled for 6/20/2007. GTN notified Ecology of postponement on 6/12/2007.

19.7 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 3.2.1 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.

19.8 Order No. DE97AQ-E135, 1st Amendment, Approval Condition 5.7: 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.

19.9 Order No. 02AQER-3949, 2nd Amendment, Approval Conditions 3.4.9, 3.6.1 and 3.6.2: PM emissions testing for Unit 8A. Condition 3.6.1 required initial performance testing for PM.

19.10 Condition 3.6.3.1.1 requires quarterly testing for NOX for the 1st two years of operation
No ongoing PM testing is required.

19.11 Conditions 12 c), and d) of PSD X80-01 require submittal of data on collection of NOx monitoring data. The permit does not specify the emission unit to which this applies. No NOX monitoring is required for the auxiliary generator. *Submittal of NOx monitoring data is only required for turbine 8A.*

19.12 Condition 12 e) i) of PSD X80-01 requires submittal of "excess emissions reports". There is no definition of "excess emissions" and no reporting frequency is specified.

19.13 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.

19.13.1 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.

19.13.2 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.

19.13.3 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.

19.13.4 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 **9M** 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.*

19.13.5 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 as a requirement of the AOP under the authority of WAC 173-401-630(1).

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

19.14.1 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.

19.14.2 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.

19.14.3 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.

19.14.4 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.

19.14.5 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.

19.14.6 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.

19.14.7 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.

19.14.8 WAC 173-400-115 Standards of performance for new sources – Since 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)) 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.

19.14.9 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.

19.14.10 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.

19.14.11 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.

19.14.12 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 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.

19.14.13 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.

19.14.14 WAC 173-400-075 Emission Standards for Sources Emitting Hazardous Air Pollutants adopts 40 CFR 61 by reference.

19.14.15 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

19.15 The permittee included in their application a list of requirements for which they requested Ecology to determine inapplicability and grant the permit shield to the Wallula facility. 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 obviously inapplicable, and are not included in Section 4.

19.16 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.

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.

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.

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.

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.

MRRR **5M** –Periodic walk-around surveys are a 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.

MRRR **6M** – The monitoring as specified has been designed based on the condition that 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.

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.

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 emission units . 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.

MRRR **9M** – 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.

MRRR **10M** – 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.

MRRR **11M** – The monitoring is specifically required by 40 CFR 60.

MRRR **12M** – 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.

MRRR **13M** – 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. These requirements are met by the monitoring imposed by Order No. 02AQER-3949 First Amendment.

MRRR **14M** – 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.

MRRR **15M** – This MRRR establishes the minimum monitoring, recordkeeping and reporting information required for unit .

MRRR **16M** This MRRR specifies monitoring, recordkeeping and reporting requirements for the auxiliary generator

19.17 Streamlining Explanations

Order No. 02AQER-3949 1st Amendment, Issued 11/20/02, 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.

40 CFR 60.332, Emission Standard for Nitrogen Oxides – Based on the most conservative assumptions, the most restrictive emission limitation that may be imposed by subpart GG would be 75 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) and NOC Order No. 08AQ-E249 (for unit 8B) contain emission limitations for NO_X that limit emissions to either 25 ppm or 42 ppm. Since the conditions included in the first amendment to the PSD Order and the NOC Order are more stringent than any limit imposed by subpart GG, it is appropriate to apply streamlining to this requirement.

40 CFR 60.333, Emission Standards for Sulfur Dioxide – This requirement limits the sulfur content of natural gas burned to less than 0.8 percent by weight. Order No 03AQER-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.

19.18 Clarifications and Interpretations

19.18.1 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 most up-to-date version of the regulation. State-only enforceable permit conditions are identified with the symbol (S).

19.18.2 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.

19.18.3 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.

19.18.4 Chapter 173-425 WAC, Outdoor 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.

19.18.5 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**.

19.18.6 Compressor Turbine 8C – Unit 8C 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.

19.18.7 Standard Condition 1.13.4, Emission Inventory – The requirements contained in this standard condition shall be met by the monitoring submittal requirements contained within the AOP provided sufficient emission information is provided.

19.18.8 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.

19.18.9 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 rpm under the conditions that exist at a given time. The minimum NGG is listed as 90% in Order 02AQER-3949. GTN reports that the turbine only operates at 90% during startup and shutdown. The set-point for SoLoNOx operation is 92% NGG and higher, making it appropriate to consider 92% NGG as the minimum operating rate.

19.18.10 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.

19.18.11 Order 02AQER39 2nd amendment, condition 3.8.1 requires records of downtime required by monitoring in condition 3.6.2. Condition 3.6.2 does not reference any monitoring. Condition 3.5.2 requires monitoring of turbine inlet temperature. The AOP references condition 3.5.2 of the Order.

19.18.12 Order 02AQER39 2nd amendment, condition 3.1 BACT states that BACT for PM10 and SO_2 shall be the exclusive use of pipeline quality natural gas and good combustion practice. Conditions 3.1.1 and 3.1.2 refer to use of dry low-NOx control and lean pre-mix combustion. These conditions apply only to the turbine.

Conditions 3.1.3 and 3.1.4 require control of PM_{10} and SO_2 by use of pipeline quality natural gas and good combustion practice. No reference to the emergency generator or to any fuel other than pipeline quality natural gas is made.

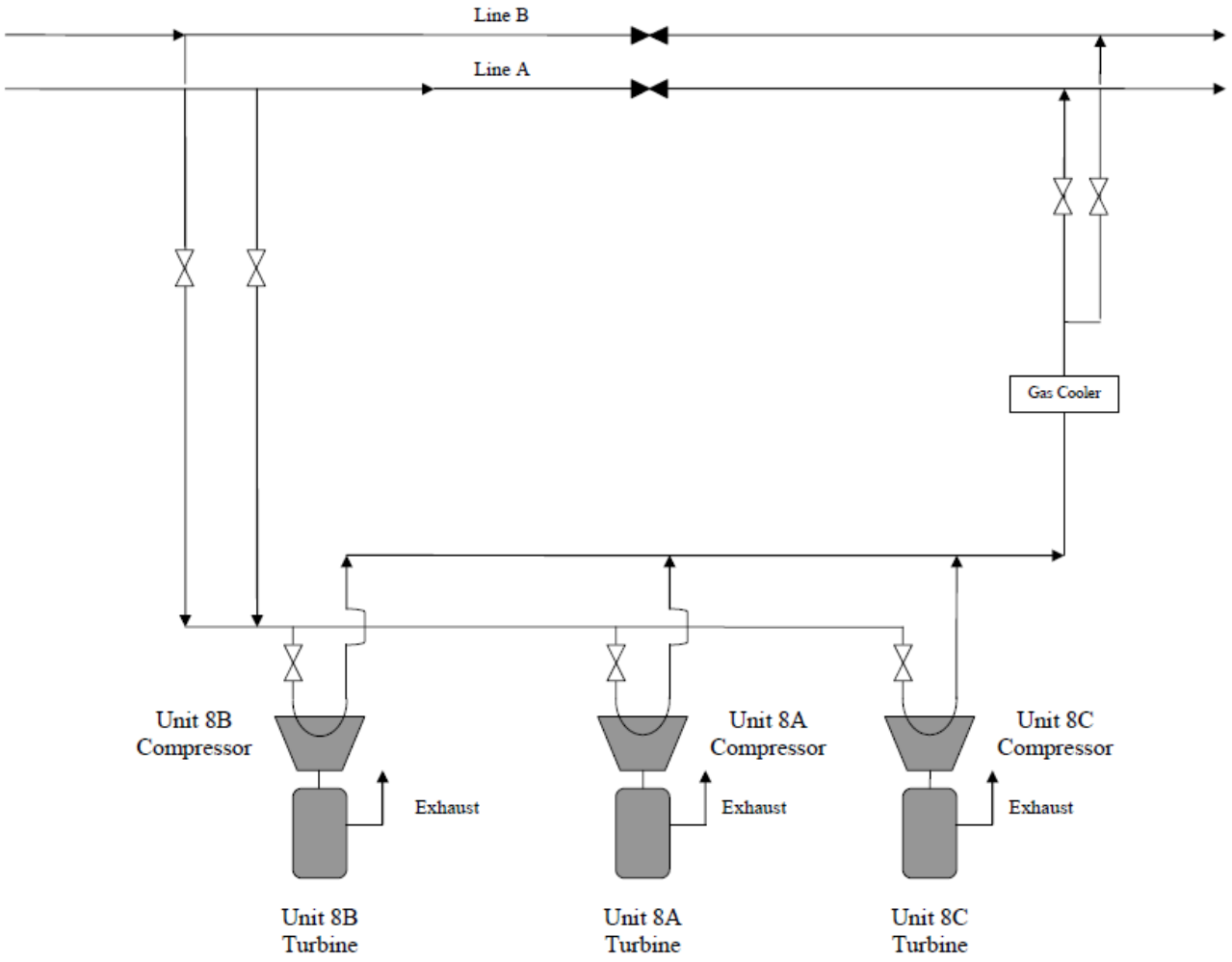
GTNs' AOP renewal application lists pipeline quality natural gas as the only fuel used by the three combustion turbines. No other fuel is listed in the renewal application. Therefore, the AOP specifies that the only fuel used in the three turbines and the emergency generator shall be natural gas.

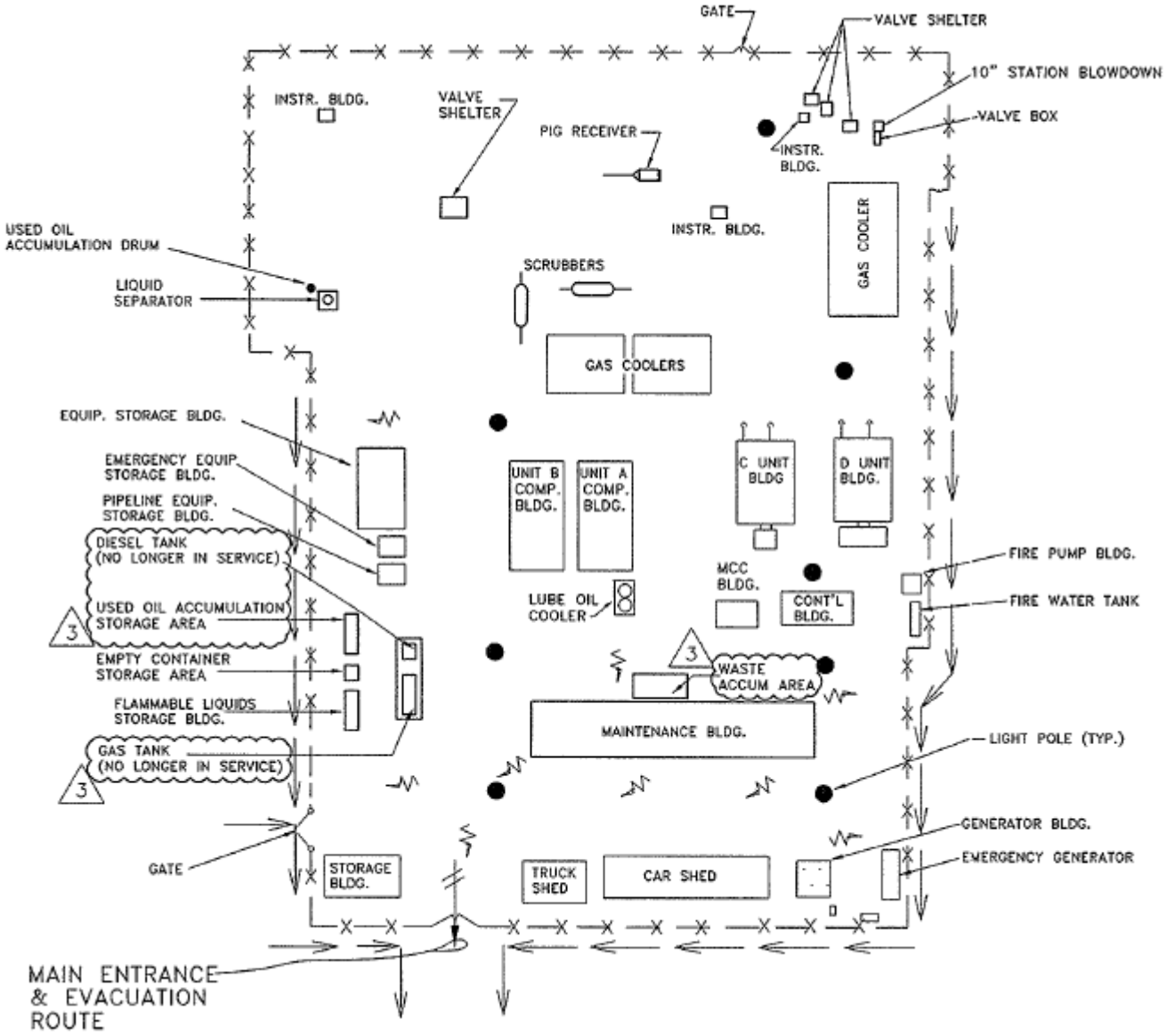
14.0 Appendix A – PG&E GTN Compressor Station #8 – Wallula, Property Legal Description, and Process Flow Diagram

14.16 Process Flow Diagram

14.17 Legal Description of Property and Property Plot Plans

Compressor Station 8, Wallula, WA
Process Flow Diagram




GATE
VALVE SHELTER
10" STATION BLOWDOWN
VALVE BOX
INSTR. BLDG.
VALVE SHELTER
PIG RECEIVER
INSTR. BLDG.
INSTR. BLDG.
GAS COOLER
USED OIL ACCUMULATION DRUM
LIQUID SEPARATOR
SCRUBBERS
GAS COOLERS
EQUIP. STORAGE BLDG.
EMERGENCY EQUIP STORAGE BLDG.
PIPELINE EQUIP. STORAGE BLDG.
DIESEL TANK (NO LONGER IN SERVICE)
USED OIL ACCUMULATION STORAGE AREA
EMPTY CONTAINER STORAGE AREA
FLAMMABLE LIQUIDS STORAGE BLDG.
GAS TANK (NO LONGER IN SERVICE)
UNIT B COMP. BLDG.
UNIT A COMP. BLDG.
C UNIT BLDG
D UNIT BLDG.
MCC BLDG.
CONT'L BLDG.
LUBE OIL COOLER
WASTE ACCUM AREA
MAINTENANCE BLDG.
FIRE PUMP BLDG.
FIRE WATER TANK
LIGHT POLE (TYP.)
GENERATOR BLDG.
EMERGENCY GENERATOR
GATE
STORAGE BLDG.
TRUCK SHED
CAR SHED
MAIN ENTRANCE & EVACUATION ROUTE