



**SCHUTTE COMPRESSOR STATION
DOMINION TRANSMISSION INC.
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
TITLE V OPERATING PERMIT NO: R30-01700100-2008**

Dominion Transmission, Inc.
Schutte Compressor Station
Rt. 2 Box 210
Salem, WV 26426

Prepared for:

Dominion Transmission, Inc.
445 West Main Street
Clarksburg, WV 26301

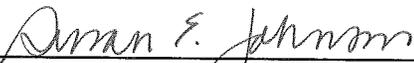
Prepared by:

AMEC Earth & Environmental
2200 Gateway Centre Blvd, Suite 205
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JULY 2010



Jody Lambert
Staff Scientist



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Unit Manager



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1.0 INTRODUCTION

Schutte Station is a natural gas compressor station used to compress natural gas for Dominion Transmission, Inc.'s pipeline system in West Virginia. Schutte Station is located near Sedalia, WV.

Schutte Station has the potential to emit in excess of 250 tons per year of nitrogen oxides (NOx) and 100 tons per year of volatile organic compounds (VOCs), and is classified as a major stationary source under the West Virginia Department of Environmental Protection (WVDEP) Regulation (45 CSR Part 30) and is subject to the Title V Operating Permit provisions of Part 30.

Schutte Station was originally issued a Title V Operating Permit (Permit No: R30-01700100-1996) in 1996 for a period of five (5) years. A Title V renewal permit was issued in 2006 (Permit No: R30-01700100-2006) for a period of five (5) years. Schutte Station was also subject to the underlying State Operating Permit (Rule 13 Permit No: R13-2778). These permits were for the operation of two (2) 660-hp reciprocating engines (EN01 and EN02), one (1) dehydration unit (DEHY01), one (1) 0.25 MMBtu/hr natural gas fired reboiler (RBR01), and six (6) aboveground storage tanks of various sizes.

On August 5, 2008, Dominion Transmission, Inc. (Dominion) submitted both the Title V permit modification application and the R-13 State Operating Permit modification application to the WVDEP. The Title V Operating Permit (Permit No: R30-01700100-2006) and the R-13 construction permit (Permit No: R13-2778) were modified for the installation of a 660-hp natural gas-fired reciprocating engine (EN03) and replacement of the dehydration unit (RBR01, DEHY01) and flare (F1) to increase capacity to compress gas.

On November 3, 2008, WVDEP issued a permit to construct (R13-2778) for the proposed construction/modification at Schutte Station. On January 29, 2009, WVDEP issued a revised Title V Operating Permit (Permit No: R30-01700100-2008) incorporating the modification to Schutte Station. Dominion installed the aforementioned equipment in 2009.



2.0 PROCESS DESCRIPTION

Schutte Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01 – EN03) at the facility receive natural gas flowing through a valve on the pipeline and recompresses the natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit. The dehydration unit removes moisture and impurities from the gas stream.

The dehydration process begins with the compressed natural gas entering the unit and then being passed through a triethylene glycol dehydration system consisting of a contactor bed, a reboiler (RBR01), and associated equipment. As a result of this process, the natural gas is stripped of moisture and impurities, along with a small amount of hydrocarbons. The wet gas enters the contactor where moisture and some hydrocarbons are absorbed into the lean glycol. The glycol, which has become rich with absorbed moisture and hydrocarbons, is regenerated in the still column (DEHY01) using the heat generated from the natural gas-fired reboiler (RBR01) to liberate the moisture and hydrocarbon vapors. The regenerator vapors are vented to the flare (F1) to combust the hydrocarbons, thereby, reducing overall emissions and odor. The compressed, dehydrated gas then enters the pipeline.

Listed below is a description of the equipment located at the Schutte Station.

Compressor Engines

Cooper GMV-6TF 660-hp natural gas-fired Reciprocating Engine

- Emission point EN01
- Emission unit EN01

Cooper GMV-6TF 660-hp natural gas-fired Reciprocating Engine

- Emission point EN02
- Emission unit EN02

Ajax DPC-2803LE 600-hp natural gas-fired Reciprocating Engine

- Emission point EN03
- Emission unit EN03

NATCO Dehydration Unit Reboiler 1.0 MMBtu/hr natural gas-fired reboiler

- Emission point RBR01
- Emission unit RBR01



Dehydration Unit/Still Column 10.0 mmcf/day

- Emission point DEHY01
- Emission unit DEHY01

Dehydration Unit Controlled Flare 10.0 MMBtu/hr

- Emission point F1
- Emission unit F1

Horizontal Ethylene Glycol 2000-gallon aboveground storage tank

- Emission point TK01
- Emission unit TK01

Horizontal Tri-ethylene Glycol 560-gallon aboveground storage tank

- Emission point TK02
- Emission unit TK02

Horizontal Engine Oil 3000-gallon aboveground storage tank

- Emission point TK03
- Emission unit TK03

Horizontal Drip Gas 3000-gallon aboveground storage tank

- Emission point TK04
- Emission unit TK04

Horizontal Waste Water 230-gallon aboveground storage tank

- Emission point TK05
- Emission unit TK05

Vertical Waste Water 500-gallon aboveground storage tank

- Emission point TK06
- Emission unit TK06

Horizontal Engine Oil 1,000-gallon above ground storage tank

- Emission point TK07
- Emission unit TK07



3.0 REGULATORY DISCUSSION

The Schutte Station is located near Sedalia, Doddridge County, West Virginia. The area is classified as attainment with respect to the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

Prevention of Significant Deterioration (PSD)

West Virginia's PSD regulations are found in 45 CSR 14. The PSD program is based on a new source review process to ensure that any new sources of air pollution will not cause a significant deterioration of local ambient air quality. The PSD regulations only apply to "major" new sources or "major" modifications of existing sources. A "major" stationary source being defined as a source being classified in any one of the 28 source categories identified in 40 CFR 52.21 which has the potential to emit 100 tons or more per year of any regulated pollutant, or any other stationary source which has the potential to emit 250 tons or more per year of a regulated pollutant. "Major modification" means any physical change in or change in the method of operation of a major stationary source which results in: a significant emissions increase of any regulated NSR pollutant; and a significant net emissions increase of that pollutant from the major stationary source.

Schutte Station is currently operating with the potential to emit (PTE) in excess of 250 tons per year of Nitrogen Oxides (NO_x). All other regulated pollutants are below the "major" source threshold. Based on Schutte Station's potential to emit, the Schutte Station is considered a "PSD major" source for NO_x emissions.

In 2009, Dominion installed additional equipment at Schutte Station. The change in potential emissions resulting from this modification was below the significant project thresholds of PSD and was not considered a major modification under PSD regulations, as documented in Permit Number R13-2778 (issued 11/03/2008) and later incorporated in the facility's Title V operating permit (R30-01700100-2006).

Non-Attainment

Doddridge County, West Virginia is currently classified as attainment with respect to the NAAQS for all criteria pollutants. Article 9 of the non-attainment regulations is not applicable to this permit renewal application.

West Virginia Permitting Requirements

The requirement for renewal applications for Title V Operating Permits is provided in 45 CSR 30 (Permits for Construction, Modification, Relocation, and operation of Stationary Sources of Air Pollutants) – Regulation 30. This application is being submitted to satisfy the requirements of 45 CSR 30.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)



Section 112 of the Clean Air Act provides the EPA with a means of developing standards for potentially hazardous air pollutants (HAPs) for specific source categories. The regulations have been developed and implemented under Section 112(b) and are presented in 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants). Emission limits or control requirements developed to implement Section 112 of the CAA are applicable to both new and existing sources. Sources located at a facility with PTE of 10 tons per year (tpy) of a single HAP or 25 tpy total for combined HAPs are potentially subject to NESHAP regulations.

In 1999, the USEPA issued the NESHAP for Natural Gas Production Facilities (Subpart HH). These rules, also known as Maximum Achievable Control Technology (MACT) rules, contain air pollution emission control and monitoring requirements for new and existing glycol dehydration units.

Schutte Station has one dehydration unit, equipped with a flare. The flare has been installed in order to reduce the facilities potential for HAP emissions below the major levels specified in the NESHAP. A Regulation 13 Construction Permit (R-13-2778) was issued to Schutte Station regulating the control efficiency and destruction efficiency of the flare and thus reducing HAP emissions to a minor source level. This federally enforceable reduction in HAP emissions excludes Schutte Station from NESHAP Natural Gas Production Facilities, Subpart HH, as well as NESHAP Reciprocating Internal Combustion Engines, Subpart ZZZZ.

New Source Performance Standards (NSPS)

Section 111 of the CAA provides USEPA with a means of developing standards for new sources for specific source categories. The regulations have been implemented under Section 111(b) and are presented in 40 CFR 60.

In 2008, the USEPA issued the NSPS for Stationary Spark Ignition Internal Combustion Engines (Subpart JJJJ). This rule outlines standards of performance for all new, modified, or reconstructed units meeting the applicability of the rule. The rule segments applicability by unit horsepower and manufactured date.

Dominion installed a new 600 horsepower reciprocating engine at Schutte Station in 2009 (Emission Unit EN03). This unit is subject to Subpart JJJJ and subject to the following emission limitations.

Schutte Station New Engine Emission Limits	
<i>Pollutant</i>	<i>g/hp-hr</i>
NOx	2
CO	4
VOC	1

The manufacturer supplied compliance certifications stating that the reciprocating engine was compliant with 40 CFR 63 Subpart JJJJ.



4.0 POTENTIAL TO EMIT

Schutte Station is a major source of nitrogen oxides under 45 CSR Part 30 of the West Virginia Code of State Regulations. Schutte Station is currently operating at the following potential emission rates:

Process Control Equipment	Potential Emissions, Tons Per Year (tpy)		
	Carbon Monoxide	Nitrogen Oxides	Volatile Organic Compounds
Current Potential-to-Emit	42.76	271.00	158.15
Fugitive Emissions	--	--	98.32
Engines (EN01 – EN03)	41.14	270.34	34.53
Dehydration System	1.23	0.22	25.27
Reboiler	0.39	0.44	0.02

The Dehydration Unit Still Column and Flare emissions are combined as per the 2008 R13-2778 Permit. The Flare is being permitted as a control device to limit the PTE of HAPs from the facility. The facility is not a major source of HAPs.



5.0 PROPOSED MODIFICATIONS

Dominion does not propose any new modifications under this application.



APPENDIX A
AIR PERMIT FORMS



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.wvdep.org/daq

TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 numbered sections: 1. Name of Applicant (Dominion Transmission, Inc.), 2. Facility Name (Schutte Station), 3. DAQ Plant ID No. (017-00100), 4. Federal Employer ID No. (550629203), 5. Permit Application Type (Renewal), 6. Type of Business Entity (Corporation), 7. Is the Applicant the: (Both), 8. Number of onsite employees (15), 9. Governmental Code (Privately owned), 10. Business Confidentiality Claims (No).

11. Mailing Address		
Street or P.O. Box: 445 West Main Street		
City: Clarksburg	State: WV	Zip: 26301
Telephone Number: (304) 627-3225	Fax Number: (304) 627-3222	

12. Facility Location		
Street: Route 2, Box 210	City: Sedalia	County: Doddridge
UTM Easting: 534.46 km	UTM Northing: 4357.67 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: From the intersection of Rt. 50 and Rt. 79, go West on Rt. 50 for 9.9 miles to Rt. 23 North. Turn right onto Rt. 23 North and travel 19.5 miles. Turn left onto gravel road and cross the small bridge, continue to station on the right.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, for what air pollutants?
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, name the affected state(s). Pennsylvania Ohio
Is facility located within 100 km of a Class I Area ¹ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, do emissions impact a Class I Area ¹ ? <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, name the area(s). Dolly Sobs Wilderness Area Otter Creek Wilderness Area
¹ Class I areas include Dolly Sobs and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Jeffrey L. Barger		Title: Vice President, Pipeline Operations
Street or P.O. Box: 445 West Main Street		
City: Clarksburg	State: WV	Zip: 26301
Telephone Number: (304) 627-3910		Fax Number: (304) 627-3323
E-mail address: Jeffry.L.Barger@dom.com		
Environmental Contact: Richard B. Gangle		Title: Environmental Specialist III
Street or P.O. Box: 445 West Main Street		
City: Clarksburg	State: WV	Zip: 26301
Telephone Number: (304) 627-3325		Fax Number: (304) 627-3222
E-mail address: Richard.B.Gangle@dom.com		
Application Preparer: Jody B. Lambert		Title: Environmental Scientist
Company: AMEC Earth & Environmental, Inc.		
Street or P.O. Box: 2200 Gateway Centre Blvd, Suite 205		
City: Morrisville	State: NC	Zip: 27560
Telephone Number: (919) 447-2750		Fax Number: (919) 447-2751
E-mail address: jody.lambert@amec.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Natural Gas Compressor Station	N/A	48612	4922

Provide a general description of operations.

Schutte Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01 – EN03) at the facility receive natural gas flowing through a valve on the pipeline and recompresses the natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit. The dehydration unit removes moisture and impurities from the gas stream.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS (Subpart JJJJ- RICE)	<input type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> NO _x Budget Trading Program Non-EGUs (45CSR1)	<input type="checkbox"/> NO _x Budget Trading Program EGUs (45CSR26)

19. Non Applicability Determinations
<p>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</p> <p>40 CFR 64 – Engines do not have any control; Glycol Dehydration unit is not a major source of HAPs. Therefore, in accordance with 40 CFR 64.2(a), CAM is not applicable to this facility.</p>
<input type="checkbox"/> Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- 45 CSR 6-3.1 – Open Burning prohibited (TV 3.1.1)
- 45 CSR 6-3.2 – Open Burning exemption (TV 3.1.2)
- 40 CFR Part 61 – Asbestos inspection and removal (TV 3.1.3)
- 45 CSR 15 – Asbestos inspection and removal (TV 3.1.3)
- State Only: 45 CSR 4-3.1 – No Objectionable odors (TV 3.1.4)
- 45 CSR 11-5.2 – Standby plans for emergency episodes (TV 3.1.5)
- WV Code 22-5-4 (a) (14) – The Secretary can request any pertinent information such as annual emission inventory reporting (TV 3.1.6)
- 40 CFR Part 82 Subpart F – Ozone depleting substances (TV 3.1.7)
- 40 CFR Part 68 – Risk Management Plan (TV 3.1.8)
- 45 CSR 10-4.1 (a) – Emission of Sulfur Oxides (TV 3.1.9) – DEHY01, F1
- 45 CSR 10-4.1 (c) – Emission of Hydrogen Sulfides (TV 3.1.10) – DEHY01, F1
- State Only: 45 CSR 17-3.1 – Fugitive Particulate Matter (TV 3.1.11)
- 45 CSR 13 – Operating Permit requirements for remaining Minor HAP source (TV 3.1.12, R13-2778 , 4.1.2)
- 45 CSR 13 – Operating Permit requirements for O&M of equipment (TV 3.1.13, R13-2778 , 4.1.3)
- 45 CSR 30-5.1 (c) – Visible Emission checks (TV 3.2.1) – F1
- 45 CSR 30-5.1 (c) – Annual Sulfur analysis of Inlet Gas Stream (TV 3.2.2) – DEHY01, F1
- 45 CSR 30-5.1 (c) – Annual H2S analysis of Inlet Gas Stream (TV 3.2.3) – DEHY01, F1

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45 CSR 6-3.1 – The permittee shall prohibit open burning (TV 3.1.1)
- 45 CSR 6-3.2 – The permittee shall notify if open burning occurs (TV 3.1.2)
- 40 CFR Part 61 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)
- 45 CSR 15 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)
- 45 CSR 4 – Permittee shall maintain records of all odor complaints received (TV 3.1.4)
- 45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan (TV 3.1.5)
- WV 22-5-4 – The permittee shall submit semi-annual emission inventory reports (TV 3.1.6)
- 40 CFR Part 82 Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing Ozone depleting substances (TV 3.1.7)
- 40 CFR Part 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted (TV 3.1.8)
- 45 CR 10 – Emission of Sulfur Oxides shall be limited by burning only pipeline quality Natural Gas (TV 3.1.9)

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- 45 CSR 13 – Testing Requirements (TV 3.3.1, WV Code 22-5-4 (a) (15))
- 45 CSR 30 – Recordkeeping Requirements (TV 3.4)
- 45 CSR 30 – Recordkeeping Requirements (TV 3.5)
- 45 CSR 2-3.1 – Visible emission limited to less than ten (10) percent opacity (TV 4.1.1)

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45 CSR 10 – Emission of Hydrogen Sulfides shall be limited by burning only pipeline quality Natural Gas (TV 3.1.10)
- 45 CSR 17 – The permittee will limit fugitive emissions from the facility by burning only pipeline quality natural gas (TV 3.1.11)
- 45 CSR 13 – HAP emissions from the facility shall be limited by burning pipeline quality natural gas and by use of the dehydration unit flare (TV 3.1.12, R13-2778, 4.1.2)
- 45 CSR 13 – O&M will be performed on the air pollution emitting equipment at the facility (TV 3.1.13, R13-2778, 4.1.3)
- 45 CSR 30-5.1 (c) – The permittee shall conduct and maintain records of monthly visible emission checks on the flare (TV 3.2.1)
- 45 CSR 30.5.1.c – Semi-Annual Inlet gas stream shall be sampled for Total Sulfur (TV 3.2.2)
- 45 CSR 30.5.1.c – Semi-Annual inlet gas stream shall be sampled for H2S (TV 3.2.3)
- 45 CSR 13 – The permittee shall maintain records of compliance tests for a duration of five (5) years (TV 3.3.1, WV Code 22-5.4 (a) (15))
- 45 CSR 30 – The permittee shall maintain records of maintenance, complaints, monitoring, and malfunctions. (TV 3.4)
- 45 CSR 30 – The permittee shall certify and submit monitoring reports, compliance reports, and emissions statements as specified (TV 3.5)
- 45 CSR 2-3.1 – Permittee shall limit visible emissions to less than ten (10) percent by combusting only natural gas (TV 4.1.1)

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit <i>(if any)</i>
R13-1077	04/07/1989	
R13-2778	11/03/2008	
	/ /	
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
	/ /	
	/ /	
	/ /	
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	/ /	
	/ /	
	/ /	
	/ /	

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	42.76
Nitrogen Oxides (NO _x)	271.00
Lead (Pb)	N/A
Particulate Matter (PM _{2.5}) ¹	1.43
Particulate Matter (PM ₁₀) ¹	1.96
Total Particulate Matter (TSP)	1.96
Sulfur Dioxide (SO ₂)	0.05
Volatile Organic Compounds (VOC)	158.15
Hazardous Air Pollutants ²	Potential Emissions
Formaldehyde	2.25
Acrolein	0.18
Acetaldehyde	0.19
Benzene	0.22
Ethylbenzene	0.13
Hexane	0.39
Toluene	0.35
Xylene	1.29
Regulated Pollutants other than Criteria and HAP	Potential Emissions
¹ PM _{2.5} and PM ₁₀ are components of TSP. ² For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.	

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.
	<p>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)

	owners/operators must still get a permit if otherwise requested.)
<input type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Jeffrey L. Barger

Title: Vice President, Pipeline Operations

Responsible official's signature:

Signature: _____ Signature Date: _____
 (Must be signed and dated in blue ink)

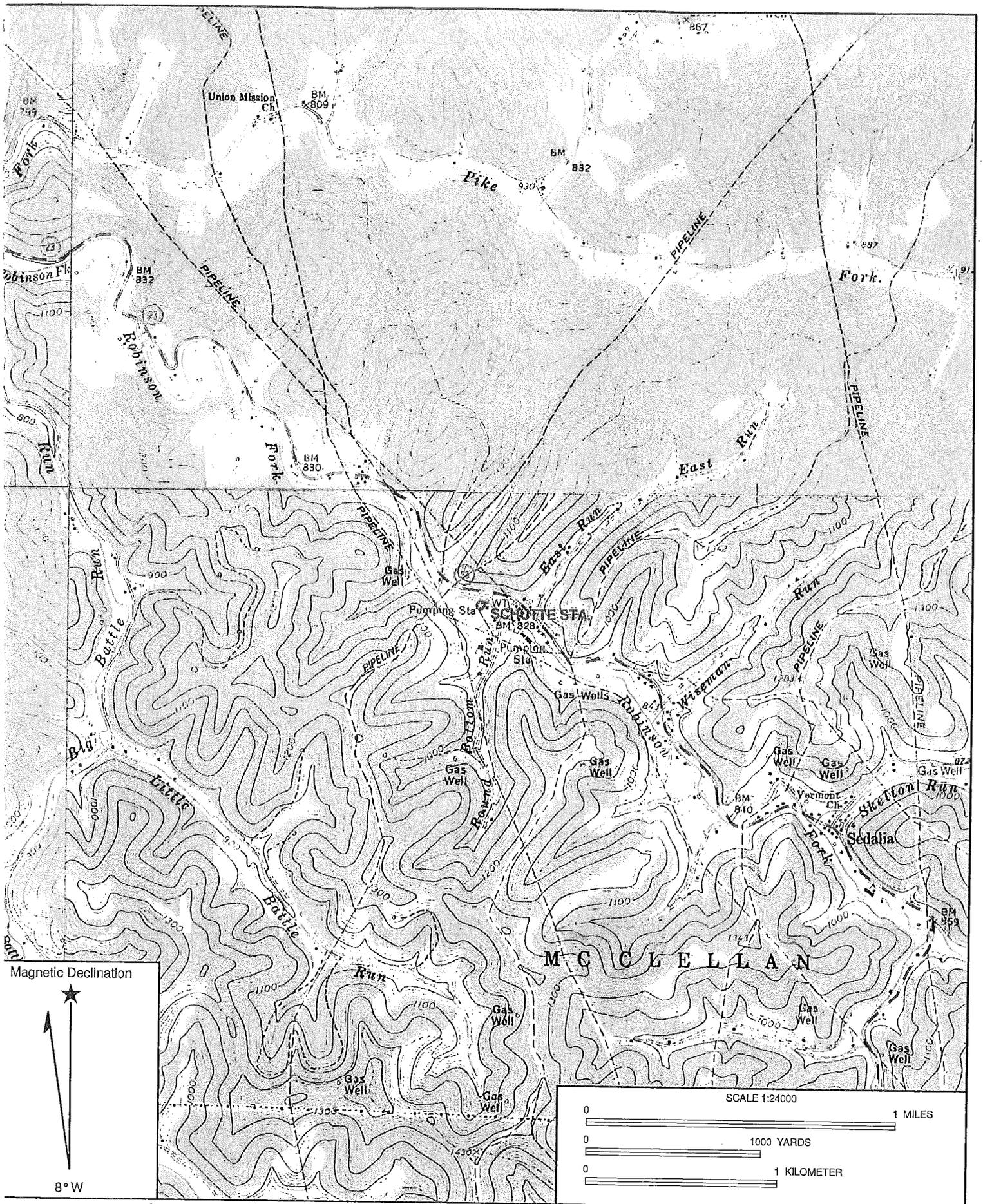
Note: Please check all applicable attachments included with this permit application:

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.wvdep.org/daq, requested by phone (304) 926-0475, and/or obtained through the mail.



APPENDIX B
PLOT PLANS



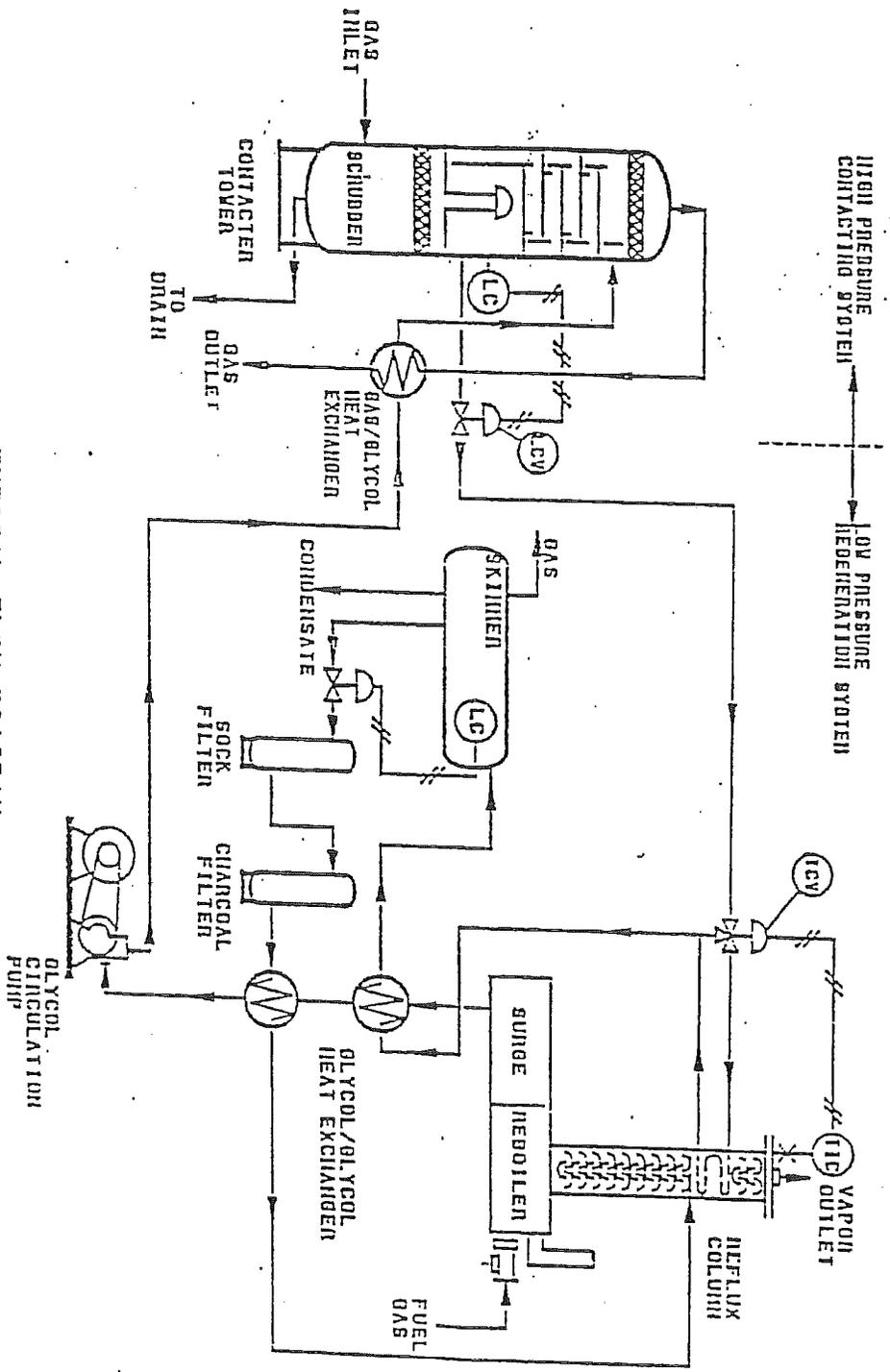
Name: SALEM
 Date: 8/24/2006
 Scale: 1 inch equals 2000 feet

Location: 039.3697998° N 080.5998803° W NAD 83
 Caption: SCHUTTE STA.



APPENDIX C
PROCESS FLOW DIAGRAMS

SEE DETAIL FOR STACK NUMBERS



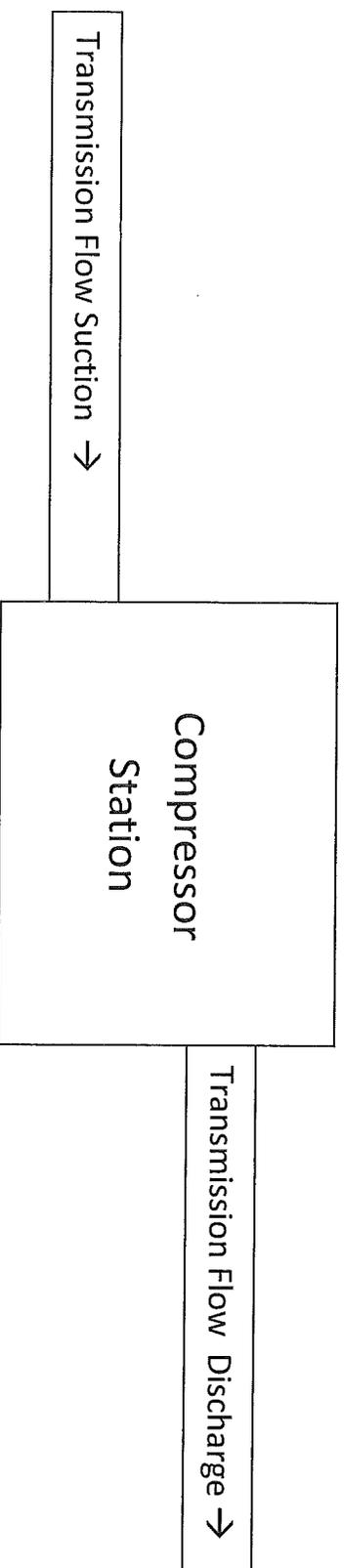
TYPICAL FLOW DIAGRAM
GLYCOL DEHYDRATION UNIT

Natural Gas Compression Station Process Flow Diagram

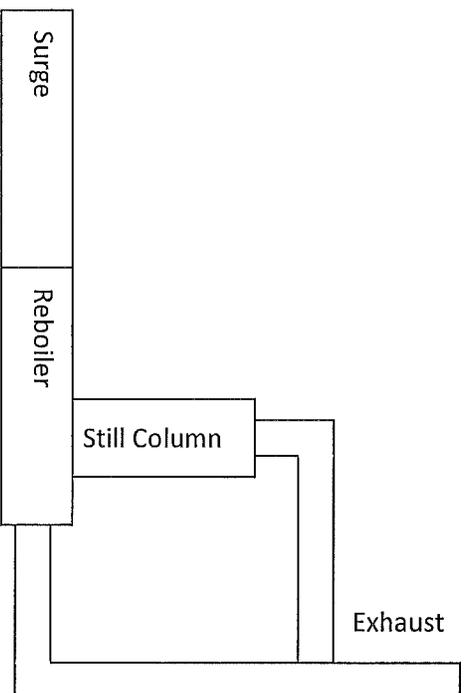
Schutte Station

Fugitive sources are described in application.

Fugitive sources are for the entire facility.

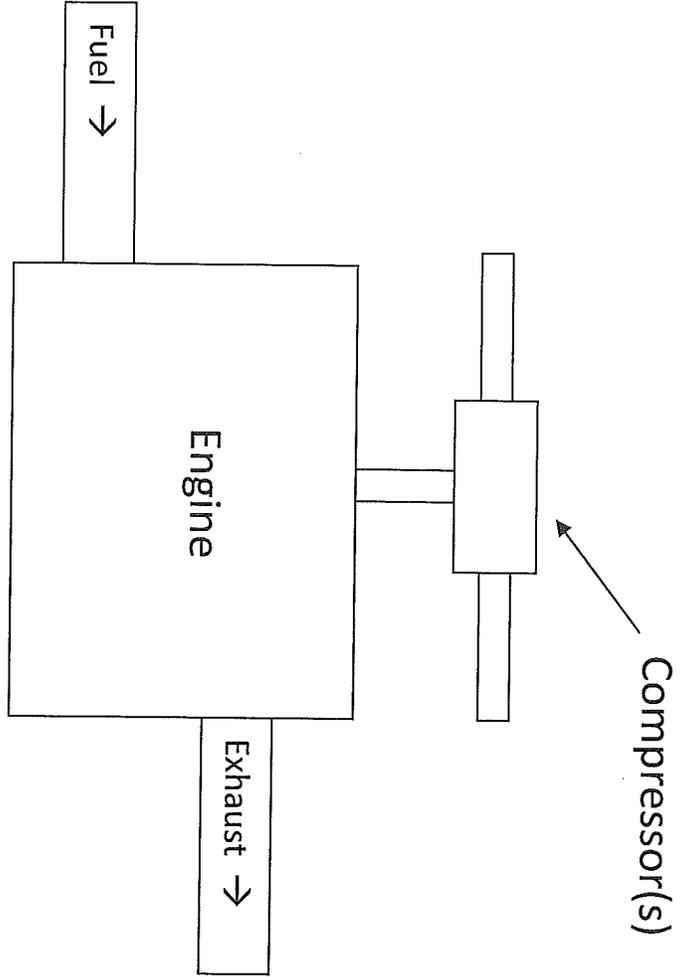


Natural Gas Compression Station Process Flow Diagram – Glycol Dehy



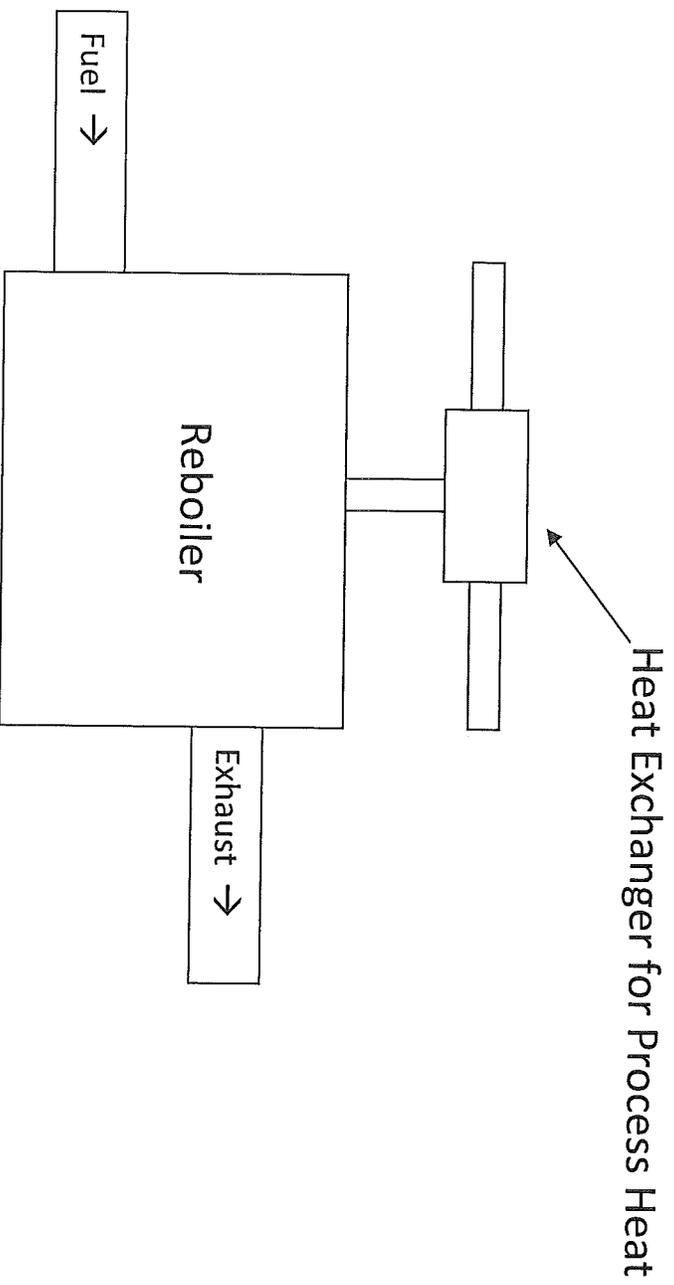
Schutte Station
Stack ID Number: DEHY01

Natural Gas Compression Station Process Flow Diagram - Engine



Schutte Station
Stack ID Number: EN01
EN02
EN03

Natural Gas Compression Station Process Flow Diagram - Reboiler



Schutte Station
Stack ID Number: RBR01



APPENDIX D
EQUIPMENT TABLE

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
EN01	EN01	Reciprocating Engine/Integral Compressor; Cooper, GMV-6TF	1985	660 HP	N/A
EN02	EN02	Reciprocating Engine/Integral Compressor; Cooper, GMV-6TF	1985	660 HP	N/A
EN03	EN03	Reciprocating Engine/Integral Compressor; AJAX, DPC-2803LE	2009	600 HP	N/A
DEHY01	DEHY01	Dehydration unit still: NATCO	2009	10 mmcf/day	N/A
F1	F1	Glycol Dehydration unit flare	2009	10 MMBtu/hr	N/A
RBR01	RBR01	Dehydration unit reboiler; NATCO, 600/100	2009	1.0 MMBtu/hr	F1
TK01	TK01	Horizontal Aboveground Storage Tank – Ethylene Glycol	1984	2,000-gallon	N/A
TK02	TK02	Horizontal Aboveground Storage Tank – Tri-Ethylene Glycol	2009	560-gallon	N/A
TK03	TK03	Horizontal Aboveground Storage Tank – Engine Oil	1984	3,000-gallon	N/A
TK04	TK04	Horizontal Aboveground Storage Tank – Drip Gas	2003	3,000-gallon	N/A
TK05	TK05	Horizontal Aboveground Storage Tank – Wastewater	2003	230-gallon	N/A
TK06	TK06	Vertical Aboveground Storage Tank – waste water	2003	500-gallon	N/A
TK07	TK07	Horizontal Aboveground Storage Tank – Engine Oil	2009	1,000-gallon	N/A

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.



APPENDIX E
EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: EN01	Emission unit name: Cooper, GMV-6TF Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas-fired reciprocating engine/integral compressor – 660 HP (8400 Btu/hp-hr)

Manufacturer: Cooper	Model number: GMV-6TF	Serial number:
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Construction date: 1985	Installation date: 1985	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
660 HP

Maximum Hourly Throughput: 8400 Btu/hp-hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 660 HP	Type and Btu/hr rating of burners: 8400 Btu/hp-hr, 0.0055 MMscf/hr
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas – 8400 Btu/hp-hr, 0.0055 MMscf/hr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	20 gr Sulfur/100 cu. ft.		

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	4.4	19.1
Nitrogen Oxides (NO _x)	29.5	129.4
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.0006	0.0024
Particulate Matter (PM ₁₀)	0.06	0.24
Total Particulate Matter (TSP)	0.06	0.24
Sulfur Dioxide (SO ₂)	0.003	0.01
Volatile Organic Compounds (VOC)	3.3	14.7
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.13	0.56
Benzene	0.0096	0.04
Toluene	0.0023	0.01
Ethylbenzene	0.0012	0.01
n-Hexane	0.00	0
Xylene	0.0036	0.01
Acetaldehyde	0.0039	0.02
Acrolein	0.0026	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
CO, NO_x, VOC Emission Rates based on annual emission statement submittals to WVDEP.
PM₁₀, PM_{2.5}, and SO₂ Emission Factors were obtained from USEPA's AIRS Report (March 1990).
HAP emission factors based on 2 stroke lean burn engine emission factors obtained from GRI's HAPCalc v1.0, except for ethylbenzene and xylene which were obtained from USEPA's AP-42.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: EN02	Emission unit name: Cooper, GMV-6TF Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Natural Gas-fired reciprocating engine/integral compressor – 660 HP (8400 Btu/hp-hr)

Manufacturer: Cooper	Model number: GMV-6TF	Serial number:
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Construction date: 1985	Installation date: 1985	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 660 HP

Maximum Hourly Throughput: 8400 Btu/hp-hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? ___ Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating: 660 HP	Type and Btu/hr rating of burners: 8400 Btu/hp-hr, 0.0055 MMscf/hr
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas – 8400 Btu/hp-hr, 0.0055 MMscf/hr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	20 gr Sulfur/100 cu. ft.		

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	4.4	19.1
Nitrogen Oxides (NO _x)	29.5	129.4
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.00055	0.0024
Particulate Matter (PM ₁₀)	0.06	0.24
Total Particulate Matter (TSP)	0.06	0.24
Sulfur Dioxide (SO ₂)	0.003	0.01
Volatile Organic Compounds (VOC)	3.3	14.7
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.13	0.56
Benzene	0.0096	0.04
Toluene	0.0023	0.01
Ethylbenzene	0.0012	0.01
n-Hexane	0.00	0
Xylene	0.0036	0.01
Acetaldehyde	0.0039	0.02
Acrolein	0.0026	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
CO, NO_x, VOC Emission Rates based on annual emission statement submittals to WVDEP.
PM₁₀, PM_{2.5}, and SO₂ Emission Factors were obtained from USEPA's AIRS Report (March 1990).
HAP emission factors based on 2 stroke lean burn engine emission factors obtained from GRI's HAPCalc v1.0, except for ethylbenzene and xylene which were obtained from USEPA's AP-42.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: EN03	Emission unit name: AJAX, DPC-2803LE Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas-fired reciprocating engine/integral compressor – 600 HP (7800 Btu/hp-hr)

Manufacturer: AJAX	Model number: DPC-2803LE	Serial number:
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Construction date: 2008	Installation date: 2009	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
600 HP

Maximum Hourly Throughput: 7800 Btu/hp-hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 600 HP, 4.68 x 10 ⁶ Btu/hr	Type and Btu/hr rating of burners: 4.68 x 10 ⁶ Btu/hr
---	--

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas – 7800 Btu/hp-hr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	20 gr Sulfur/100 cu. ft.		

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.66	2.90
Nitrogen Oxides (NO _x)	2.65	11.59
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.32	1.43
Particulate Matter (PM ₁₀)	0.33	1.44
Total Particulate Matter (TSP)	0.33	1.44
Sulfur Dioxide (SO ₂)	0.01	0.02
Volatile Organic Compounds (VOC)	1.19	5.21
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.26	1.13
Benzene	0.01	0.04
Toluene	0.00	0.02
Ethylbenzene	0.00	<0.01
n-Hexane	0.00	0.01
Xylene	0.00	0.01
Acetaldehyde	0.04	0.16
Acrolein	0.04	0.16
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
CO, NO_x, VOC Emission Rates based on manufacturer's certification.
PM10, PM2.5, SO2 and HAP Emission Factors were obtained from USEPA's AP-42 Table 3.2-1 (7/00).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45 CSR 13 – Fuel usage limited to 4,800 ft³/hr of natural gas (TV 6.1.1, R13-2778, 5.1.1)
- 45 CSR 13 – lb/hr and tpy emission limits (TV 6.1.2, R13-2778, 5.1.2)
- 45 CSR 13 – emission limits (TV 6.2.1, R13-2778, 7.2.1, 40 CFR 60.4233(e))
- 45 CSR 16 – emission limits (TV 6.2.1, R13-2778, 7.2.1, 40 CFR 60.4233(e))
- 45 CSR 13 – emission limits (TV 6.2.2, R13-2778, 7.2.2, 40 CFR 60.4234)
- 45 CSR 16 – emission limits (TV 6.2.2, R13-2778, 7.2.2, 40 CFR 60.4234)
- 45 CSR 13 – emission limit compliance (TV 6.3.1, R13-2778, 7.3.1, 40 CFR 60.4243(b))
- 45 CSR 16 – emission limit compliance (TV 6.3.1, R13-2778, 7.3.1, 40 CFR 60.4243(b))
- 45 CSR 13 – alternative fuels (TV 6.3.2, R13-2778, 7.3.2, 40 CFR 60.4243(e))
- 45 CSR 16 – alternative fuels (TV 6.3.2, R13-2778, 7.3.2, 40 CFR 60.4243(e))
- 45 CSR 13 – AFR controller maintenance & operation (TV 6.3.3, R13-2778, 7.3.3, 40 CFR 60.4243(g))
- 45 CSR 16 – AFR controller maintenance & operation (TV 6.3.3, R13-2778, 7.3.3, 40 CFR 60.4243(g))

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45 CSR 13 – The permittee shall maintain records of fuel usage to demonstrate compliance with 6.1.1 (TV 6.5.1, R13-2778, 5.1.1)
- 45 CSR 13 – The permittee shall maintain records of fuel usage to demonstrate compliance with 6.1.2 (TV 6.5.1, R13-2778, 5.1.2)
- 45 CSR 13 – The permittee shall maintain fuel usage records required for calculation of emission limits to demonstrate compliance (TV 6.2, R13-2778, 7.2.1, 40 CFR 60.4233(e))
- 45 CSR 16 – The permittee shall maintain fuel usage records required for calculation of emission limits to demonstrate compliance (TV 6.2, R13-2778, 7.2.1, 40 CFR 60.4233(e))
- 45 CSR 13 – Records of engine certification will be maintained to demonstrate compliance (TV 6.3.1, R13-2778, 7.3.1, 40 CFR 60.4243(b))
- 45 CSR 16 – Records of engine certification will be maintained to demonstrate compliance with (TV 6.3.1, R13-2778, 7.3.1, 40 CFR 60.4243(b))
- 45 CSR 13 – Fuel records will be maintained (TV 6.3.2, R13-2778, 7.3.2, 40 CFR 60.4243(e))
- 45 CSR 16 – Fuel records will be maintained (TV 6.3.2, R13-2778, 7.3.2, 40 CFR 60.4243(e))
- 45 CSR 13 – If an AFR controller is required, it will be maintained & operated as required (TV 6.3.3, R13-2778, 7.3.3, 40 CFR 60.4243(g))
- 45 CSR 16 – If an AFR controller is required, it will be maintained & operated as required (TV 6.3.3, R13-2778, 7.3.3, 40 CFR 60.4243(g))

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45 CSR 13 – Performance Testing (TV 6.4 *et al*, R13-2778, 7.4.1, 40 CFR 60.4244(a-g))
- 45 CSR 16 – Performance Testing (TV 6.4 *et al*, R13-2778, 7.4.1, 40 CFR 60.4244(a-g))
- 45 CSR 13 – Recordkeeping (TV 6.5.1, R13-2778, 5.2)
- 45 CSR 13 – Recordkeeping and Reporting (TV 6.5.2, 45 CFR 13, R13-2778, 7.5.2 (a)-(d), 40 CFR 8860.4245(a)-(d))
- 45 CSR 16 – Recordkeeping and Reporting (TV 6.5.2, 45 CFR 16, R13-2778, 7.5.2 (a)-(d), 40 CFR 8860.4245(a)-(d))

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45 CSR 13 – Performance Testing will be conducted as required (TV 6.4 *et al*, R13-2778, 7.4.1, 40 CFR 60.4244(a-g))
- 45 CSR 16 – Performance Testing will be conducted as required (TV 6.4 *et al*, R13-2778, 7.4.1, 40 CFR 60.4244(a-g))
- 45 CSR 13 – The permittee shall maintain fuel usage records. (TV 6.5.1, R13-2778, 5.2)
- 45 CSR 13 – The permittee shall maintain SI ICE engine records (TV 6.5.2, 45 CFR 13, R13-2778, 7.5.2 (a)-(d), 40 CFR 8860.4245(a)-(d))
- 45 CSR 16 – The permittee shall maintain SI ICE engine records (TV 6.5.2, 45 CFR 16, R13-2778, 7.5.2 (a)-(d), 40 CFR 8860.4245(a)-(d))

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: DEHY01	Emission unit name: DEHY01	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Dehydration Unit Still Column

Manufacturer: NATCO	Model number:	Serial number:
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Construction date:	Installation date: 2009	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
10 MMCF/Day

Maximum Hourly Throughput: 0.42 MMSCF/hr 10 MMSCF/Day	Maximum Annual Throughput:	Maximum Operating Schedule: 8760
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas – 10 MMSCF/Day throughput

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	20 gr Sulfur/100 cu. ft.		

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	5.66	24.79
<i>In accordance with the 2008 Title V permit application, the emissions from the Flare (F1) and the Dehydration Unit Still (DEHY01) are combined and are reported on Attachment G – APCD Emissions Form.</i>		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
n-Hexane	0.06	0.25
Benzene	0.02	0.08
Toluene	0.07	0.29
Ethylbenzene	0.03	0.11
Xylenes	0.29	1.26
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission rates for the dehydration unit were obtained from GRI GLYCalc V4.0, with 98% destruction efficiency for the flare.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45 CSR 30-5.1(c) – Annual analysis of Inlet Gas for Total Sulfur (TV 3.2.2).
- 45 CSR 30-5.1(c) – Annual analysis of Inlet Gas for H2S (TV 3.2.3).
- 45 CSR 13 – Maximum Throughput Limit (TV 5.1.6, 45 CSR 13-2778, 6.1.1)
- 45 CSR 13 – Maximum Emissions (TV 5.1.7, 45 CSR 13, R13-2778, 6.1.2)
- 45 CSR 13 – Determining Potential HAP Emissions (TV 5.1.8, 45 CSR 13, R13-2778, 6.1.3, 40 CFR 63, Subpart HH)
- 45 CSR 13 – Wet Gas Throughput Monitoring (TV 5.2.3, 45 CSR 13, R13-2778, 6.2.2)
- 45 CSR 13 – Permittee shall demonstrate compliance with 5.1.8, upon request by the Director, using GLYCalc Version 3.0 or higher (TV 5.3.4, 45 CSR 13, R13-2778, 6.3.2).

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45 CSR 30-5.1(c) – Annual inlet gas sampling will be conducted and records will be maintained, SO2 emissions are limited by Operating Permit R13-2778.
- 45 CSR 30-5.1(c) – Annual inlet gas sampling will be conducted and records will be maintained, H2S emissions are limited by Operating Permit R13-2778.
- 45 CSR 13 – Permittee shall maintain records of natural gas throughput through the dehydration unit (TV 5.2.3, 45 CSR 13, R13-2778, 6.2.2)
- 45 CSR 13 – Permittee shall demonstrate compliance with 5.1.7 by maintaining records of PTE HAPs using GLYCalc Version 4.0 or higher to estimate emissions from the dehydration unit (TV 5.1.1, 45 CSR 30-5.1.c)
- 45 CSR 13 – Permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements to demonstrate compliance with 5.2 and 5.3 (TV 5.4.5, 45 CSR 13, R13-2778, 6.4.4)
- 45 CSR 13 – Permittee shall maintain records of testing to demonstrate compliance with 5.3.4 (TV 5.4.4, 45 CSR 13, R13-2778, 6.4.3).
- 45 CSR 13 – Permittee shall maintain records of all PTE HAP calculations for the entire facility to demonstrate compliance with 5.1.8 (TV 5.4.7, 45 CSR 13, R13-2778, 6.4.6)
- 45 CSR 13 – Permittee shall maintain records of wet natural gas throughput to demonstrate compliance with 5.2.3 (TV 5.4.8, 45 CSR 13, R13-2778, 6.4.7)
- 45 CSR 13 –Permittee shall maintain records for 5 years (TV 5.4.9, 45 CSR 13, R13-2778, 6.4.8)

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: RBR01	Emission unit name: Reboiler; NATCO 600/100	List any control devices associated with this emission unit: F1
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
1.0 MMBtu/hr Natural Gas-fired Boiler

Manufacturer: NATCO	Model number: 600/100	Serial number:
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Construction date: 2009	Installation date: 2009	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1.0 MMBtu/hr

Maximum Hourly Throughput: 1.0 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 1.0 MMBtu/hr	Type and Btu/hr rating of burners: 1.0 MMBtu/hr
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas – 1.0 MMBtu/hr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	20 gr Sulfur/100 cu. ft.		

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.09	0.39
Nitrogen Oxides (NO _x)	0.10	0.44
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.00	0.00
Particulate Matter (PM ₁₀)	0.01	0.04
Total Particulate Matter (TSP)	0.01	0.04
Sulfur Dioxide (SO ₂)	0.00	0.00
Volatile Organic Compounds (VOC)	0.01	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.00	<0.01
Benzene	0.00	<0.01
Toluene	0.00	<0.01
Ethylbenzene	0.00	0.00
n-Hexane	0.00	<0.01
Xylene	0.00	0.00
Acetaldehyde	0.00	0.00
Acrolein	0.00	0.00
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission rates for reboiler for NO_x and CO from USEPA AP-42 Table 1.4-1.
Emission rates for reboiler for VOC, PM, and SO₂ from USEPA AP-42 Table 1.4-2.
Emission rates for reboiler for HAPs from USEPA AP-42 Table 1.4-3.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45 CSR 2-3.1 – Opacity limit of less than ten (10) percent (TV 4.1.1)

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

45 CSR 2-3.1 – Opacity readings will be conducted upon request from the Department.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:

F1

List all emission units associated with this control device.

RBR01

Manufacturer:

Questor

Model number:

R12N

Installation date:

2009

Type of Air Pollution Control Device:

- | | | |
|---|--|---|
| <input type="checkbox"/> Baghouse/Fabric Filter | <input type="checkbox"/> Venturi Scrubber | <input type="checkbox"/> Multiclone |
| <input type="checkbox"/> Carbon Bed Adsorber | <input type="checkbox"/> Packed Tower Scrubber | <input type="checkbox"/> Single Cyclone |
| <input type="checkbox"/> Carbon Drum(s) | <input type="checkbox"/> Other Wet Scrubber | <input type="checkbox"/> Cyclone Bank |
| <input type="checkbox"/> Catalytic Incinerator | <input type="checkbox"/> Condenser | <input type="checkbox"/> Settling Chamber |
| <input type="checkbox"/> Thermal Incinerator | <input checked="" type="checkbox"/> Flare | <input type="checkbox"/> Other (describe) _____ |
| <input type="checkbox"/> Wet Plate Electrostatic Precipitator | | <input type="checkbox"/> Dry Plate Electrostatic Precipitator |

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
VOC		98%
Benzene		98%
Ethylbenzene		98%
n-Hexane		98%
Toluene		98%
Xylene		98%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Profire 1100 – an ionization flame fail system with a thermocouple backup
10 MMBtu/hr non-assisted burner

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** The Permittee is conducting reasonable assurance compliance monitoring to maintain minor source classification in accordance with the requirements of 40 CFR 63, Subpart HH.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Visible emissions Limit (less than twenty (20) percent opacity) – Permittee shall maintain initial and monthly monitoring records (TV 3.2.1, 45 CSR 30-5.1.c).
Maintain Minor Source of HAPs classification – Permittee shall maintain all PTE calculations, testing reports, and gas analysis records (TV 5.1.5, 40 CFR 63.10(b)(3), Subpart HH).
Flare shall be maintained and operated to meet manufacturer’s design specifications – Permittee shall maintain records of flare design evaluation and testing results (TV 5.1.1-4, 45 CSR 6.4.1, 6.4.3-6).
Wet gas content shall be analyzed – Permittee shall maintain records of wet gas analysis (TV 5.1.6, 5.2.3, 45 CSR 13, R13-2778, 6.1.1, 6.2.2).
Presence of flame shall be monitored and recorded – Permittee shall maintain records of times and duration of flame absence (TV 5.1.9, 5.2.2, 45 CSR 13, R13-2778, 6.1.5, 6.2.1).



APPENDIX F
P.E. CERTIFICATION



P.E. Certification

I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments as they pertain to the practice of engineering. This is defined as the performance of a professional service such as consultation, investigation, evaluation, planning, design or supervision of construction or operation in connection with any utilities, structures, buildings, machines, equipment, processes, works, or projects wherein the safeguarding of life, health and property is concerned, when such service or work requires the application of engineering principals and data. Based on my inquiry of those individuals with primary responsibility for obtaining such information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name of P.E. Susan E. Johnson

Signature of P.E. *Susan E. Johnson*

Date 7 120 12010

WV License No. 18653

Phone (919) 447- 2750

