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NORTHWEST PIPELINE LLC

STATEMENT OF BASIS FOR AIR OPERATING PERMIT 04-01

RENEWAL #4

August 14, 2020

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List of Abbreviations

AOP	Air Operating Permit
BCAA	Benton Clean Air Authority
BTU	British Thermal Units
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dscf	Dry standard cubic foot
Ecology	Washington State Department of Ecology
EPA	United States Environment Protection Agency
FCAA	Federal Clean Air Act
gr/dscf	Grain per dry standard cubic foot
MACT	Maximum Achievable Control Technology Standard
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
MVAC	Motor Vehicle Air Conditioner
NOC	Notice of Construction
NO_x	Oxides of Nitrogen
OA	Order of Approval
O_2	Oxygen
O&M	Operation & Maintenance
PE	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
RICE	Reciprocating Internal Combustion Engine
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
SIP	State Improvement Plan
SO_2	Sulfur Dioxide
tpy	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
VOC	Volatile Organic Particulate
WAC	Washington Administrative Code

DEFINITIONS OF WORDS AND PHRASES

Terms not otherwise defined in this permit have the meaning assigned to them in the referenced regulations.

Administrator The administrator of the United States Environmental Protection Agency or her/his designee [WAC 173-401-200(12), 10/4/93]

Chapter 401 Permit Any permit or group of permits covering a source, subject to the permitting requirements of Chapter 173-401 WAC, that is issued, renewed, amended, or revised pursuant to Chapter 173-401 WAC [WAC 173-401-200(5), 10/4/93]

Emission Limitation A requirement established under the FCAA or Chapter 70.94 RCW which limits the quantity, rate or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment work practice, or operational standard promulgated under the FCAA or Chapter 70.94 RCW [WAC 173-400-030(22), 9/13/96]

Emissions Unit Any part of a stationary source or source which emits or would have the potential to emit any pollutant subject to regulation under the Federal Clean Air Act, Chapter 70.94 RCW, or 70.98 RCW [WAC 173-400-030(23), 9/13/96]

Federal Clean Air Act Federal Clean Air Act. also known as Public Law 88-206, 77 Stat. 392. December 17, 1963, 42 U.S.C. 7401 et seq., as last amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990 [WAC 173-401-200(13), 10/4/93]

Opacity The degree to which an object seen through a plume is obscured, stated as a percentage [WAC 173-400-030(51), 9/13/96]

PM Standard An emission limitation on the amount of particulate matter an emissions unit may emit, generally expressed in terms of grains per dry standard cubic foot, pounds per hour, or some other concentration or emission rate.

Visible Emissions An emission limitation on visible emissions expressed in Standard percent opacity

STATEMENT OF BASIS FOR NORTHWEST PIPELINE LLC

CHAPTER 401 AIR OPERATING PERMT
AOP 04-01 RENEWAL #4 (2020)

Northwest Pipeline Operations

Peak Day Capacity	3.7 billion cubic feet per day
Seasonal Storage	13 billion cubic feet
Approximate Daily Throughput	2.1 billion cubic feet
Supply Areas	Rocky Mountain, Canada & San Juan
Market Areas	Western United States
Approximate miles of Pipeline:	3,900
Compressor Stations	41

Northwest Pipeline is an approximately 3,900-mile bi-directional transmission system crossing the states of Washington, Oregon, Idaho, Wyoming, Utah and Colorado. Northwest's bi-directional system provides access to British Columbia, Alberta, Rocky Mountain, and San Juan Basin gas supplies.

1. Introduction

This document sets forth the legal and factual basis for the permit conditions in the FINAL Air Operating Permit (AOP) issued by the Benton Clean Air Agency (BCAA) for a natural gas compressor station located near Plymouth, Washington. This document is called a “Statement of Basis” and is required by the Washington State regulations (WAC 173-401). A Statement of Basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

2. Basis for Title V Applicability

Northwest Pipeline LLC, Plymouth Liquid Natural Gas (LNG) Plant/Compressor Station, is subject to Title V (Air Operating Permit Regulations) of the Federal Clean Air Act, due to the potential emissions of nitrogen oxides (NO_x) Volatile Organic Compounds (VOCs) and carbon monoxide (CO), including design and federally enforceable limits on the equipment, in excess of 100 tons per year (tpy). WAC 173-401-200(17)(b) identifies any source that directly emits or has the potential to emit 100 tpy of any air pollutant as a major source. Major sources are required to obtain Title V permits under WAC 173-401-300(1)(a)(i).

This facility does not emit more than 10 tons per year of a single hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants. For the purposes of NESHAPS or MACT, this facility is an area source.

WAC 173-401-700(8) requires that a statement be provided at the time a draft permit is issued under the Title V program, setting forth the legal and factual basis for permit conditions including reference to the applicable statutory or regulatory provisions for the conditions. This document provides the basis for the draft permit for Northwest Pipeline.

Table 1: Annual Potential to Emit*

EP	EMISSION UNIT	NO_x (TPY)	CO (TPY)	VOC (TPY)	SO_2 (TPY)	PM_{10} (TPY)	Formaldehyde (lb/yr)
1	IR 26 KVS Reciprocating Engine	219.88	10.21	4.86	0.02	0.41	2,220.95
2	IR 26 KVS Reciprocating Engine	219.88	10.21	4.86	0.02	0.41	2,220.95
3	IR 26 KVS Reciprocating Engine	219.88	10.21	4.86	0.02	0.41	2,220.95
4	IR 26 KVS Reciprocating Engine	219.88	10.21	4.86	0.02	0.41	2,220.95
5	Saturn 10-T1300 NG Turbine	13.36	4.60	0.31	0.22	0.44	97.19
6	Vaporizer	15.81	132.01	18.75	0.13	1.67	33.04
7	Vaporizer	15.81	132.01	18.75	0.13	1.67	33.04
8	Vaporizer	15.81	132.01	18.75	0.13	1.67	33.04
9	Vaporizer	15.81	132.01	18.75	0.13	1.67	33.04
10	Backup Generator	2.56	4.20	0.03	0.00	0.02	46.25
11	Boiler	2.16	1.81	0.12	0.01	0.16	3.24
13	6 MMBTU Regenerative Heater	1.22	2.05	0.13	0.01	0.19	3.66
14	Diesel Fire Pump	0.43	0.09	0.03	0.03	0.03	47.20
15	Diesel Fire Pump	0.43	0.09	0.03	0.03	0.03	47.20
Totals		962.92	581.72	95.08	0.93	9.21	4.62 (t)

- Annual potential to emit values as submitted by Northwest Pipeline LLC on 28-Aug-2008 as part of the renewal application and the emission limits defined in BCAA Order #2002-0015 on 7-Nov-2002 for the Saturn 10-T1300 turbine.
- Unit specific emissions estimates are included in Appendix B.

3. Purpose of Current Permitting Action

The purpose of the current permitting action is to renew the Title V Permit for this facility and to incorporate 40 CFR 63 Subpart ZZZZ (RICE MACT) requirements. Diesel engines for fire pumps were replaced which did not require NSR. A regenerative heater replaced two salt bath heater with NOC 2015-0007; those requirements are incorporated into this action.

4. Attainment Classification

The facility is located in an area that is unclassified for all criteria pollutants as of March 2020.

5. Title V Facility Timeline and Permitting History

Original Title V AOP Issued (AOP #05-0016) 12-Sep-1996
Renewal AOP Application Submitted 15-Jun-2001
Renewal AOP Application Deemed Complete 15-Aug-2001
Original Title V AOP Expiration Date 20-Dec-2001

BCAA Order #2002-0015 Issued (Saturn Turbine) 7-Nov-2002

Draft Renewal AOP Issued 18-Jul-2004
Public Comment Period Begins 18-Jul-2004
Public Comment Period Ends 18-Aug-2004
EPA Review Period Begins 18-Aug-2004
EPA Review Period Ends 2-Oct-2004
Final Renewal AOP Issued (AOP #04-01) 1-Sep-2004
Final Renewal AOP Effective Date 1-Sep-2004
Renewal AOP Expiration Date 1-Sep-2009

Renewal AOP Application Submitted 28 Aug-2008
Renewal AOP Application Deemed Complete 27-Oct-2008
Final Renewal AOP Issued (AOP #04-01) 18-Sep-2009
Renewal AOP Expiration Date 18-Sep-2014

Renewal AOP Application Submitted ..... 12 Sept 2013
Renewal AOP Application Deemed Complete ..... 25 Feb 2014
Final Renewal AOP Issued (AOP #04-01) 15-Sep-2014
Renewal AOP Expiration Date 15-Sep-2019

BCAA Order #2015-0007 Regenerative Heater 6-Aug-2015

Renewal AOP Application Submitted ..... 7 August 2018
Renewal AOP Application Deemed Complete ..... 25 September 2018
Final Renewal AOP Issued (AOP #04-01) ..... August 14, 2020
Renewal AOP Expiration Date ..... August 14, 2025

.....

6. Facility Identifying Information

6.1. Company Name: ..... Plymouth Plant – Williams Northwest Pipeline LLC

6.2. Facility Name: ..... Plymouth LNG Plant/Compressor Station

6.3. Parent Company: ..... Williams Northwest Pipeline LLC

6.4. Facility Address: ..... 42612 E Christy Rd, Plymouth, WA 99346

6.5. Responsible Official: ..... , Director of Operations

6.6. Mailing Address: ..... 295 Chipeta Way, Salt Lake City, UT 84108

6.7. Facility Contact: ..... Aaron Galer, Environmental Specialist

6.8. Facility Contact Phone Number: 801/584-6288

6.9. Unified Business Identification Number: 87-0269236

6.10. Standard Industrial Classification Code: ..... 4922 [NAICS – 486210]

7. Facility Description

The Plymouth LNG Plant of Northwest Pipeline LLC is located in Township 5N, Range 27E, Section 11 in Benton County, Washington. The Plymouth LNG Plant receives pressurized natural gas feedstock from a selection of four main gas pipelines that are owned by Northwest Pipeline LLC. Each gas line is equipped with a branch line to the facility that includes a remote-operated, emergency shutoff isolation valves for isolation during emergencies. The branch lines converge into a main feed line, where pressures, flows and temperatures are monitored. A separate branch from the main feedstock line provides fuel gas for the gas-fired equipment on-site. The compressor station maintains gas pressure on the four pipelines as demand dictates using four reciprocating engines and one gas turbine, all of which burn natural gas, and liquefies natural gas from the pipelines for peak demand storage.

Natural Gas Compression

Four Ingersoll-Rand natural gas-fired engines and one Saturn 10-T1300 natural gas engine are used to provide compression capacity for the four main natural gas lines that run through the plant. Natural gas entering the plant at a lower pressure is pressurized to provide transportability through the natural gas pipeline.

Northwest Pipeline's Plymouth facility includes four natural gas fired Ingersoll Rand reciprocating engines; Units 1 – 4; each 1,000 hp. There is one natural gas fired turbines Unit 5, a Solar unit rated at 1,292 HP. The function of the natural gas engines and turbine is to produce gas horsepower in order to induce flow of the gas in the pipeline. Natural gas entering the plant at a lower pressure is pressurized to provide transportability through the natural gas pipeline. The horsepower requirement at the station varies depending on customer demand, weather conditions, availability of compressor units at other stations on the pipeline, downstream pressure requirements, and receiving pressures and volumes. Consequently, normal operation includes operation of any of the four reciprocating engineers, or the turbine individually, or combinations of the units together.

LNG Storage

Gaseous natural gas feedstock is filtered through a common filter/separator to remove larger impurities and water; the filter discharge is sent to a waste sump. After being metered at a metering station, the natural gas is sent through an adsorber tower to purify and reduce the dew point of the gas, making it easier to liquefy. Once the adsorber tower reaches maximum capacity, the gas flow is switched to the other tower while the first tower is regenerated. Regeneration is done by heating a portion of the natural gas with a regeneration heater which is located downstream of the adsorber. Any natural gas produced during the regeneration process is cooled, compressed, and returned to the pipelines.

After exiting the adsorber tower, gaseous natural gas enters a liquefaction unit, called a cold box, which is refrigerated using a series of six cryogenic exchangers. These cryogenic exchangers utilize nitrogen, methane, ethylene, propane, isobutane, and isopentane as refrigerants to reduce the temperature of the natural gas until it liquefies. The cold box

refrigerants are enclosed systems and any vaporized refrigerant is recaptured, compressed, and reused.

Once liquefied, the natural gas is stored in either LNG Storage Tank I or II. Instrumentation is installed on both storage tanks to monitor liquid densities, temperatures, levels, and boil-off flow rates. Any gas that is produced by boil-off from the storage tanks is repressurized by a boil-off compressor and fed back into the four main gas lines.

LNG Vaporization

When initiated by natural gas demand, liquid natural gas is vaporized into gaseous natural gas. Based on which tank, LNG Storage Tank I or II, which has the higher ethane content or BTU rating, liquid natural gas is withdrawn and sent to the vaporizers, which are water filled, gas-fired, heat exchangers that return the natural gas to its original gaseous state. The natural gas is then compressed and discharged into one of the four main gas lines.

8. Facility Emissions Units/Processes

a. General Facility (Section 2.1 in AOP)
b. Saturn 10-1300 Natural Gas Turbine (Section 2.2 in AOP)
c. RICE Requirements (Section 2.3 in AOP)
d. GTS Regeneration Process Heater (Section 2.4 in AOP)

Emission Point	Description	Air Pollution Control Equipment
Units 1 – 4	Ingersoll Rand 26 KVS Reciprocating Compressor Engines 1,000 hp	None
These engines are Ingersoll Rand 26 KVS; 1000 HP, 4S-LB (four stroke lean burn) natural gas-fired reciprocating engines and were installed in 1956. All four pre-date BCAA's Notice of Construction (NOC) program and the federal Prevention of Significant Deterioration (PSD) program, so no new source review approvals have been required for these units. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400. These engines are subject to applicable requirements found in 40 CFR 63 Subpart ZZZZ MACT for RICE.		

Unit 5	Solar T-1300 Turbine; 1,292 hp	The use of pipeline quality natural gas and good combustion practice along with emission limits was determined to be BACT for this unit.
Unit 5 is a Solar Turbine, T-1300 rated at 1,292 hp. It is fueled by natural gas. It was installed in 2002 through BCAA NOC 2002-0015. It is subject to 40 CFR 60, Standards of performance for new stationary sources and 40 CFR 60 Subpart GG, Standards of Performance for Stationary Gas Turbines. The use of pipeline quality natural gas and good combustion practice was determined to be BACT for this unit.		

Units 6-9	Vaporizers	None
Units 6 – 9 are vaporizers with a rated capacity of 51.3 MMBtu/hour. These engines are Ingersoll Rand 26 KVS natural gas-fired reciprocating engines and were installed in 1956. All four pre-date BCAA's Notice of Construction (NOC) program and the federal Prevention of Significant Deterioration (PSD) program, so no new source review approvals have been required for these units. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400		

Unit 10	Emergency Generator Waukesha 1235 KW	None
Unit 10 is a natural gas fired emergency generator used for emergency power. Its permit limit is 200 hours per year. It was installed in 1956.		

This unit pre-dates BCAA's Notice of Construction (NOC) program and the federal Prevention of Significant Deterioration (PSD) program, so no new source review approvals have been required for these units. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400. This unit is subject to applicable requirements found in 40 CFR 63 Subpart ZZZZ MACT for RICE.

Unit 11	5 MMBtu/hr natural gas fired boiler	None
Unit 11 is a natural gas fired boiler used for process heat. This unit pre-dates BCAA's Notice of Construction (NOC) program and the federal Prevention of Significant Deterioration (PSD) program, so no new source review approvals have been required for these units. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400		

Units 13	Regenerative Heater	Use pf pipeline grade natural gas and good combustion practices
Unit 13 is a GTS regeneration process heater rated at 5.68 MMBtu/hr., Model SC-H6. It was installed in 2015 through BCAA Order 2015-0007. Unit 13 replaced two units (previously 12 and 13).		

Units 14-15	Diesel Fire Pumps 1 and 2 John Deere-Clarke Rated hp 144@1750 rpm	None
Units 14 and 15 are diesel fire pumps rated at 144 hp each. These units were installed in 2014. WAC 173-144-110(4)(h)(xxxix), Stationary emergency IC engines with a aggregate brake horsepower less than or equal to500 brake horsepower are exempt from submitting a notice of construction. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400		

9. Insignificant Emission Units/Activities

9.1. Insignificant emission units proposed by Northwest Pipeline LLC in the Title V Renewal Application submitted to BCAA that have been found to meet the requirements outlined in WAC 173-401-533 as insignificant on the basis of size or production rate:

- *Twelve (12) 20,000 BTU heaters* used for building heat (WAC 173-401-533(2)(e) – Combustion sources less than 5 MMBTU/hr, exclusively using natural gas, butane, propane and/or LPG).

- *Four (4) 75,000 BTU heaters used for building heat* (WAC 173-401-533(2)(e) – Combustion sources less than 5 MMBTU/hr, exclusively using natural gas, butane, propane and/or LPG).

9.2. Insignificant emission units outlined in WAC 173-401-532 may be found at the facility, but Northwest Pipeline LLC opted to omit listing any of these activities in the AOP application as allowed in WAC 173-401-532(1).

10. Applicable and Inapplicable Requirement Determinations and Explanations

10.1. **Initial or one-time** BCAA Order of Approval and Notice of Construction requirements that have not been included in the AOP as on-going applicable requirements:

- BCAA Order #2002-0015, Condition 5.3.3 – The initial source performance test was conducted 20-Nov-2003. The source test plan and final report are on file at BCAA's office in Richland, WA.

- BCAA Order #2002-0015, Condition 5.5.2 – An O&M Manual has been developed by Northwest Pipeline LLC and is available on-site.

- BCAA Order #2002-0015, Condition 6.1 – According to the letter submitted by Northwest Pipeline on 10-Nov-2003, initial start-up of the Saturn natural gas turbine occurred on 21-Oct-2003. Therefore, this condition no longer applies.

- Order #2002-0015, Condition 6.7 – The Saturn natural gas turbine has been constructed and is operating. Therefore, this condition no longer applies.

- Order #2002-0015, Condition 6.8 – The Saturn natural gas turbine has exceeded the testing and break in period based on a start date of 21-Oct-2003. Therefore, this condition no longer applies.

- Order #2002-0015, Condition 7.3 – The Saturn natural gas turbine is operating. Therefore, this condition no longer applies.

- Order #2002-0015, Condition 7.7 – The notice of construction was issued November 7, 2001. Therefore, the 30-day comment period has been exceeded and this condition no longer applies.

- Order #2015-0007, Condition 5.1.1.1 – the GTS Regen heater has been installed and has a low NO_X burner.

10.2. Order requirements that clarified miscellaneous issues regarding the applicable emission units, but were not, in actuality, approval conditions, have not been included in the AOP as on-going applicable requirements:

- Order #2002-0015, Condition 5.4.1 – "NWP shall conduct visible emissions observations to ensure compliance with condition 5.2 according to the following:" - This condition states the applicability of other conditions (e.g. Conditions 5.4.1.1, 5.4.1.2, and 5.4.1.3) which have been included in the MRRR section of the AOP.

- Order #2002-0015, Condition 6.3 – "This facility is subject to the Title V operating permit provisions under WAC 173-401 and the BCAA Air Operating Permit Program."

- Order #2002-0015, Condition 7.5 - "Nothing in this Order is intended to satisfy additional requirements that may exist under other permits or regulations of this or other agencies."

- Order #2002-0015, Condition 7.7 – "For technical assistance with this Order, please contact the BCAA at 509/943-3396."

10.3. Applicable Requirements

The permittee listed applicable and inapplicable requirements in the renewal application. BCAA reviewed that information and summarized the applicable regulations in the table below. Footnotes are included where our determination differed from that of the permittee. Applicable regulations that are emissions related are referenced in the AOP. Applicable regulations that are procedural do not require any action on the part of the source and are not included in the AOP as on-going applicable requirements. Applicable Requirements are listed in Table 2.

Table 2: Applicable Requirements

REGULATION OR STATUTE	APPLICABLE (Emissions Related)	APPLICABLE (Procedural)	NOT APPLICABLE (Based on current operations)
Federal Regulations			
40 CFR 52.21 b-w			X[1]
40 CFR 52, Subpart WW			X
40 CFR 60, Subparts A & GG and Appendices A and B	X[2]		

x

[1] The permittee is not currently subject to the PSD program under 40 CFR 52.21 based on the fact that the four reciprocating engines were installed in 1956 and the potential emissions from the Saturn gas turbine are below the threshold levels.

Table 2: Applicable Requirements

REGULATION OR STATUTE	APPLICABLE (Emissions Related)	APPLICABLE (Procedural)	NOT APPLICABLE (Based on current operations)
40 CFR 60, excl. A & GG			X[2]
40 CFR 61, Subpart M		X	
40 CFR 61, excl. M			X
40 CFR 63, Subpart ZZZZ		X	
40 CFR 63, excl. ZZZZ			X
40 CFR 64			X[3]
40 CFR 68			X
40 CFR 70.6(a)(3)	X		
40 CFR 72, excl. 70.6(a)3)		X	
40 CFR 75			X
40 CFR 76			X
40 CFR 77			X
40 CFR 79 and 80			X
40 CFR 82, Subparts A – D			X
40 CFR 82, Subparts E - F		X	
40 CFR 98		X	
Washington State Regulations			
WAC 173-400-010		X	
WAC 173-400-020		X	
WAC 173-400-030		X	
WAC 173-400-040	X		
WAC 173-400-045		X	
WAC 173-400-050 (1,3)	X		
WAC 173-400-050 (2)			X
WAC 173-400-060	X		
WAC 173-400-070			X
WAC 173-400-075			X
WAC 173-400-081		X	
WAC 173-400-091			X

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[2] The permittee designated this as a procedural requirement in the AOP renewal application, However 40 CFR 60 Subpart A and GG apply to the facility as emissions-related requirements and all other new source performance standards are inapplicable based n current operations.

[3] The Compliance Assistance Monitoring program only applies to sources at a major source that use a control device to achieve compliance with an emission limit or standard; and the potential pre control device emissions of the applicable regulated pollutant are equal to or greater than 100% of the amount required for a source to be classified as a major source under 40 CFR 70.

Table 2: Applicable Requirements

REGULATION OR STATUTE	APPLICABLE (Emissions Related)	APPLICABLE (Procedural)	NOT APPLICABLE (Based on current operations)
WAC 173-400-099			X
WAC 173-400-100			X
WAC 173-400-101			X
WAC 173-400-102			X
WAC 173-400-103			X
WAC 173-400-104			X
WAC 173-400-105	X		
WAC 173-400-107 (9/20/93) F	X		
WAC 173-400-107 (9/16/18) S	X		
WAC 173-400-108	X		
WAC 173-400-109	X		
WAC 173-400-110		X	
WAC 173-400-112			X
WAC 173-400-113		X	
WAC 173-400-114		X	
WAC 173-400-115	X		
WAC 173-400-117			X
WAC 173-400-118		X	
WAC 173-400-120			X
WAC 173-400-131			X
WAC 173-400-136			X
WAC 173-400-141			X
WAC 173-400-151			X
WAC 173-400-161			X
WAC 173-400-171			X
WAC 173-400-180		X	
WAC 173-400-190			X
WAC 173-400-200		X	
WAC 173-400-205	X		
WAC 173-400-210			X
WAC 173-400-220			X
WAC 173-400-230		X	
WAC 173-400-240		X	
WAC 173-400-250		X	
WAC 173-400-260		X	
WAC 173-401		X	
WAC 173-405			X

Table 2: Applicable Requirements

REGULATION OR STATUTE	APPLICABLE (Emissions Related)	APPLICABLE (Procedural)	NOT APPLICABLE (Based on current operations)
WAC 173-406			X
WAC 173-410			X
WAC 173-415			X
WAC 173-420			X
WAC 173-421			X
WAC 173-422			X
WAC 173-425 (Outdoor Burning)		X	
WAC 173-430			X
WAC 173-433, excl 110, 120			X
WAC 173-433-110			X
WAC 173-433-120			X
WAC 173-434			X
WAC 173-435			X
WAC 173-441	X[4]		
WAC 173-450			X
WAC 173-460		X	
WAC 173-470		X	
WAC 173-474		X	
WAC 173-475		X	
WAC 173-480			X
WAC 173-481			X
WAC 173-490			X
WAC 173-491			X
WAC 173-492			X
WAC 173-495			X
WAC 246-247			X

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[4] WAC 173-441 requires owners and operators to quantify and report emissions of GHG from source categories that emit over 10,000 metric tons CO2e or more per year. All reports are submitted directly to Ecology with little or no involvement by BCAA.

40 CFR 64 Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) rule in 40 CFR Part 64 requires owners and operators to monitor the operation and maintenance of their control equipment so that they can evaluate the performance of their control devices and report whether or not their facilities meet established emission standards.

If owners and operators of these facilities find that their control equipment is not working properly, the CAM rule requires them to take action to correct any malfunctions and to report such instances to the appropriate enforcement agency (i.e., State and local environmental agencies). Additionally, the CAM rule provides some enforcement tools that will help State and local environmental agencies require facilities to respond appropriately to the monitoring results and improve pollution control operations.

The CAM rule applies at major sources with emission units that have control devices, and emissions from the emission unit could exceed 100 tons per year if the control device was not operated. No emission units at this facility have control devices, therefore CAM is not applicable.

40 CFR 63 Subpart ZZZZ MACT for RICE (Reciprocating Internal Combustion Engines)

40 CFR 63, Subpart ZZZZ establishes standards for stationary reciprocating internal combustion engines (RICE). Under the provisions of Subpart ZZZZ, the Ingersoll-Rand Reciprocating Compressor Engines, the Waukesha Emergency Generator and John Deere-Clarke Fire Pumps at this facility are classified as existing stationary RICE and are subject to the regulation.

- The Compressors are >500 hp, 4S-LB, existing RICE at a remote area source.
- The Emergency Generator is >500 hp existing emergency RICE at an area HAP source.
- The Fire Pumps are new Emergency CI stationary RICE.

This facility meets the definition of "remote" in §63.6675 Remote stationary RICE means stationary RICE meeting any of the following criteria:

> (3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25-mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.
>
> A diagram that shows the remote location is included as Appendix C.

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

> (f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators

must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

Requirements for all engines include the work practice standards identified in Table 2d of the NESHAP, the requirement to operate the generator in a manner consistent with safety and good air pollution control practices for minimizing emissions, and the requirement to operate the generator according to manufacturer's emission-related written instructions. Since these are emergency generators, there are also requirements to track hours of operation and limit hours of non-emergency operations.

70 CFR 68 Chemical Accident Prevention Provisions

40 CFR 68 "Chemical Accident Prevention Provision" does not apply to Northwest Pipeline's compressor stations because the compressor stations do not meet the definition of "stationary source". Under 40 CFR 68 Subpart A, definitions, the regulations state under the term "Stationary Source" the following:

"The term stationary source does not apply to transportation, including storage incident to transportation, of any regulated substance or any other extremely hazardous substance under the provisions of this part. Transportation includes, but is not limited to, transportation subject to oversight or regulation under 49 CFR parts 192, 194, 195, or a state natural gas or hazardous liquid program for which the state has in effect a certification to DOT under 49 U.S.C. section 60105... "

Northwest Pipeline is a natural gas transmission company and is currently regulated under 49 CFR part 192 and thus is not required to submit a risk management plan.

However, the regulation has been noted in the inapplicable terms of the permit in order to address future operations that may store or handle substances that are subject to the regulation.

[WAC 173-401-640(2)]

Reporting of Emissions of Greenhouse Gases WAC 173-441 (state)

WAC 173-441 requires owners and operators to quantify and report emissions of greenhouse gases from applicable source categories if actual emissions from their facility are ten thousand metric tons C02e or more per year. Annual greenhouse gas emissions from this facility have the potential to be greater than ten thousand tons so the facility may be subject to the reporting program if actual emissions are ten thousand metric tons C02e or more per year. All required reports are to be submitted directly to Ecology. Likewise, report review and approval of calculation methodology is performed by Ecology with little or no involvement by BCAA.

Information submitted by the facility shows that this regulation does not apply to the facility because the facility emits below the 10,000 metric tons of OC2e of greenhouse gases per year threshold.

[WAC 173-441]

40 CFR 98, Federal Mandatory Greenhouse Gas Emission Inventory Regulation

The requirements for the mandatory GHG reporting are in 40 CFR 98. This regulation is implemented by the EPA. This regulation does not contain applicable requirements under the Title V program.

Subpart C has reporting requirements for stationary fuel combustion sources. The facility must have aggregate maximum rated het input over 30 MMBtu/hr or greater and emit over 25,000 metric tons of CO2e per year in combined emissions from all stationary fuel combustion sources for this Subpart to apply.

Subpart W applies if the facility meets the definition of one of the identified industry segments and emits 25,000 metric tons of CO_2e or more per year. Onshore Natural Gas Transmission Compression is a Subpart W industry segment.

The Plymouth Plant/Compressor Station facility meets the definition of the transmission compression industry segment and is subject to Subpart W if actual emissions from Subpart C sources and Subpart W sources exceed 25,000 metric tons of CO_2e.

Information submitted by the facility shows that this regulation does not apply to the facility because the facility emits below the 25,000 metric tons of CO_2 e of greenhouse gases per year threshold.

11. Standard Terms and Conditions

This section of Northwest Pipeline's permit contains standard terms and conditions that apply to all sources in BCAA's Title V program. These conditions have been reviewed by EPA and include all terms required in Chapter 173-401 WAC as well as requirements from other air quality laws and regulations. The standard terms have been organized in seven subsections including:

- Permit Administration;
- Inspection & Entry;
- Emergency Provisions;
- General Monitoring, Recordkeeping, & Reporting;
- Compliance Certification;
- Truth and Accuracy Of Statements And Documents And Treatment Of Documents; And
- Applicable When Triggered Requirements.

A discussion of each subsection follows. The requirements in each section are briefly discussed, along with the citations for each requirement. Using the same methodology as the permit, requirements that are not required under the FCAA are indicated by the phrase "STATE/LOCAL ONLY" after the legal citation. Although, in and of itself, Chapter 173-401 WAC is not federally enforceable, the requirements of this regulation are based on federal requirements for the operating permit program. Upon issuance of the permit, the terms based on Chapter 173-401 WAC will become federally enforceable for the source.

NOTE: The adoption date for each requirement is also given. The adoption date may be important if an earlier version of the requirement is in the State Implementation Plan (SIP). In many instances, a revision may have occurred within a section that does not affect the requirement being cited. If this is the case, the most recent adoption date is given, along with the SIP version date in parentheses, and the requirement is federally enforceable. If a change was made in the requirement, both the earlier, SIP approved, requirement and the most recent requirement would go in the permit. The version in the SIP would be federally enforceable, and the more recent version would be enforceable at the state or local level.

If a new rule or a newer version of a rule has been submitted to EPA for inclusion in the SIP and EPA has proposed action, but not taken final action, the permit will be drafted so that when EPA action does occur, the requirement will become federally enforceable.

Permit Administration

Below are standard terms included in the subsection, Permit Administration. Generally, the language tracks the rule language closely with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirement.

1.1. Report Submittals. This term provides the address to which reports must be sent and requires all reports to be certified by a responsible official. [WAC 173-401-520, 10/4/93]

1.2. Duty to Supplement or Correct Application. The permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, must promptly submit such supplementary facts or corrected information. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit. [WAC 173-401-500(6), 9/16/02]

1.3. Schedule of Compliance. The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis. The compliance schedule is referenced in the second on permit applications, WAC 173-401-510(2)(h)(iiii), 05/17/1994. [WAC 173-401-630(3), 10/4/93]

1.4. Permit Shield. Compliance with a permit condition is deemed compliance with the applicable requirements identified in the permit upon which that condition is based, as of the date of permit issuance except that this shield will not affect the following:

a. The provisions of Section 303 of the FCAA (emergency orders), including the authority of the Administrator under that section;

b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;

c. The ability of EPA to obtain information from the permittee pursuant to Section 114 of the FCAA;

d. The ability of BCAA to establish or revise requirements for the use of reasonably available control technology (RACT) as provided in Chapter 252, Laws of 1993.

[WAC 173-401-605(3), 9/16/2002], [RCW 70.94.154, 1/4/2001 (S)], [WAC 173-401-640(1) & (4), 10/4/93]

1.5 Reasonably Available Control Technology (RACT) - Control technology that is reasonably available, and both technologically and economically feasible. Usually applied to existing sources in nonattainment areas; in most cases is less stringent than new source performance standards. [WAC 173-401-605(3), 10/04/1993], [RCW 70.94.154, 1/4/2001 (S)]

1.6 Recordkeeping

This subsection contains general requirements for recordkeeping. Monitoring, recordkeeping, & reporting requirements (MRRR) that apply to specific emission standards or specific emission activities are located in the second section of the permit. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements.

1.6.1. Records of Required Monitoring Information. This term details what records must be kept relating to monitoring.

1.6.2. Records of Changes. The permittee must keep records of changes made at the source that result in emissions of a regulated air pollutant, subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from such a change.

1.6.3. Retention of Records. The permittee must keep monitoring data and support information for a period of five years.

1.6.4 This term references Inspection and Entry, and Duty to Provide information.

[WAC 173-401-615(2), 09/16/2002], [WAC 173-401-630(2)(b), 09/16/2002], [40 CFR 60.7(b), 60.7(f), 7/01/2001], [BCAA Order #2002-0015, 5.4.5]

1.7 Reporting and Compliance Certification

As part of BCAA's Title V program, sources are required to submit annual compliance certifications to assure source compliance with 401 permits per WAC 173-401-630(1), 10/4/93. (BCAA may require more frequent certifications if the source is out of compliance or if an underlying requirement specifies more frequent submittals.) This subsection of the permit addresses the details of these compliance certification submittals, including how often submittals must occur, what the submittals must contain and to whom the certifications must be sent. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements. [40 CFR 52.33(a), 07/01/2001], [40CFR 60.11(g), 07/01/2001]

1.7.1 Prompt Reporting of Deviations. The permittee must promptly report deviations from permit requirements, the probable cause of such deviations, and any corrective measures taken. (Prompt is defined in this permit term and is consistent with the reporting time limits of terms in the Emergency Provisions section.) [WAC 173-401-615(3)(b), 9/16/02]

1.7.2 Semi Annual Monitoring Reports. The permittee must submit monitoring reports to BCAA as follows:

- Monitoring report covering the period from January 1 – June 30 each year shall be submitted to BCAA and postmarked no later than October 15th of the same calendar year; and
- Monitoring report covering the period from July 1 – December 31 each year shall be submitted to BCAA and postmarked no later than April 15 of the following calendar year.
- Specific reporting dates are given that apply to monitoring reports after the most recent renewal.
- All instances of permit deviations must be identified in the monitoring reports. The monitoring reports must be certified by a responsible official. [WAC 173-401-615(3)(a), 9/16/02]

1.7.3. Compliance Certification Submittals.

- This term covers the frequency for submitting compliance certifications. [WAC 173-401-630(5)(a), 10/4/93]

- Compliance Certification Contents. This term describes what must be included in each compliance certification. [WAC 173-401-630(5)(c), 10/4/93]
- Specific reporting dates are given that apply to monitoring reports after the most recent renewal.
- Submittal to EPA. This term requires that certifications be sent to EPA as well as BCAA. [WAC 173-401-630(5)(d), 10/4/93]

1.7.4 Emission Inventory. The permittee must submit an inventory of emissions from the source each year and must maintain records sufficient to document reported emissions. The PSD and NOC also require that the annual report include other information including fuel usage, hours of operation, and monitoring information. [WAC 173-400-105(1), 8/15/01 (S)]

1.7.5 Submittals – all submittals to BCAA shall be sent to the address referenced in Section 1.1 and all must be certified.

[WAC 173-400-105(1), 08/15/2001 (S)], [WAC 173-400-107(3), 8/20/1993 (S)], [WAC 173-401-500(6), 09/16/2002], [WAC 173-401-520, 10/04/1993], [WAC 173-401-615(3), 09/16/2002], [WAC 173-401-630(1), 10/04/1993], [WAC 173-401-630(5)(a), 10/04/1993], [WAC 173-401-630(5)(c), 10/04/1993], [WAC 173-401-630(5)(d), 10/04/1993], [40 CFR 52.33(a), 07/01/2001], [40CFR 60.11(g), 07/01/2001]

1.8. Duty to Comply - The permittee must comply with the terms and conditions of the permit. [WAC 173-401-620(2)(a), 10/4/93]

1.9 Need to Halt or Reduce Activity Not a Defense - The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action. [WAC 173-401-620(2)(b), 10/4/93]

1.10 Permit Actions - This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If NORTHWEST PIPELINE files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance. [WAC 173-401-620(2)(c), 8/15/2001]

1.11 Property Rights. The permit does not convey any property rights of any sort, or any exclusive privilege. [WAC 173-401-620(2)(d), 10/4/93]

1.12 Duty to Provide Information. The permittee must furnish, within a reasonable time to BCAA, any information, including records required in the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. [WAC 173-401-620(2)(e), 10/4/93]

1.13 Permit Fees. The permittee must pay fees as a condition of this permit in accordance with BCAA's fee schedule. Failure to pay fees in a timely fashion shall subject the

permittee to civil and criminal penalties as prescribed in Chapter 70.94 RCW. [WAC 173-401-620(2)(f), 10/04/1993], [WAC 173-401-930(3), 12/30/1993], [RCW 70.94.162(1), 1/4/2001 (S)]

1.14 Severability. If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable. [WAC 173-401-620(2)(h), 10/4/93], [RCW 70.94.905, 1/4/2001 (S)]

1.15 Permit Appeals. The permit or any conditions in it may be appealed only by filing an appeal with the pollution control hearings board and serving it on BCAA within thirty days of receipt pursuant to RCW 43.21B.310. This provision for appeal is separate from and additional to any federal rights to petition and review under §505(b) of the FCAA, including petitions filed pursuant to 40 CFR 70.8(c) and 70.8(d). [WAC 173-401-620(2)(i), 10/4/93] [WAC 173-401-735(1), 4/2/97]

1.16 Permit Continuation. The permit will not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. [WAC 173-401-620(2)(j), 10/4/93]

1.17 Federal Enforceability - All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. [WAC 173-401-625, 10/4/93]

Inspection and Entry

Below are standard terms included in the subsection, Inspection & Entry. This subsection of the permit contains requirements for allowing authorized access to a facility for purposes of assuring/determining compliance with air quality requirements. Generally, the language tracks the rule language closely with only minor changes for clarity and conciseness. There is no intent to alter the effect of the requirements.

1.18. Inspection and Entry. Upon presentation of credentials and other documents as may be required by law, the permittee must allow BCAA, or an authorized representative, to enter a Chapter 401 facility or location where records are kept, to have access to and copy, at reasonable times records, to inspect, at reasonable times, any facility or equipment or operations regulated by the permit, and/or to perform sampling or monitoring, at reasonable times, for the purpose of assuring compliance. [WAC 173-400-105, 8/18/2001], [WAC 173-401-630(2), 10/4/93], [BCAA Order 2002-0015 7.1], [RCE 70.94.200, 1987]

Nothing in this condition limits the ability of EPA to inspect or enter the premises of the permittee under Section 114 of the FCAA. [WAC 173-401-640(4)(d), 10/4/93]

Obstruction of Access. No person may obstruct, hamper, or interfere with any authorized representative of BCAA who requests entry for the purpose of inspection, and who presents appropriate credentials; nor may any person obstruct, hamper or interfere with any such inspection. [RCW 70.94.200, 1987]

Emergency Provisions/ Excess Emissions

Below are standard terms that are included in the subsection, Emergency Provisions. This subsection of the permit contains provisions, governing the treatment of periods of emissions in excess of applicable standards, when such emissions stem from unforeseeable events or arise from start-up, shutdown or maintenance, where design or operational practices could not preclude such emissions. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements.

Excess emissions due to startup or shutdown conditions, scheduled maintenance or upsets that are determined to be unavoidable under the procedures and criteria in WAC 173-400-107 shall be excused and not subject to penalty. For any excess emission that Northwest Pipeline wants Benton Clean Air Agency to consider unavoidable and excusable under WAC 173-400-107, Northwest Pipeline shall submit the information required under WAC 173-400-107. [WAC 173-400- 107(2), 8/20/93]

WAC 173-400-107 addresses excess emissions and the language in the most current version of this rule specifies this section of the rule is only effective until the effective date of EPA's removal of the 9/20/93 version of WAC 173-400-107 from the SIP. The language in the proposed permit reflects the 9/20/93 version of the rule and remains unchanged from the draft permit. Once EPA takes action on the SIP, the permit will be modified to reflect the updated language in WAC 173-400-108 and WAC 173-400-109, and the removal of WAC 173-400-107.

1.19 Excess Emissions. This term incorporates the excess emissions provisions of Chapter 173-400 WAC which require that the excess emissions be excused and not be subject to penalty if certain criteria are met. As with the emergency provision above, the time limits for reporting excess emissions are included in this term. [WAC 173-400-107, 8/20/1993 (S)], [WAC 173-401-645, 10/4/93], [BCAA Order 2002-0015, 5.4.4], [BCAA Order 2002-0015, 6.2]

1.20 Operational Flexibility. In the event that an emissions unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. Recordkeeping and reporting must note the reason why, and lengths of time that, the emissions unit was not operated. [WAC 173-401-650(1)(a), 10/4/93]

Applicable When Triggered Requirements

The subsection, Applicable When Triggered Requirements, contains requirements that do not apply to the facility unless certain activities at the site trigger the requirement. BCAA has included these requirements in the permit, either because they are often triggered at sources or are important enough that their inclusion in the permit is warranted. Generally, the language tracks the rule language closely with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements. However, in the term, Source Testing, language has been added to clarify what an approved test method is, as the

rule does not elaborate on what “approved” means. The discussion below provides more detail in regard to this.

1.21 New Source Review. Prior to the establishment of a new source, including modifications, the permittee may be required to file and obtain approval under BCAA's Notice of Construction program.
[WAC 173-400-110, 8/20/93, 8/15/2001 (S)], [WAC 173-400-113, 8/20/93, 8/15/2001 (S)], [WAC 173-400-116, 8/15/2001 (S)], [WAC 173-400-141, 8/15/2001 (S)], [WAC 173-400-171, 8/20/93, 8/15/2001 (S)], [WAC 173-460 7/21/1998 (S)], [RCW 70.94.152, 1/4/2001 (S)]

1.22 Replacement or Substantial Alteration of Existing Control Equipment. Prior to replacing or substantially altering existing control equipment, the permittee shall file and obtain approval under BCAA's Notice of Construction program. [WAC 173-400-045(4), 8/15/2001 (S)], [WAC 173-400-114, 8/15/2001 (S)], [RCW 70.94.153, 1/4/2001 (S)

1.23 Administrative Permit Amendments – this section outlines the requirements and procedures for managing permit amendments that meet the criteria for ‘administrative permit amendment” in WAC 173-400-020. [WAC 173-401-720, 10/04/1993}, [BCAA Order #2002-0015, 7.4].

1.24 Changes not Requiring Permit Revisions – this section describes changes that may be made without a permit revision, and includ4es the conditions which must be med. The permit shield authorized under WAC 173-401-640 does not apply to changes made under this term.
[WAC 173-401-722, 09/16/2002], [WAC 173-401-620(2)(g), 10/04/1993]

Emissions Trading - No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit. [WAC 173-401-620(2)(g), 10/4/93]

1.25 Off-Permit Changes – this section describes changes that may be made which are not specifically addressed by the other permit terms and conditions. [WAC 173-401-724, 10/04/1993]

1.26 Reopening for Cause - This term lists instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements. [WAC 173-401-730, 10/4/93]

Emissions Trading - No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit. [WAC 173-401-620(2)(g), 10/4/93]

1.27 Federal Chlorofluorocarbon 9CFC) Requirements – this term outlines provisions of the CFC rule which must be followed handling or managing equipment containing CFCs.

1.28 Demolition and Renovation (Asbestos). The permittee must comply with applicable local, state, and federal requirements regarding demolition and renovation. [40 CFR 61, Subpart M, 07/01/2001], [WAC 173-400-075(1), 8/15/2001 (S)].

1.29 Permit Renewal and Expiration. The permit is in effect for five years. The permittee's right to operate this source terminates with the expiration of the permit unless a timely and complete application for renewal is submitted. Chapter 173-401-710(1) allows BCAA to set, in the permit, the due date for the renewal as long as it is no more than 18 months and no less than six months prior to expiration of the permit. BCAA specifies in the permit that the renewal must be submitted no more than 18 months and no less than 12 months prior to the permit expiration. The facility may continue to operate subject to final action by BCAA on the application, as long as a timely and complete application has been filed and all requested additional information necessary to process the permit is submitted by the deadline specified in writing by BCAA. [WAC 173-401-610, 10/4/93] [WAC 173-401-705, 10/4/93] [WAC 173-401-710(1) & (3), 8/15/01]

1.30 General Obligations – this term describes the general obligations included in WAC 173-401-640(4).
[WAC 173-401-640(4),10/04/1993]

12. Monitoring, Recordkeeping, Reporting Requirements (MRRR) – Sufficiency Explanations

This section contains emission limitations and emission related requirements, including general requirements for the facility. The section is divided into several subsections. The first subsection lists limitations that apply facility wide. Subsequent subsections focus on individual emission units or classes of similar emission units. As in all other sections of the permit, requirements that are not required under the FCAA are indicated by the phrase "STATE/LOCAL ONLY" after the legal citation.

This section of the permit is formatted differently from the STANDARD TERMS AND CONDITIONS section. Requirements are listed in columns. The actual requirement is given in one column of the table. The regulatory bases for the applicable requirements are listed in another column of the emission limitation tables. The averaging time and reference test method, used to determine compliance with the requirement, are listed in columns, if applicable. The monitoring, recordkeeping, and reporting requirements (MRRR) used to determine compliance with the requirement are listed in the last column of the emission limitation tables.

The monitoring, recordkeeping, and reporting requirements (MRRR) are enforceable and are given in the last subsection of the permit. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying requirement.

Facility-wide Emission Limitations

This subsection contains applicable emission limitations that apply facility-wide. The facility-wide emission limitations apply to insignificant emission units. However, monitoring, recordkeeping and reporting requirements are not required for the insignificant emission units because SRCAA has determined that they are not necessary to assure compliance with facility-wide emission limitations. GTN is required to certify compliance with the facility-wide emission limitations for insignificant emission units (see Condition 30 of permit).

Process 1: General Facility

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.1.1	All emission units are required to use RACT.	WAC 173-400-040, 1st paragraph, [20-Aug-1993](F) WAC 173-400-040, 1st paragraph, [15-Aug-2001](S), RCW 70.94.154(1)(S)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	
2.1.2	Visible emissions shall not exceed 20% opacity for more than three (3) minutes in any one hour.	WAC 173-400-040(1),(excl (c)&(d)) [20-Aug-1993] (F) WAC 173-400-040(1), [15-Aug-2001] (S)

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
MRRR 8M	Weekly visible emissions monitoring was defined for the Solar turbine permitted in 2002 and is considered to be sufficient monitoring for this unit with regard to the opacity standard. The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400. These requirements do not directly establish any specific regime of monitoring or recordkeeping. Consequently, BCAA has implemented monitoring and recordkeeping requirements under the "gap filling" provisions of WAC 173-401-615. These requirements are designed to assure compliance through periodic facility inspections and prompt corrective action demonstration of compliance is required in some cases via the visible emissions evaluation. The emission units at this facility combust only natural gas. Visible emissions, other than heat waves, from natural gas combustion are virtually non-detectable to the human eye. The following equation shows an example of calculation of particulate matter concentrations in exhaust gas from natural gas combustion based on EPA AP-42 emission factor corrected to 15% oxygen: (0.005 lb PM/MMBtu) * (7000 gr/lb) * (MMBtu/8720 dscf) * (20.9-15.0)/(20.9) = 0.001 gr/dscf @ 15% oxygen. Emissions are generally not visible until the concentration approaches 0.01gr/dscf. In addition, this source has a history of opacity compliance. Therefore, weekly opacity monitoring, in addition to response to emission unit malfunction is considered adequate for demonstrating compliance with WAC 173-400. The specifics of the monitoring described have been designed to provide relatively frequent evaluation of each potential emission point, while requiring EPA RM 9 only when visible emissions are observed. 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 prolonged environmental degradation. Test Method: RM22 NOTE: this is a gap filled MRR. [WAC 173-401-615(1)(b) & (3), 9/16/2002], [WAC 173-401-630(1), 10/04/1993], [BCAA Order #2002-0015, Standard Conditions 5.4.1.1 & 5.4.1.2]	
2.1.3	Particulate matter shall not be deposited beyond the property in sufficient quantity to interfere unreasonably with the use and enjoyment of other's property.	WAC 173-400-040(2), [15-Aug-2001] (S) BCAA Order #2002-0015, 6.6 .....(F)

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002] Test Method RM 22	
2.1.4	The source shall perform maintenance to minimize, and take reasonable precautions to prevent, fugitive emissions from becoming airborne.	WAC 173-400-040(3), [20-Aug-1993] (F) WAC 173-400-040(3), [15-Aug-2001] (S) BCAA Order #2002-0015, 6.5 .....(F)
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002]	
2.1.5	Odors shall not be generated which unreasonably interfere with any other property owner's use and enjoyment of his property.	WAC 173-400-040(4), [15-Aug-2001] .(S) BCAA Order #2002-0015, 6.4 .....(F)
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002]	
2.1.6	Emission or contaminants that are detrimental to the health safety or welfare of any person, or causes damage to property or business shall not be generated.	WAC 173-400-040(5), [20-Aug-1993] .(F) WAC 173-400-040(5). [26-(S)ep-2001] (S)
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002]	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.1.7	$SO_2 \leq 1000$ ppm_{vd} @ 7% O_2 (60-minute average)	WAC 173-400-040(6, 1(S)t), [20-Aug-1993] .....(F) WAC 173-400-040(6, 1(S)t), [15-Aug-2001] .....(S)
MRRR 3M	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 continuous 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. [WAC 173-401-615(1)(b), 09/16/2002]	
MRRR 4M	The monitoring was designed to verify that the quality of the natural gas used in the equipment meets low sulfur specifications and to provide a site-specific emission factor for use in the emissions calculations described in MRRR 4M.	
MRRR 5M	Source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from the engines and vaporizers in relation to emissions of other pollutants, and the technical feasibility of conducting periodic source testing. Alternative test methods, including a source test on a comparable unit conducted in accordance with EPA protocols and test methods, may be considered if submitted in writing to BCAA with supporting documentation. [WAC 173-400-105(2), 08/15/2001] Test Method: RM20	
2.1.8	No person shall conceal or mask emission of a contaminant.	WAC 173-400-040(7), [20-Aug-1993] .....(F) WAC 173-400-040(7), [15-Aug-2001] .....(S)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.1.9	The source shall perform maintenance to minimize emissions of, and take reasonable precautions to prevent, fugitive dust from becoming airborne.	WAC 173-400-040(8), [20-Aug-1993] (F) WAC 173-400-040(8), [15-Aug-2001] (S) BCAA Order #2002-0015, 6.5 .....(F)
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002]	
2.1.10	Particulate emissions of less than or equal to 0.23 gram/dry m^3 or 0.1 grain/dscf of exhaust gas	WAC 173-400-050(1) & (3), [20-Aug-1993] (F) WAC 173-400-050(1) & (3), [15-Aug-2001] (S) WAC 173-400-060, [20-Aug-1993] (F) WAC 173-400-060, [15-Aug-2001] (S)
MRRR 3M	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 continuous 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. [WAC 173-401-615(1)(b), 09/16/2002] Test Method RM5	
2.1.11	No source may use dispersion techniques or excess stack height to meet ambient air quality standards or PSD increment limitations.	WAC 173-400-200(2) [20-Aug-1993] .....(F) WAC 173-400-200(2) [15-Aug-2001] .....(S)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.1.12	Varying the rate of emission of a pollutant according to atmospheric conditions is prohibited, except as directed according to air pollution episode regulations.	WAC 173-400-205, [20-Aug-1993] (F) WAC 173-400-205, [15-Aug-2001] (S)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	
2.1.13	Open burning is subject to restrictions.	WAC 173-425, [17-Sep-1990] .....(F)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	
2.1.14	Causing air pollution in violation of Chapter 70.94 is unlawful and subject to penalty.	RCW 70.94.040, [04-Jan-2002] ....(F) BCAA Order #2002-0015, 7.6 .....(F)
MRRR 1M	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. [WAC 173-401-615(1)(b)]	
2.1.15	Actual emissions from fire pumps are less than threshold levels.	WAC 173-401-530(4) .....(F)
MRRR 3M	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 continuous 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. [WAC 173-401-615(1)(b), 09/16/2002]	

PROCESS #2: Saturn 10-T1300 Natural Gas Turbine

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.2.1	The turbine will only operate using pipeline quality natural gas.	BCAA Order #2002-0015, 5.1 ..... F BCAA Order #2002-0015, 5.5.1 ..... F
MRRR 1M	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. [WAC 173-401-615(1)(b)]	
2.2.2	NO_x emissions are limited to 75 ppm_{vd} corrected to 15% O_2 and 18.85 tons per year.[5]	BCAA Order #2002-0015, 5.2.1 ..... F BCAA Order #2002-0015, 5.2.4 ..... F BCAA Order #2002-0015, 5.3 ..... F BCAA Order #2002-0015, 5.4.2 ..... F
MRRR 6M **MRRR 7M**	Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from natural gas boilers in relation to emissions of other pollutants, and the technical feasibility of conducting periodical source testing. [BCAA Order 2001-0015, Condition 5.3] The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations. [BCAA Order 2001-0015, Condition 5.4.2] Test Method: RM 20	
2.2.3	CO emissions are limited to 100 ppm_{vd} corrected to 15% O_2 and 15.30 tons per year. [5]	BCAA Order #2002-0015, 5.2.1 ..... F BCAA Order #2002-0015, 5.2.4 ..... F BCAA Order #2002-0015, 5.3 ..... F BCAA Order #2002-0015, 5.4.2 ..... F

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[5] Each emission unit is based upon a three (3) hour rolling averaging time.

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
MRRR 6M **MRRR 7M**	Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from natural gas boilers in relation to emissions of other pollutants, and the technical feasibility of conducting periodical source testing. [BCAA Order 2001-0015, Condition 5.3] The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations. [BCAA Order 2001-0015, Condition 5.4.2] Test Method: RM 10	
2.2.4	SO_2 emissions are limited to 150 ppm_{vd} corrected to 15% O_2 and 0.21 tons per year. [5]	BCAA Order #2002-0015, 5.2.1 ..... F BCAA Order #2002-0015, 5.2.4 ..... F BCAA Order #2002-0015, 5.4.2 ..... F
MRRR 3M **MRRR 4M** **MRRR 7M**	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 continuous 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. . [WAC 173-401-615(1)(b), 09/16/2002] The monitoring was designed to verify that the quality of the natural gas used in the equipment meets low sulfur specifications and to provide a site-specific emission factor for use in the emissions calculations described in MRRR 3M. [BCAA Order 2001-0015, Condition 5.4.6] The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations. [BCAA Order 2001-0015, Condition 5.4.2]	
2.2.5	VOC emissions are limited to 100 ppm_{vd} corrected to 15% O_2 and 8.76 tons per year. [5]	BCAA Order #2002-0015, 5.2.1 ..... F BCAA Order #2002-0015, 5.2.4 ..... F BCAA Order #2002-0015, 5.3 ..... F BCAA Order #2002-0015, 5.4.2 ..... F

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
MRRR 6M **MRRR 7M**	Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from natural gas boilers in relation to emissions of other pollutants, and the technical feasibility of conducting periodical source testing. [BCAA Order 2001-0015, Condition 5.3] The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations. [BCAA Order 2001-0015, Condition 5.4.2] Test Method: RM 25A	
2.2.6	PM_{10} emissions are limited to 0.1 gr/dscf and 0.42 tons per year. [5]	BCAA Order #2002-0015, 5.2.1 ..... F BCAA Order #2002-0015, 5.2.4 ..... F BCAA Order #2002-0015, 5.4.2 ..... F
MRRR 3M **MRRR 7M**	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 continuous 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. . [WAC 173-401-615(1)(b), 09/16/2002] The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations. [BCAA Order 2001-0015, Condition 5.4.2]	
2.2.7	Visible emissions less than or equal to 10% opacity, six (6) minute average.	BCAA Order #2002-0015, 5.2.2 ..... F BCAA Order #2002-0015, 5.3 ..... F
MRRR 6M **MRRR 8M**	Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from natural gas boilers in relation to emissions of other pollutants, and the technical feasibility of conducting periodical source testing. [BCAA Order 2001-0015, Condition 5.3] See condition 2.1.2 for a detailed explanation of MRRR8.	
2.2.8	Visible emissions at the property boundary shall be 0% opacity.	BCAA Order #2002-0015, 5.2.3 ..... F
MRRR 8M	See condition 2.1.2 for a detailed explanation of MRRR8.	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.2.9	Promptly address any complaints	BCAA Order #2002-0015, 5.4.3 ..... F
MRRR 2M	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 are addressed. [WAC 173-401-615(1)(b), 09/16/2002]	
2.2.10	Maintain emission unit specific O&M Manuals.	BCAA Order #2002-0015, 5.5.2 ..... F
MRRR 9M	The recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions. [BCAA Order #2002-0015, Condition 5.5.2], [WAC 173-401-615(1)(b), 9/16/2002], [WAC 173-401-630(1), 10/04/1993]	
2.2.11	Legible copies of BCAA Order #2002 - 0015 and the O&M manual shall be readily available to operating personnel.	BCAA Order #2002-0015, 7.2 ..... F
MRRR 1M	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. [WAC 173-401-615(1)(b)]	

PROCESS #3: 40 CFR 63 Subpart ZZZZ RICE MACT Compliance

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.3.1	Permittee must evaluate the status of the facility as to whether it meets the definition of remote annually.	40 CFR 63.6603 (f) 40 CFR 66.6375 "Remote"
MRRR 10M	Evaluation and recordkeeping to assure that the facility is and remains "Remote" according to the definition (3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.	
2.3.2	Compressor Engines (EU 1 – 4) At all times the compressor engines must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR 63.660S(b)- Subpart ZZZZ
MRRR 11M	Compressor Engine Monitoring - This monitoring section is drawn from 40 CFR 63.6655. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring	
2.3.3	Compressor Engines (EU 1 – 4) The permittee shall conduct the following maintenance for the Compressor Engines: a. Change oil and filter every 2,160 hours of operation or annually, Pump Engine whichever comes first except as provided in 40 CFR 63 .662S(i); b. Inspect air cleaner every 2,160 hours of operation or annually, whichever Plan comes first; c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR 63.6602 & Table 2d, Section 8- Subpart ZZZZ
MRRR11M	Compressor Engine Monitoring - This monitoring section is drawn from 40 CFR 63.6655. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.3.4	Emergency Generator (EU 10) The permittee shall conduct the following maintenance for the emergency generator: a. Change oil and filter every 500 hours of operation or annually, Pump Engine whichever comes first except as provided in 40 CFR 63 .662S(i); b. Inspect air cleaner every 1,000 hours of operation or annually, whichever Plan comes first; c. Inspect all hoses and belts every SOO hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR 63.6602 & Table 2d, Section 5- Subpart ZZZZ
MRRR12M	This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its status as emergency use only. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate. Compliance with applicable emission limits is demonstrated based on recorded hours of operation.	
2.3.5	Emergency Generator (EU 10) The emergency generator may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the Generator manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized.	40 CFR 63.6640(f)- Subpart ZZZZ
MRRR12M	This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its status as emergency use only. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate. Compliance with applicable emission limits is demonstrated based on recorded hours of operation.	
2.3.6	Emergency Generator (EU 10) The emergency generator may operate up to 50 hours per year in non-emergency situations in addition to the time operated for maintenance checks and readiness Generator testing.	40 CFR 63.6640(f)- Subpart ZZZZ
MRRR12M	This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its status as emergency use only. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate. Compliance with applicable emission limits is demonstrated based on recorded hours of operation.	

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.3.7	Fire Pumps (EU 14 and 15) The permittee shall conduct the following maintenance for the fire pump: a. Change oil and filter every 500 hours of operation or annually, Pump Engine whichever comes first except as provided in 40 CFR 63 .662S(j); b. Inspect air cleaner every 1,000 hours of operation or annually, whichever Plan comes first; c. Inspect all hoses and belts every SOO hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR 63.6602 & Table 2d, Section 4- Subpart ZZZZ
MRRR13M	This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its small size (80 hp) and limited use. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate.	
2.3.8	Fire Pumps (EU 14 and 15) At all times the fire pump must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR 63.6605(b)- Subpart ZZZZ
MRRR 13M	This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its small size (80 hp) and limited use. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate.	

PROCESS #4: GTS Regeneration Process Heater

Condition Number	Description	Condition, Emission Standard, or Work Practice Federal & State Enforceable = F State only Enforceable = S
2.4.1	Use of pipeline quality natural gas in the emission unit.	BCAA Order #2015-0007, 5.1.1.2....F
MRRR 9M	The recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions. [BCAA Order #2002-0015, Condition 5.5.2], [WAC 173-401-615(1)(b), 9/16/2002], [WAC 173-401-630(1), 10/04/1993]	
2.4.2	Maintain emission unit specific fuel purchase and fuel use records.	BCAA Order #2015-0007, 5.3.1.1....F BCAA Order #2015-0007, 5.3.1.2....F
MRRR 9M	The recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions. [BCAA Order #2002-0015, Condition 5.5.2], [WAC 173-401-615(1)(b), 9/16/2002], [WAC 173-401-630(1), 10/04/1993]	
2.4.3	Maintain emission unit specific O&M Records	BCAA Order #2015-0007, 5.3.1.3....F
MRRR 9M	The recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions. [BCAA Order #2002-0015, Condition 5.5.2], [WAC 173-401-615(1)(b), 9/16/2002], [WAC 173-401-630(1), 10/04/1993]	
2.4.4	The GTS Regenerative Heater must have a maximum throughput of 10,200 lb/hr of regen gas.	BCAA Order #2015-0007, 5.4.4.....F
MRRR 9M	The recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions. [BCAA Order #2002-0015, Condition 5.5.2], [WAC 173-401-615(1)(b), 9/16/2002], [WAC 173-401-630(1), 10/04/1993]	

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

MRRR 1M – 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 2M – 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 are addressed.

MRRR 3M – 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 continuous 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 4M – The monitoring was designed to verify that the quality of the natural gas used in the equipment meets low sulfur specifications and to provide a site-specific emission factor for use in the emissions calculations described in MRRR 4M.

MRRR 5M –Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from the engines and vaporizers in relation to emissions of other pollutants, and the technical feasibility of conducting periodic source testing. Alternative test methods, including a source test on a comparable unit conducted in accordance with EPA protocols and test methods, may be considered if submitted in writing to BCAA with supporting documentation.

MRRR 6M – Periodic source testing has been added to the monitoring due to the potential emissions, the increased importance of nitrogen oxide emissions from natural gas boilers in relation to emissions of other pollutants, and the technical feasibility of conducting periodical source testing.

MRRR 7M - The monitoring was designed to be used in conjunction with MRRR 6M to provide site specific data in the determination of emissions calculations.

MRRR 8M – Weekly visible emissions monitoring was defined for the Solar turbine permitted in 2002 and is considered to be sufficient monitoring for this unit with regard to the opacity standard.

The applicable requirements for the reciprocating engines and vaporizers are drawn from WAC 173-400. These requirements do not directly establish any specific regime of monitoring or recordkeeping. Consequently, BCAA has implemented monitoring and recordkeeping requirements under the “gap filling” provisions of WAC 173-401-615. These requirements are designed to assure compliance through periodic facility inspections and prompt corrective action demonstration of

compliance is required in some cases via the visible emissions evaluation. The emission units at this facility combust only natural gas. Visible emissions, other than heat waves, from natural gas combustion are virtually non-detectable to the human eye. The following equation shows an example of calculation of particulate matter concentrations in exhaust gas from natural gas combustion based on EPA AP-42 emission factor corrected to 15% oxygen:

(0.005 lb PM/MMBtu) * (7000 gr/lb) * (MMBtu/8720 dscf) * (20.9-15.0)/(20.9) = 0.001 gr/dscf @ 15% oxygen.

Emissions are generally not visible until the concentration approaches 0.01gr/dscf. In addition, this source has a history of opacity compliance. Therefore, weekly opacity monitoring, in addition to response to emission unit malfunction is considered adequate for demonstrating compliance with WAC 173-400.

The specifics of the monitoring described have been designed to provide relatively frequent evaluation of each potential emission point, while requiring EPA RM 9 only when visible emissions are observed. 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 prolonged environmental degradation.

MRRR9M – the recordkeeping is considered sufficient to verify that the equipment is operated according to manufacturer's design and instructions.

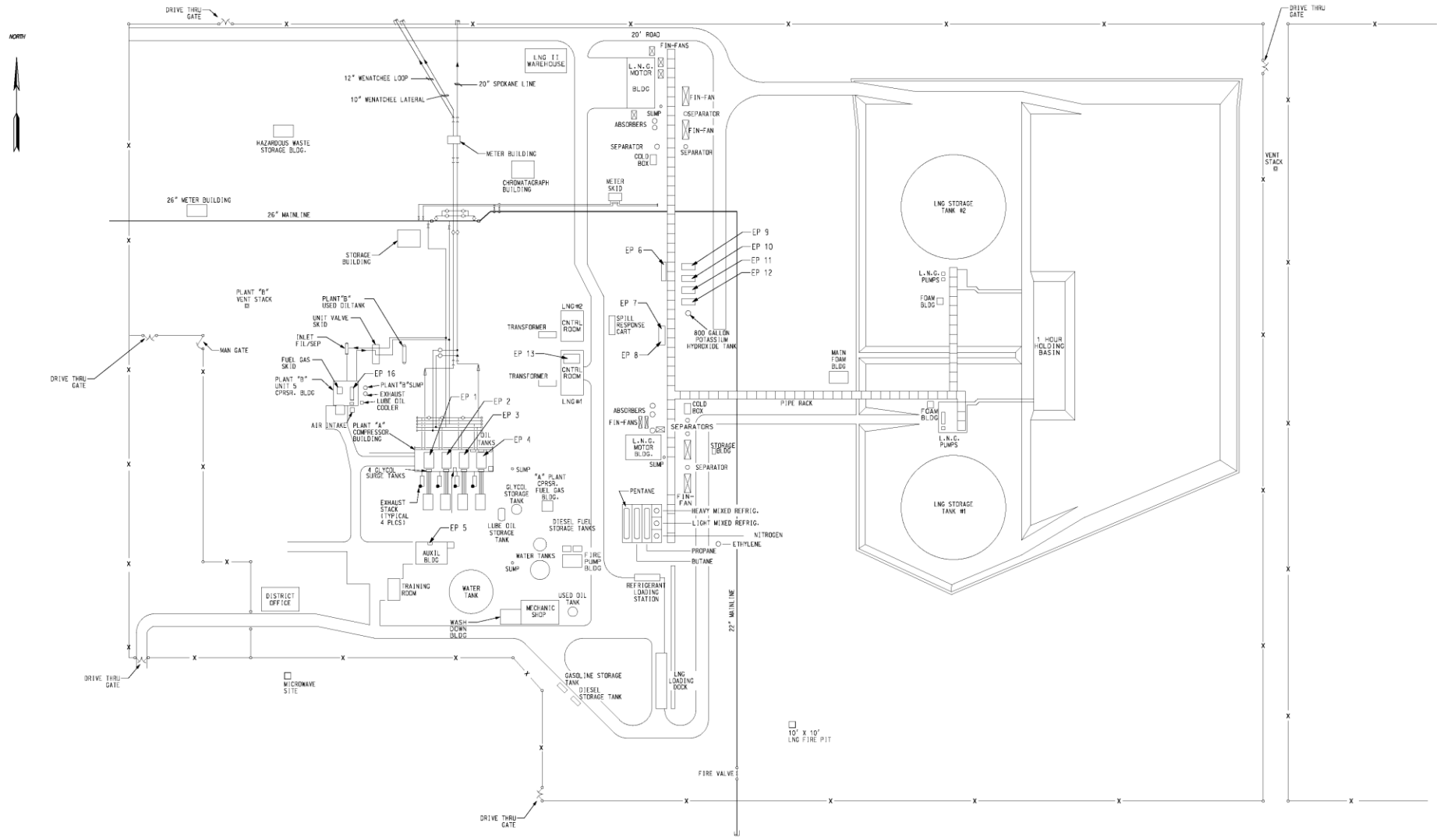
MRRR10M – evaluation and recordkeeping to assure that the facility is and remains "Remote" according to the definition (3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

MRRR11M – Compressor Engine Monitoring - This monitoring section is drawn from 40 CFR 63.6655. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring

MRRR12M – Emergency Generator Monitoring - This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its status as emergency use only. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate. Compliance with applicable emission limits is demonstrated based on recorded hours of operation.

MRRR13M – Fire Pump Monitoring **-** This monitoring section is drawn from 40 CFR 63.6655. Periodic testing is not required for this unit due to its small size (80 hp) and limited use. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring as appropriate.

Appendix A– Site Plan of Plymouth LNG Plant



(Larger copy of this Site Plan available by request from the BCAA)

Appendix B – Facility Emissions			Pollutant	E/F		Ref	Emission Rate
Ingersoll Rand		1	NOx	50.2	lb/hr	Stack Test 11/94	219.88
			CO	2.33	lb/hr	stack test 03/01	10.21
Size	1000	hp	VOC	120.36	lb/MMcf	AP42 Table 3.2-2	4.86
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 3.2-2	0.02
Fuel Use	80729.4	Mcf	PM10	10.19	lb/MMcf	AP42 Table 3.2-2	0.41
			Formaldehyde	1.15E-01	g/bhp-hr	GRI-HAPCalc 3.01	2,220.95
Ingersoll Rand		2	NOx	50.2	lb/hr	Stack Test 11/94	219.88
			CO	2.33	lb/hr	stack test 03/01	10.21
Size	1000	hp	VOC	120.36	lb/MMcf	AP42 Table 3.2-2	4.86
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 3.2-2	0.02
Fuel Use	80729.4	Mcf	PM10	10.19	lb/MMcf	AP42 Table 3.2-2	0.41
			Formaldehyde	1.15E-01	g/bhp-hr	GRI-HAPCalc 3.01	2,220.95
Ingersoll Rand		3	NOx	50.2	lb/hr	Stack Test 11/94	219.88
			CO	2.33	lb/hr	stack test 03/01	10.21
Size	1000	hp	VOC	120.36	lb/MMcf	AP42 Table 3.2-2	4.86
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 3.2-2	0.02
Fuel Use	80729.4	Mcf	PM10	10.19	lb/MMcf	AP42 Table 3.2-2	0.41
			Formaldehyde	1.15E-01	g/bhp-hr	GRI-HAPCalc 3.01	2,220.95
Ingersoll Rand		4	NOx	50.2	lb/hr	Stack Test 11/94	219.88
			CO	2.33	lb/hr	stack test 03/01	10.21
Size	1000	hp	VOC	120.36	lb/MMcf	AP42 Table 3.2-2	4.86
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 3.2-2	0.02
Fuel Use	80729.4	Mcf	PM10	10.19	lb/MMcf	AP42 Table 3.2-2	0.41
			Formaldehyde	1.15E-01	g/bhp-hr	Dec 2001 NOC	2,220.95
Saturn Turbine			NOx	3.05	lb/hr	4/13 Stack Test	13.36
			CO	1.05	lb/hr	4/13 Stack Test	4.60
Size	1292	hp	VOC	0.07	lb/hr	4/13 Stack Test	0.31
Hours	8760	hours	SO3	App0.05	lb/hr	Dec 2001 NOC	0.22
Fuel Use	134245	Mcf	PM10	0.1	lb/hr	Dec 2001 NOC	0.44
			Formaldehyde	7.24E-01	g/bhp-hr	AP42 Table 3.1-3	97.22
Vaporizer		H-31	NOx	3.61	lb/hr	Stack Test 3/06	15.81
			CO	30.14	lb/hr	Stack Test 3/06	132.01
Size	51.3	MMBtu/hr	VOC	4.28	lb/hr	Stack Test 3/06	18.75
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.13
Fuel Use	440576.5	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	1.67
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-2	33.04
Vaporizer		H-32	NOx	3.61	lb/hr	Stack Test 3/06	15.81
			CO	30.14	lb/hr	Stack Test 3/06	132.01
Size	51.3	MMBtu/hr	VOC	4.28	lb/hr	Stack Test 3/06	18.75
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.13
Fuel Use	440576.5	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	1.67
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-2	33.04
Vaporizer		H-33	NOx	3.61	lb/hr	Stack Test 3/06	15.81
			CO	30.14	lb/hr	Stack Test 3/06	132.01
Size	51.3	MMBtu/hr	VOC	4.28	lb/hr	Stack Test 3/06	18.75

Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.13
Fuel Use	440576.5	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	1.67
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-2	33.04
Vaporizer		H-34	NOx	3.61	lb/hr	Stack Test 3/06	15.81
			CO	30.14	lb/hr	Stack Test 3/06	132.01
Size	51.3	MMBtu/hr	VOC	4.28	lb/hr	Stack Test 3/06	18.75
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.13
Fuel Use	440576.5	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	1.67
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-2	33.04
Emergency Generator			NOx	2315	lb/MMcf	AP42 Table 3.2-3	2.56
			CO	3794	lb/MMcf	AP42 Table 3.2-3	4.20
Size	1200	hp	VOC	30.19	lb/MMcf	AP42 Table 3.2-3	0.03
Hours	200	hours	SO3	0.06	lb/MMcf	AP42 Table 3.2-3	0.00
Fuel Use	2211.8	Mcf	PM10	19.8	lb/MMcf	AP42 Table 3.2-3	0.02
			Formaldehyde	2.09E+01	lb/MMcf	AP42 Table 3.2-3	46.25
Boiler			NOx	100	lb/MMcf	AP42 Table 1.4-1	2.16
			CO	84	lb/MMcf	AP42 Table 1.4-1	1.81
Size	5.025	MMBtu/hr	VOC	5.5	lb/MMcf	AP42 Table 1.4-2	0.12
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.01
Fuel Use	43155.9	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	0.16
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-3	3.24
Process Heater H-11			NOx	50	lb/MMcf	AP42 Table 1.4-1	1.22
			CO	84	lb/MMcf	AP42 Table 1.4-1	2.05
Size	5.68	MMBtu/hr	VOC	5.5	lb/MMcf	AP42 Table 1.4-2	0.13
Hours	8760	hours	SO3	0.6	lb/MMcf	AP42 Table 1.4-2	0.01
Fuel Use	48718.2	Mcf	PM10	7.6	lb/MMcf	AP42 Table 1.4-2	0.19
			Formaldehyde	7.50E-02	lb/MMcf	AP42 Table 1.4-3	3.66
Diesel 1 Fire Pump			NOx	3.10E-02	lb/hp-hr	AP42 Table 3.3-1	0.43
			CO	6.68E-03	lb/hp-hr	AP42 Table 3.3-1	0.09
Size	140	hp	VOC	2.47E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
Hours	200	hours	SO3	2.05E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
Fuel Use	2000.0	gal	PM10	2.20E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
			Formaldehyde	1.18E-03	lb/hp-hr	AP42 Table 3.3-2	33.04
Diesel 2 Fire Pump			NOx	3.10E-02	lb/hp-hr	AP42 Table 3.3-1	0.43
			CO	6.68E-03	lb/hp-hr	AP42 Table 3.3-1	0.09
Size	140	hp	VOC	2.47E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
Hours	200	hours	SO3	2.05E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
Fuel Use	2000.0	gal	PM10	2.20E-03	lb/hp-hr	AP42 Table 3.3-1	0.03
			Formaldehyde	1.18E-03	lb/hp-hr	AP42 Table 3.3-2	33.04

1. When AP-42 emission factors are converted from lb/MMBtu to lb/MMcf assuming a HHV of 1020 btu/cf.
2. Fuel use for Ingersol Rand engines estimated assuming a fuel consumption of 9400 Btu/hp-hr and a HHV of 1020 Btu/cf.

3. Fuel use for turbine based on manufacturer's fuel flow at 59 ^{o}F of 14.39 MMBtu/hr based on LHV. LHV assumed to be 939 Btu/cf.
4. Fuel use for Vaporizers based on heat rating of 51.3 MMBtu/hr and HHV of 1020 Btu/cf.
5. Fuel use for emergency generator engine estimated assuming a fuel consumption of 9,400 Btu/hp-hr and HHV of 1020 Btu/cf.
6. Fuel use for fire pump engines based on an average brake specific fuel consumption of 7,000 Btu/hp-hr and average heating value of 137,000 Btu/gal.

Summary Emissions; Potential to Emit							
		NOx	**CO**	**VOC**	**SO3**	**PM10**	**Formaldehyde**
1	IR 1	219.88	10.21	4.86	0.02	0.41	2,220.95
2	IR 2	219.88	10.21	4.86	0.02	0.41	2,220.95
3	IR 3	219.88	10.21	4.86	0.02	0.41	2,220.95
4	IR 4	219.88	10.21	4.86	0.02	0.41	2,220.95
5	Saturn	13.36	4.60	0.31	0.22	0.44	97.19
6	Vaporizer 1	15.81	132.01	18.75	0.13	1.67	33.04
7	Vaporizer 2	15.81	132.01	18.75	0.13	1.67	33.04
8	Vaporizer 3	15.81	132.01	18.75	0.13	1.67	33.04
9	Vaporizer 4	15.81	132.01	18.75	0.13	1.67	33.04
10	Emergency Generator	2.56	4.20	0.03	0.00	0.02	46.25
11	Boiler	2.16	1.81	0.12	0.01	0.16	3.24
13	Process Heater	1.22	2.05	0.13	0.01	0.19	3.66
14	Fire Pump	0.43	0.09	0.03	0.03	0.03	33.04
15	Fire Pump	0.43	0.09	0.03	0.03	0.03	33.04
Totals		**962.92**	**581.72**	**95.08**	**0.93**	**9.21**	**4.62**

Appendix C: Site Diagram showing 0.25 Mile Radius