# CRAIG COMPRESSOR STATION
# DOMINION TRANSMISSION INC.
# APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
# TITLE V OPERATING PERMIT NO: R30-08500004-2006

**Dominion Transmission, Inc.**
Craig Compressor Station
Smithville, WV

*Prepared for:*

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

*Prepared by:*

**AMEC Earth & Environmental**
2200 Gateway Centre Blvd, Suite 205
Morrisville, NC 27560

**DECEMBER 2010**

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Unit Manager

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## 1.0 INTRODUCTION

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

Craig Station has the potential to emit in excess of 245 tons per year of nitrogen oxides (NOx) and 221 tons per year of volatile organic carbon (VOC). The Station 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.

The Title V Operating Permit Renewal 1 (Permit No: R30-08500004-2006) was issued on November 2, 2006, with an expiration date of November 2, 2011. The Title V Operating Permit is for the operation of two (3) 869 HP natural gas fired reciprocating engines (EN01, EN02, EN03), two (2) 225 HP back-up generators (EN05, EN06), one (1) dehydration unit flare (DEHY), one (1) dehydration unit still (DEHY01), one (1) reboiler (RBR01), one (1) 1000-gallon aboveground storage tank (TK04), two (2) 4,200-gallon aboveground storage tanks (TK10, TK11), one (1) 6,500-gallon aboveground storage tank (TK12), one (1) 1,000-gallon aboveground storage tank (TK13), and one (1) 500-gallon aboveground storage tank (TK14).

On September 29, 2009, Dominion Transmission, Inc. (Dominion) was issued a Title V modification permit to the existing Title V Operating Permit (Permit No: R30-08500004-2006). The modification incorporated changes to the emission units table.

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## 2.0 PROCESS DESCRIPTION

Craig Station began operation in 1984. The main process occurring at Craig Station is the compression and transmission of natural gas. The following emission units are present at the facility.

Three (3) 869 HP Ajax DPC-720 natural gas fired reciprocating engine
- Emission points EN01, EN02, EN03
- Emission units EN01, EN02, EN03

Two (2) 225 HP Caterpillar Emergency Back-up Generator
- Emission points S05, S06
- Emission units EN05, EN06

One (1) dehydration unit flare
- Emission points DEHY
- Emission unit DEHY

One(1) Latoka dehydration unit still
- Emission points DEHY01
- Emission unit DEHY01

One (1) Latoka reboiler
- Emission point RBR01
- Emission unit RBR01

One (1) 1,000-gallon aboveground storage tank containing antifreeze
- Emission point TK04
- Emission unit TK04

One (1) 4,200-gallon aboveground storage tank containing tri-ethylene glycol
- Emission point TK10
- Emission unit TK10

One (1) 4,200-gallon aboveground storage tank containing drip gas
- Emission point TK11
- Emission unit TK11

One (1) 6,500-gallon aboveground storage tanks containing engine oil
- Emission point TK12
- Emission unit TK12

One (1) 1,000-gallon aboveground storage tanks containing used oil
- Emission point TK13

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- Emission unit TK13

One (1) 500-gallon aboveground storage tank containing wastewater

- Emission point TK14
- Emission unit TK14

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## 3.0 POTENTIAL TO EMIT

Craig Station is a major source of nitrogen oxides and volatile organic compounds under 45 CSR 30 of the West Virginia Code of State Regulations. Craig 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 | 34.22 | 245.10 | 221.68 |
| Fugitive Emissions | -- | -- | 98.67 |
| Engines (EN01 - EN03) | 30.22 | 241.64 | 91.59 |
| Auxiliary Generators (S05-S06) | 3.40 | 3.20 | 0.03 |
| Dehydration System | 0.60 | 0.26 | 31.11 |

*The Dehydration Unit Still Column, Reboiler, and Flare Pilot emissions are combined.*
*The Flare is regulated for 95% destruction efficiency by Permit, thus the facility is not classified as a major source of HAPs.*
*Onsite storage tanks are not regulated as a potential source for VOC emissions.*

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## 4.0 PROPOSED MODIFICATIONS

Dominion does not propose any new modifications under this application.

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# APPENDIX A

# AIR PERMIT APPLICATION FORMS

AMEC Earth & Environmental, Inc.
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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*

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Dominion Transmission, Inc.

2. **Facility Name or Location:**
Craig Station

3. **DAQ Plant ID No.:**
0 8 5 — 0 0 0 0 4

4. **Federal Employer ID No. (FEIN):**
5 5 0 6 2 9 2 0 3

5. **Permit Application Type:**

☐ Initial Permit
☒ Permit Renewal
☐ Update to Initial Permit Application

When did operations commence? 1984
What is the expiration date of the existing permit? 11/02/2011

6. **Type of Business Entity:**

☒ Corporation ☐ Governmental Agency
☐ Partnership ☐ Limited Partnership

7. **Is the Applicant the:**

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. **Number of onsite employees:** 5

9. **Governmental Code:**

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. **Business Confidentiality Claims**

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

| 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 16 | **City:** Smithville | **County:** Ritchie County |
| **UTM Easting:** 491.49 km | **UTM Northing:** 4324.68 km | **Zone:** ☒ 17 or ☐ 18 |
| **Directions:** From Clarksburg, take Route 50 West for 41 miles to Ellensboro exit. Go left on Route 16 South for 18 miles thru Harrisville to Route 47. Turn left and go 0.2 miles across bridge then turn right on Route 16 South. Go approximately 20 feet and turn right up hill. Go 0.3 miles to station. | | |
| **Portable Source?** ☐ Yes ☒ No | | |
| **Is facility located within a nonattainment area?** ☐ Yes ☒ No | | **If yes, for what air pollutants?** |
| **Is facility located within 50 miles of another state?** ☒ Yes ☐ No | | **If yes, name the affected state(s).** Pennsylvania, Ohio |
| **Is facility located within 100 km of a Class I Area[1]?** ☐ Yes ☒ No<br>**If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No | | **If yes, name the area(s).** |
| [1] *Class I areas include Dolly Sods 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:** Jeffrey.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:** Beth D. Espitia | | **Title:** Environmental Engineer |
| **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:** beth.espitia@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.**

The Craig Station is a compressor facility that services a natural gas pipeline system. The purpose of the facility is to recompress natural gas flowing through a pipeline for transportation. The reciprocating engines (EN01 - EN03) at the facility receive natural gas from a valve on a pipeline and compress it to enable further transportation in the pipeline.

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. | |
| ☐ SIP | ☐ FIP |
| ☒ Minor source NSR (45CSR13) | ☐ PSD (45CSR14) |
| ☐ NESHAP (45CSR15) | ☐ Nonattainment NSR (45CSR19) |
| ☐ Section 111 NSPS | ☐ Section 112(d) MACT standards |
| ☐ Section 112(g) Case-by-case MACT | ☐ 112(r) RMP |
| ☐ Section 112(i) Early reduction of HAP | ☐ Consumer/commercial prod. reqts., section 183(e) |
| ☐ Section 129 Standards/Reqts. | ☐ Stratospheric ozone (Title VI) |
| ☐ Tank vessel reqt., section 183(f) | ☐ Emissions cap 45CSR§30-2.6.1 |
| ☐ NAAQS, increments or visibility (temp. sources) | ☐ 45CSR27 State enforceable only rule |
| ☒ 45CSR4 State enforceable only rule | ☐ Acid Rain (Title IV, 45CSR33) |
| ☐ Emissions Trading and Banking (45CSR28) | ☐ Compliance Assurance Monitoring (40CFR64) |
| ☐ $NO_x$ Budget Trading Program Non-EGUs (45CSR1) | ☐ $NO_x$ Budget Trading Program EGUs (45CSR26) |

| **19. Non Applicability Determinations** |
|---|
| **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.**<br>45CSR10 is not applicable to the engines.<br><br>According to 45 CSR 2-11, RBR01 is exempt from MRR requirement because RBR01's heat input is less than ten million BTUs per hour.<br><br>40 CFR 64 – Glycol Dehydration unit is not a major source of HAPs. Therefore, CAM is not applicable to this facility. |
| ☐ 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 / 45 CSR 15 – Asbestos inspection and removal (TV 3.1.3)

45 CSR 11-5.2 – Standby plans for reducing emissions (TV 3.1.5)

WV Code 22-5-4 (a) (14) – The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements (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)

State Only:

45 CSR 4-3.1 – No Objectionable odors (TV 3.1.4)

45 CSR 17-3.1 – Fugitive Particulate Matter (TV 3.1.9)

☐ 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.)**

WV Code 22-5-4(a)(15) – Stack Testing (TV 3.3.1)

45 CSR 30-5.1(c)(2)(A) – The permittee shall keep records of monitoring information (TV 3.4.1).

45 CSR 30-5.1(c)(2)(B) – The permittee shall keep records of monitoring and supporting information for at least 5 years (TV 3.4.2).

State only:

45 CSR 30-5.1(c) – The permittee shall keep records of odor complaints (TV 3.4.3)

**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 *(if any)* |
|---|---|---|
| R13-2497 | 9/27/2002 | |
| R13-2503 | 2/19/2003 | |

| 22. Inactive Permits/Obsolete Permit Conditions | | |
|---|---|---|
| Permit Number | Date of Issuance | Permit Condition Number |
| N/A | / / | |

*Section 3: Facility-Wide Emissions*

**23. Facility-Wide Emissions Summary [Tons per Year]**

| Criteria Pollutants | Potential Emissions |
|---|---|
| Carbon Monoxide (CO) | 34.22 |
| Nitrogen Oxides ($NO_X$) | 245.10 |
| Lead (Pb) | N/A |
| Particulate Matter ($PM_{2.5}$)[1] | 0.03 |
| Particulate Matter ($PM_{10}$)[1] | 0.96 |
| Total Particulate Matter (TSP) | 0.96 |
| Sulfur Dioxide ($SO_2$) | 0.06 |
| Volatile Organic Compounds (VOC) | 221.68 |

| Hazardous Air Pollutants[2] | Potential Emissions |
|---|---|
| Formaldehyde | 5.10 |
| Benzene | 0.59 |
| Toluene | 0.99 |
| Ethylbenzene | 0.10 |
| n-Hexane | 0.75 |
| Xylene | 0.89 |
| Acetaldehyde | 0.72 |
| Acrolein | 0.72 |

| 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) | | |
|---|---|---|
| ☒ | 1. | Air compressors and pneumatically operated equipment, including hand tools. |
| ☐ | 2. | Air contaminant detectors or recorders, combustion controllers or shutoffs. |
| ☐ | 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. |
| ☒ | 4. | Bathroom/toilet vent emissions. |
| ☐ | 5. | Batteries and battery charging stations, except at battery manufacturing plants. |
| ☐ | 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. |
| ☐ | 7. | Blacksmith forges. |
| ☒ | 8. | Boiler water treatment operations, not including cooling towers. |
| ☐ | 9. | Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source. |
| ☐ | 10. | $CO_2$ lasers, used only on metals and other materials which do not emit HAP in the process. |
| ☐ | 11. | Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources. |
| ☒ | 12. | Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel. |
| ☒ | 13. | Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment. |
| ☐ | 14. | Demineralized water tanks and demineralizer vents. |
| ☐ | 15. | Drop hammers or hydraulic presses for forging or metalworking. |
| ☐ | 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. |
| ☐ | 17. | Emergency (backup) electrical generators at residential locations. |
| ☐ | 18. | Emergency road flares. |
| ☐ | 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.<br><br>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:<br><br>____<br>____<br>____<br>____<br>____<br>____<br>____<br>____<br>____ |

| 24. Insignificant Activities (Check all that apply) | | |
|---|---|---|
| ☐ | 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.<br><br>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:<br><br>_____<br>_____<br>_____<br>_____<br>_____ |
| ☐ | 21. | Environmental chambers not using hazardous air pollutant (HAP) gases. |
| ☒ | 22. | Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption. |
| ☐ | 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. |
| ☐ | 24. | Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis. |
| ☐ | 25. | Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP. |
| ☐ | 26. | Fire suppression systems. |
| ☒ | 27. | Firefighting equipment and the equipment used to train firefighters. |
| ☐ | 28. | Flares used solely to indicate danger to the public. |
| ☒ | 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. |
| ☐ | 30. | Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation. |
| ☒ | 31. | Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic. |
| ☐ | 32. | Humidity chambers. |
| ☐ | 33. | Hydraulic and hydrostatic testing equipment. |
| ☐ | 34. | Indoor or outdoor kerosene heaters. |
| ☒ | 35. | Internal combustion engines used for landscaping purposes. |
| ☐ | 36. | Laser trimmers using dust collection to prevent fugitive emissions. |
| ☐ | 37. | Laundry activities, except for dry-cleaning and steam boilers. |
| ☐ | 38. | Natural gas pressure regulator vents, excluding venting at oil and gas production facilities. |
| ☐ | 39. | Oxygen scavenging (de-aeration) of water. |
| ☐ | 40. | Ozone generators. |
| ☒ | 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.) |
| ☐ | 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. |
| ☐ | 43. | Process water filtration systems and demineralizers. |
| ☒ | 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. |
| ☐ | 45. | Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified. |
| ☐ | 46. | Routing calibration and maintenance of laboratory equipment or other analytical instruments. |
| ☐ | 47. | Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers. |
| ☐ | 48. | Shock chambers. |
| ☐ | 49. | Solar simulators. |
| ☐ | 50. | Space heaters operating by direct heat transfer. |
| ☐ | 51. | Steam cleaning operations. |
| ☐ | 52. | Steam leaks. |
| ☐ | 53. | Steam sterilizers. |
| ☐ | 54. | Steam vents and safety relief valves. |
| ☐ | 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. |
| ☐ | 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. |
| ☐ | 57. | Such other sources or activities as the Director may determine. |
| ☐ | 58. | Tobacco smoking rooms and areas. |
| ☐ | 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: _____ (Must be signed and dated in blue ink) Signature Date: 01/20/11

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

| | |
|---|---|
| ☒ | ATTACHMENT A: Area Map |
| ☒ | ATTACHMENT B: Plot Plan(s) |
| ☒ | ATTACHMENT C: Process Flow Diagram(s) |
| ☒ | ATTACHMENT D: Equipment Table |
| ☒ | ATTACHMENT E: Emission Unit Form(s) |
| ☐ | ATTACHMENT F: Schedule of Compliance Form(s) |
| ☒ | ATTACHMENT G: Air Pollution Control Device Form(s) |
| ☐ | 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.***

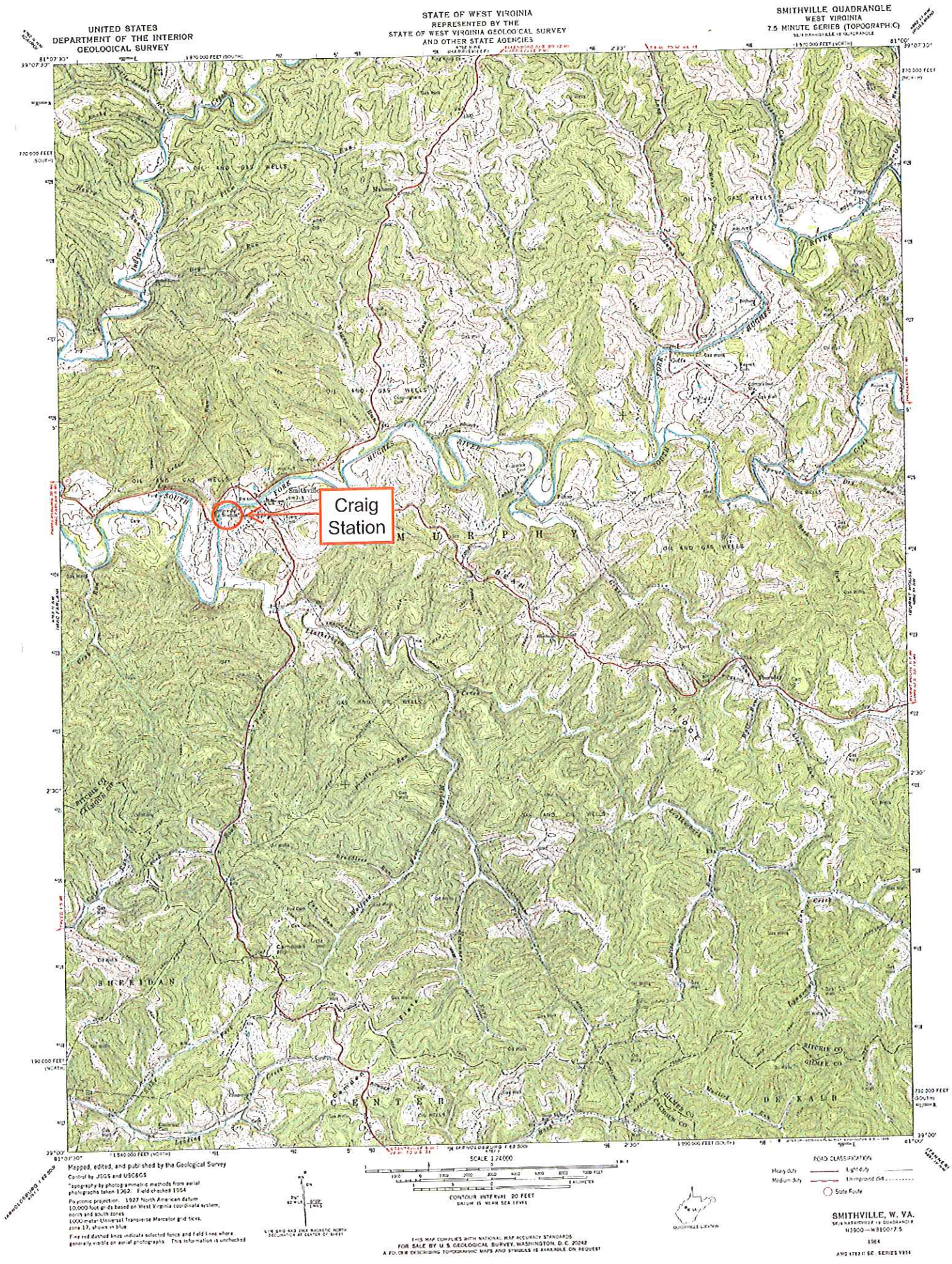
# APPENDIX B

# PLOT PLANS

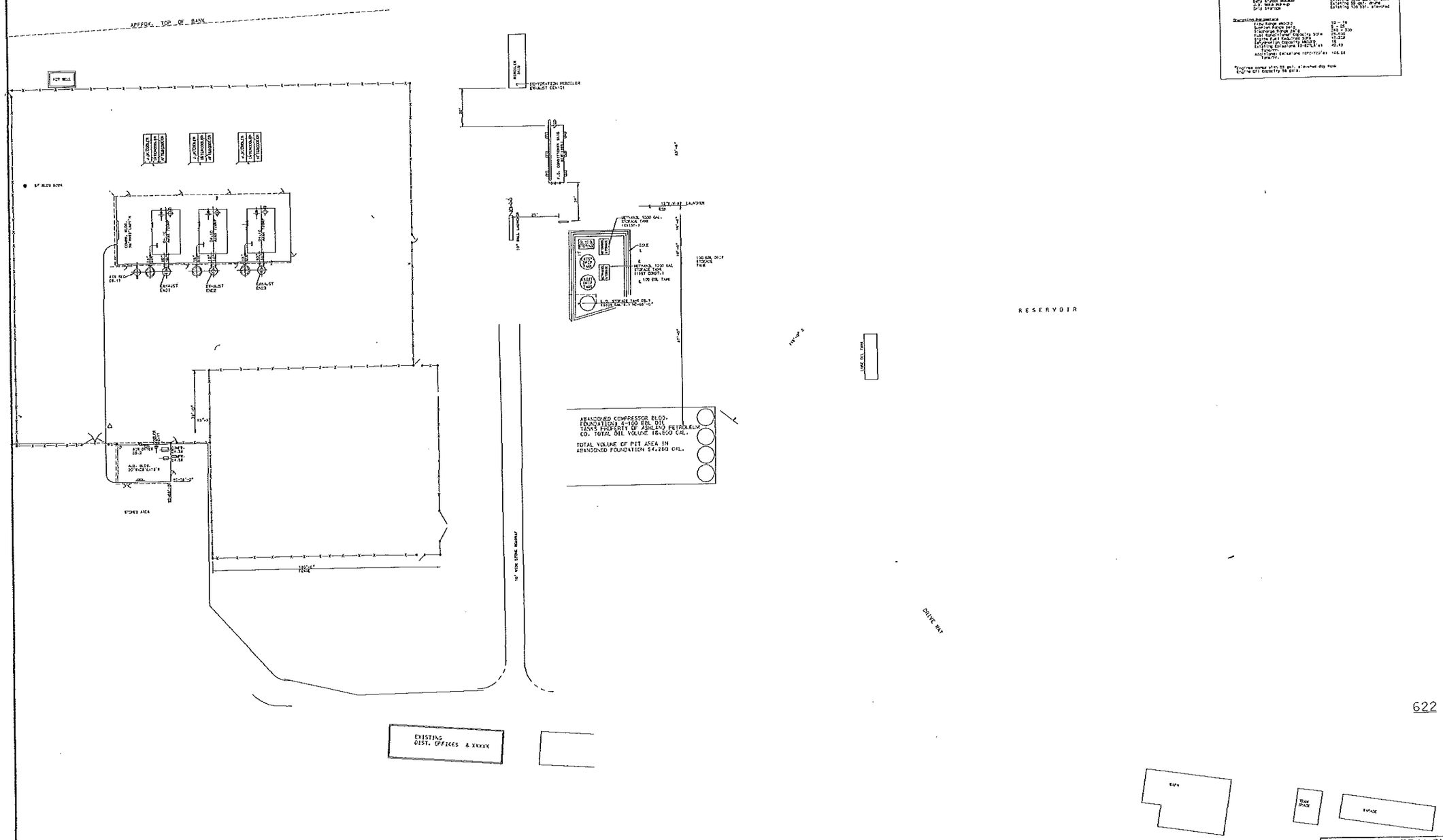
AMEC Earth & Environmental, Inc.
2200 Gateway Centre Boulevard, Suite 205
Morrisville, NC 27560

Tel – (919) 447-2750
Fax – (919) 447-2751

www.amec.com


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF WEST VIRGINIA
REPRESENTED BY THE
STATE OF WEST VIRGINIA GEOLOGICAL SURVEY
AND OTHER STATE AGENCIES
SMITHVILLE QUADRANGLE
WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
Craig Station
SCALE 1:24000
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
SMITHVILLE, W. VA.
1964

| GROUP | DWG. NO. | REV. |
|---|---|---|
| PD | E7634A | 2 |




## 1987 CONSTRUCTION

| | | |
|---|---|---|
| Engine | Model | 3-Ajax GPC-720 |
| | HP | 2150 |
| Station | Description | Gas/Electric Engine Compressor |
| | Manufacturer | Ingersoll Rand |
| | Unit Location/Clearance Pads | Ingersoll Rand |
| | Electrical Power | Purchase |
| | Backup Power | None |
| | Cooling Power | Purchase |
| | Starting System | 20 HP ACF Compressor |
| | Starting Method | Elec Gen |
| | Back to Engines | 1 HP ACF Start Drawdown Oil Heater |
| | Back to Comp. Bldg. | None |
| | Back to Dist. Bldg. | Dist |
| | Inspection System | Existing |
| | Fuel Conditioner | Planned for Fall of 96 |
| | CO | Yes |
| Buildings | Auxiliary | 20x20x10 |
| | Compressor | 35x60x25 w 5 ton crane |
| Tanks | L.O. Storage | New 8000 gal. elevated |
| | Drip Stream Vacuum | Existing 5000 gal. w/ load |
| | Drip Stream Pump | Existing 50 gal. drum |
| | Drip Storage | Existing 100 gal. elevated |
| Operating Parameters | Flow Range Mcf/d | 10 - 16 |
| | Suction Pressure Psig | 5 - 25 |
| | Discharge Pressure Psig | 245 - 300 |
| | Fuel Conditioner Capacity Scfm | 20-200 |
| | Starting Fuel Required Scfm | 11-20 |
| | Exhaust Temperature Capacity Mcf/d | 10 |
| | Exhaust Temperature Capacity Mcf/d | 40.49 |
| | Exhaust Temperature Capacity Mcf/d | 46.64 |
| | Additional Emissions (CO2-TOTAL) | 146.64 |
| | Tons/Yr. | |

*Engines same size as gal. elevated dry tank. Engine CO Capacity 50 gals.

REVISION NOTE:
POTESTA & ASSOCIATES, INC., CHANGED THE OWNER NAME FROM CNG TRANSMISSION CORPORATION, CLARKSBURG W.V. TO DOMINION TRANSMISSION CORP., PITTSBURGH, PA. ON JANUARY 16, 2002. PROJECT NO. 01-0383-008.

| SYM | DATE | BY | DESCRIPTION | APP. |
|---|---|---|---|---|
| 2 | 4/21/97 | | ALT'D. LOCATION OF 8" METER RUN | |
| 1 | 3/21/97 | | ISSUED FOR CONSTRUCTION | |
| 0 | 6/6/97 | | ISSUED FOR BID | |

DOMINION TRANSMISSION CORP.
PITTSBURGH, PA.

CRAIG STATION

TITLE: TITLE V SITE PLAN

| | | | | |
|---|---|---|---|---|
| SCALE | 1"=100' | DATE | W.O. 3120-00208 | DIVISION 3 |
| DRAWN | | | DIST: NC\CONFSTA\CRAIG | |
| CHECKED | MON JR. | 2/11/97 | FILE: POTESTA.DWG | |
| ENGINEER | RFL | 3/21/97 | GROUP PD | DWG. NO. E7634A |
| APPROVED | RFL | 3/21/97 | | REV. 2 |
| APPROVED | RTR | 3/21/97 | | |

\01-0383-HNTB\010383-07.dgn Jan. 22, 2002 15:04:04

# APPENDIX C

# PROCESS FLOW DIAGRAMS

AMEC Earth & Environmental, Inc.
2200 Gateway Centre Boulevard, Suite 205
Morrisville, NC 27560

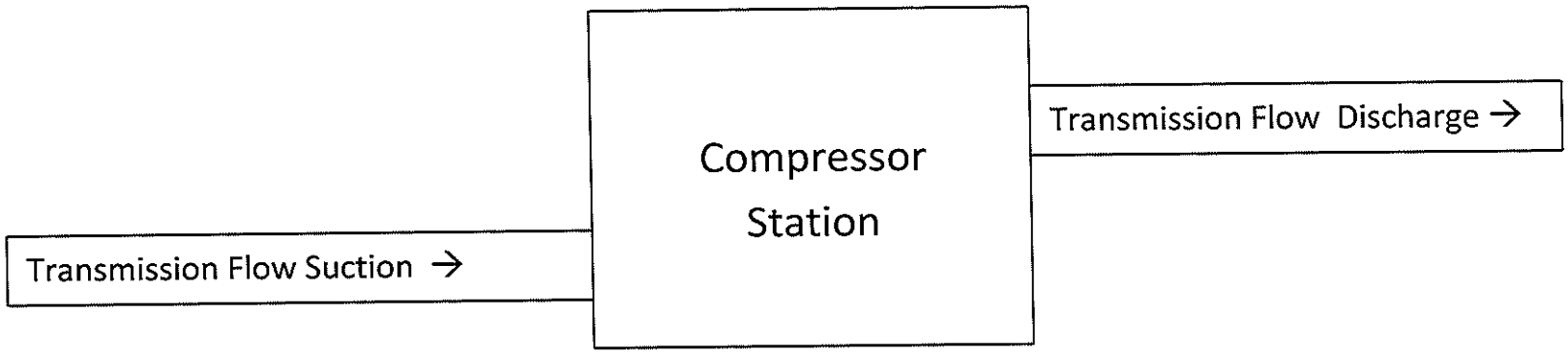
Tel – (919) 447-2750
Fax – (919) 447-2751

www.amec.com

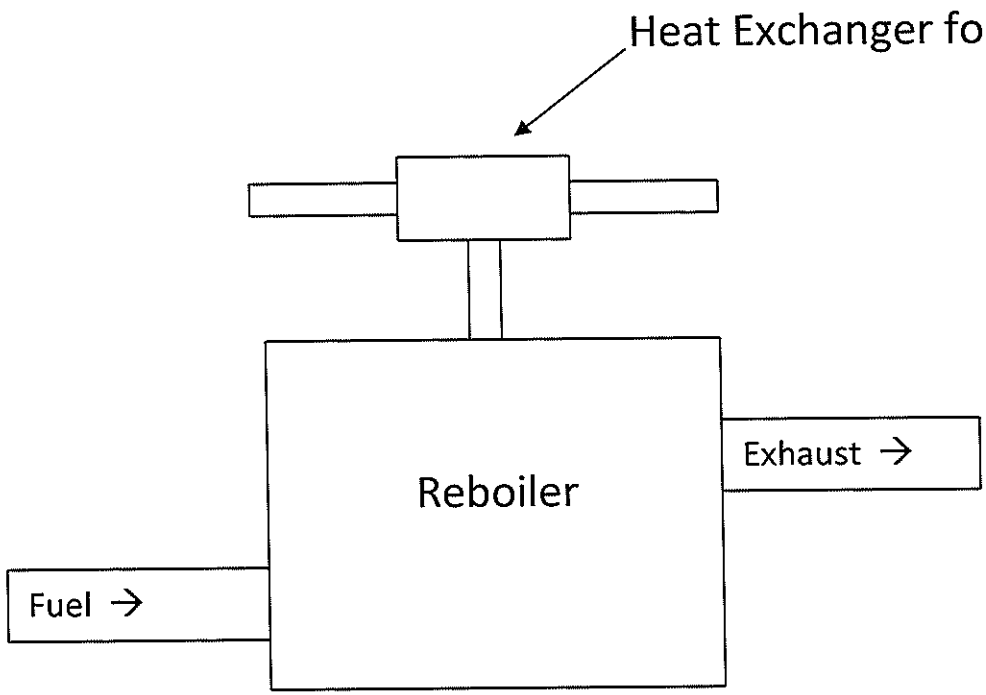
# Natural Gas Compression Station Process Flow Diagram
# Craig Station

Fugitive sources are described in application.

Fugitive sources are for the entire facility.

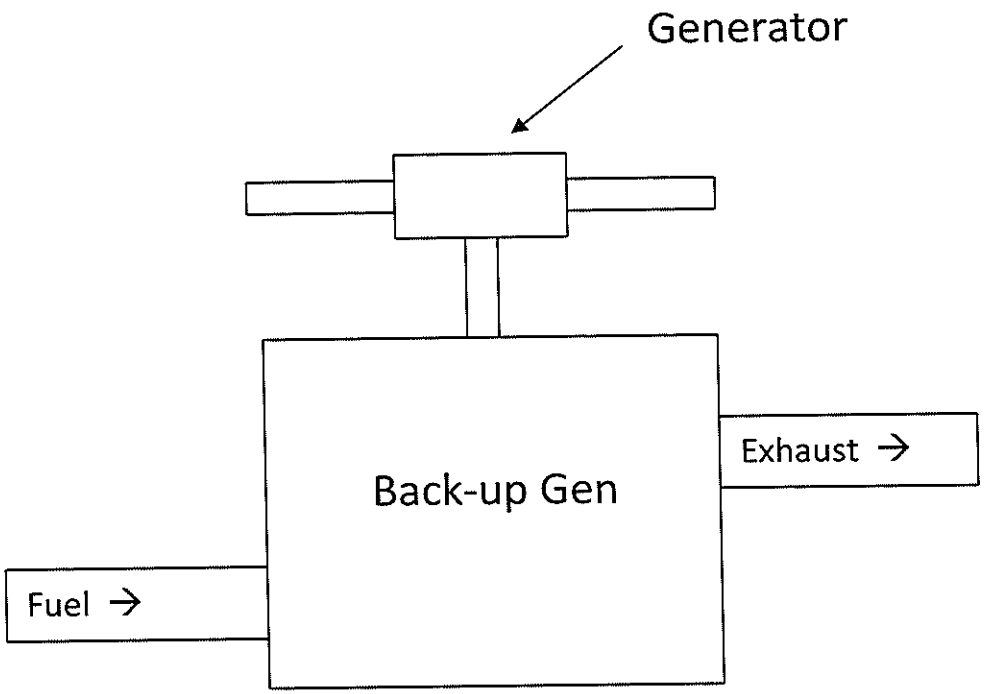


# Natural Gas Compression Station Process Flow Diagram - Reboiler



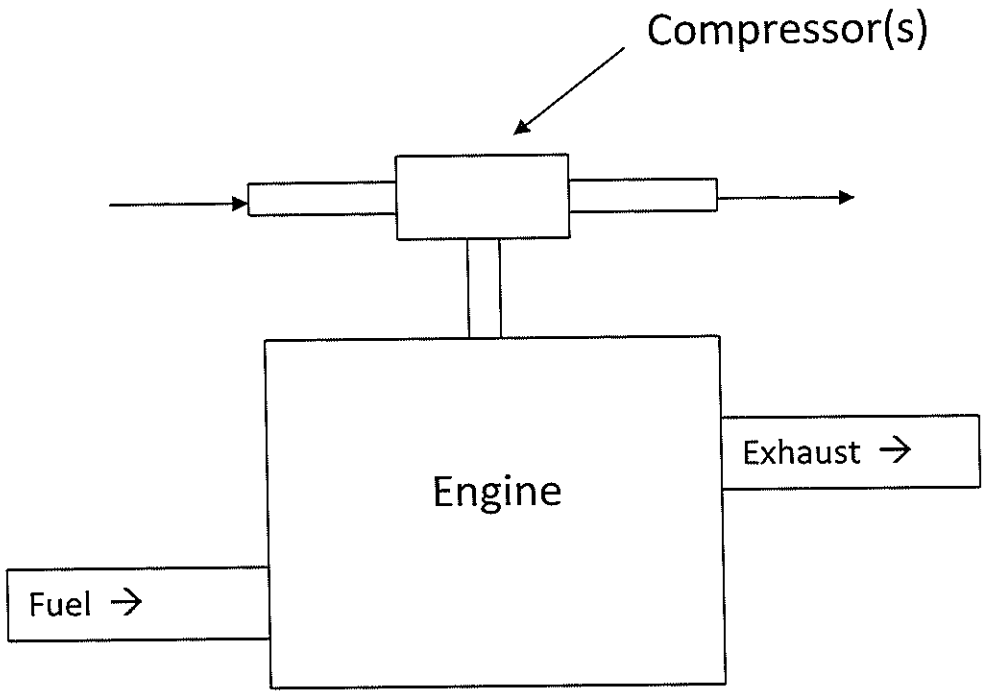

Craig Station
Emission Unit ID: RBR01

# Natural Gas Compression Station Process Flow Diagram – Back-up Generator



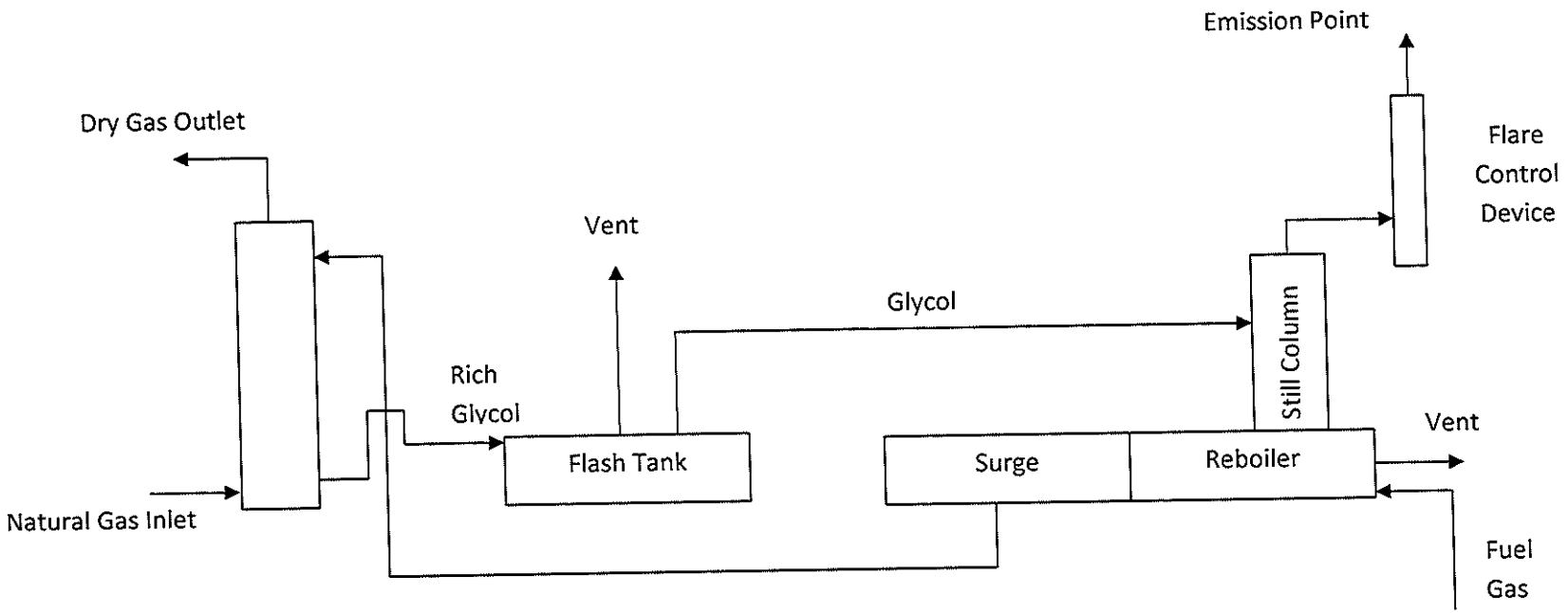

Craig Station
Emission Unit ID: EN05 and EN06

# Natural Gas Compression Station Process Flow Diagram - Engine



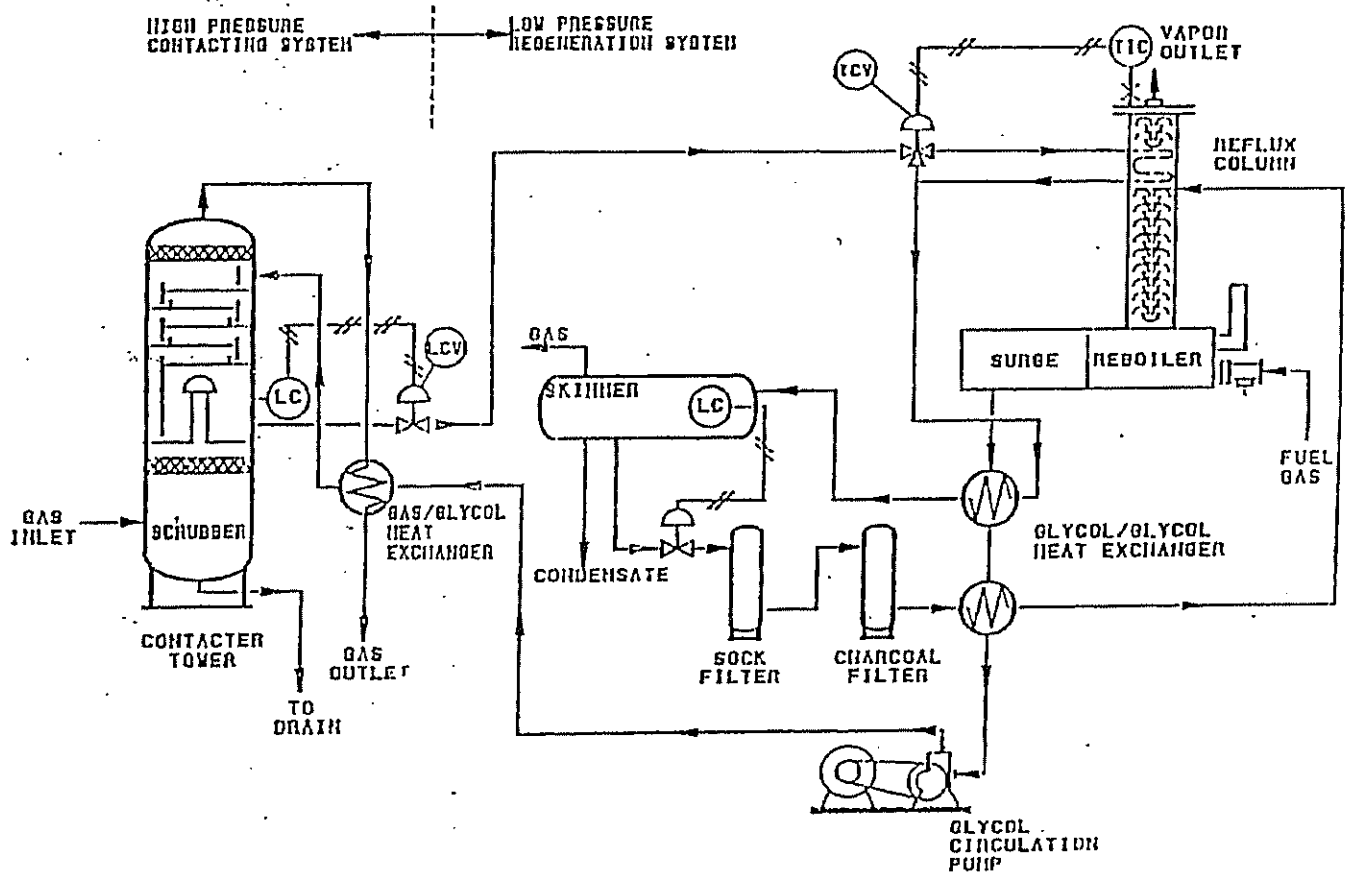

Craig Station
Emission Unit ID: EN01, EN02, EN03

# Natural Gas Compressor Station Process Flow Diagram – Glycol Dehy




Craig Station
Emission Unit ID: DEHY01, RBR01, DEHY

SEE DETAIL FOR STACK NUMBERS




TYPICAL FLOW DIAGRAM

GLYCOL DEHYDRATION UNIT

NATCO

# APPENDIX D

# EQUIPMENT TABLE

AMEC Earth & Environmental, Inc.
2200 Gateway Centre Boulevard, Suite 205
Morrisville, NC 27560

Tel – (919) 447-2750
Fax – (919) 447-2751

www.amec.com

## 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; Ajax DPC-720 | 1986 | 869 HP | N/A |
| EN02* | EN02 | Reciprocating Engine/Integral Compressor; Ajax DPC-720 | 1986 | 869 HP | N/A |
| EN03* | EN03 | Reciprocating Engine/Integral Compressor; Ajax DPC-720 | 1987 | 869 HP | N/A |
| EN05* | S05 | Caterpillar Emergency back-up Generator | 2003 | 225 HP | N/A |
| EN06* | S06 | Caterpillar Emergency back-up Generator | 2003 | 225 HP | N/A |
| DEHY01* | DEHY01 | Dehydration Unit Still; Latoka | 1984 | 17.0 mmscf/day | Flare (DEHY) |
| RBR01* | RBR01 | Dehydrator Reboiler | 1984 | 1.0 MMBTU/hr | N/A |
| DEHY* | DEHY (1C) | Dehydration Unit Still Flare | 1984 | 95% destruction efficiency | N/A |
| TK04 | TK04 | Vertical antifreeze tank | 1987 | 1000 gallons | N/A |
| TK10 | TK10 | Tri-Ethylene Glycol | 1984 | 4200 gallons | N/A |
| TK11 | TK11 | Vertical drip gas tank | 1984 | 4200 gallons | N/A |
| TK12 | TK12 | Vertical engine oil tank | 1987 | 6500 gallons | N/A |
| TK13 | TK13 | Vertical Used oil tank | 2002 | 1000 gallons | N/A |
| TK14 | TK14 | Vertical Wastewater Tank | 2002 | 500 gallons | N/A |

* Equipment burns or combusts pipeline quality natural gas only.

[1]For 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

AMEC Earth & Environmental, Inc.
2200 Gateway Centre Boulevard, Suite 205
Morrisville, NC 27560

www.amec.com

Tel – (919) 447-2750
Fax – (919) 447-2751

# ATTACHMENT E - Emission Unit Form

*Emission Unit Description*

| **Emission unit ID number:** | **Emission unit name:** | **List any control devices associated with this emission unit:** |
|---|---|---|
| EN01 | EN01 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Ajax 869 HP Natural Gas Fired Reciprocating Engine/Integral Compressor

| **Manufacturer:** | **Model number:** | **Serial number:** |
|---|---|---|
| Ajax | DPC-720 | |

| **Construction date:** | **Installation date:** | **Modification date(s):** |
|---|---|---|
| | 1986 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
869 HP

| **Maximum Hourly Throughput:** | **Maximum Annual Throughput:** | **Maximum Operating Schedule:** |
|---|---|---|
| 0.007 MMscf/hr | | 8760 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| **Does this emission unit combust fuel?** _X_Yes ___ No | **If yes, is it?** ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 869 HP | **Type and Btu/hr rating of burners:** |

**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.**
Pipeline Quality Natural Gas – 0.007 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/100 $ft^3$ | N/A | 1,000 BTU/$ft^3$ |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 2.3 | 10.07 |
| Nitrogen Oxides ($NO_X$) | 18.39 | 80.55 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | <0.01 |
| Particulate Matter ($PM_{10}$) | 0.07 | 0.31 |
| Total Particulate Matter (TSP) | 0.07 | 0.31 |
| Sulfur Dioxide ($SO_2$) | <0.01 | 0.02 |
| Volatile Organic Compounds (VOC) | 6.97 | 30.53 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | 0.39 | 1.69 |
| Benzene | 0.01 | 0.06 |
| Toluene | <0.01 | 0.03 |
| Ethylbenzene | <0.01 | <0.01 |
| n-Hexane | <0.01 | 0.01 |
| Xylene | <0.01 | 0.01 |
| Acetaldehyde | 0.05 | 0.24 |
| Acrolein | 0.05 | 0.24 |
| 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, NOx, and VOC Emission Rates based on Manufacturer's Information.
PM and SO2 emission rates are from AIRS (3/90).
HAP emission factors were obtained from Table 3.2-1 of AP-42 (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.**

____ 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?** _X_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: | Emission unit name: | List any control devices associated with this emission unit: |
|---|---|---|
| EN02 | EN02 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Ajax 869 HP Natural Gas Fired Reciprocating Engine/Integral Compressor

| Manufacturer: | Model number: | Serial number: |
|---|---|---|
| Ajax | DPC-720 | |

| Construction date: | Installation date: | Modification date(s): |
|---|---|---|
| | 1986 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
869 HP

| Maximum Hourly Throughput: | Maximum Annual Throughput: | Maximum Operating Schedule: |
|---|---|---|
| 0.007 MMscf/hr | | 8760 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| Does this emission unit combust fuel? _X_Yes ___ No | If yes, is it? ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 869 HP | **Type and Btu/hr rating of burners:** |

**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.**
Pipeline Quality Natural Gas – 0.007 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/100 $ft^3$ | N/A | 1,000 BTU/$ft^3$ |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 2.3 | 10.07 |
| Nitrogen Oxides ($NO_X$) | 18.39 | 80.55 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | <0.01 |
| Particulate Matter ($PM_{10}$) | 0.07 | 0.31 |
| Total Particulate Matter (TSP) | 0.07 | 0.31 |
| Sulfur Dioxide ($SO_2$) | <0.01 | 0.02 |
| Volatile Organic Compounds (VOC) | 6.97 | 30.53 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | 0.39 | 1.69 |
| Benzene | 0.01 | 0.06 |
| Toluene | <0.01 | 0.03 |
| Ethylbenzene | <0.01 | <0.01 |
| n-Hexane | <0.01 | 0.01 |
| Xylene | <0.01 | 0.01 |
| Acetaldehyde | 0.05 | 0.24 |
| Acrolein | 0.05 | 0.24 |
| 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, NOx, and VOC Emission Rates based on Manufacturer's Information.
PM and SO2 emission rates are from AIRS (3/90).
HAP emission factors were obtained from Table 3.2-1 of AP-42 (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.**

____ 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?** _X_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:** | **Emission unit name:** | **List any control devices associated with this emission unit:** |
|---|---|---|
| EN03 | EN03 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Ajax 869 HP Natural Gas Fired Reciprocating Engine/Integral Compressor

| **Manufacturer:** | **Model number:** | **Serial number:** |
|---|---|---|
| Ajax | DPC-720 | |
| **Construction date:** | **Installation date:** | **Modification date(s):** |
| | 1986 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
869 HP

| **Maximum Hourly Throughput:** | **Maximum Annual Throughput:** | **Maximum Operating Schedule:** |
|---|---|---|
| 0.007 MMscf/hr | | 8760 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| **Does this emission unit combust fuel?** _X_Yes ___ No | **If yes, is it?** ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 869 HP | **Type and Btu/hr rating of burners:** |

**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.**
Pipeline Quality Natural Gas – 0.007 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/100 $ft^3$ | N/A | 1,000 BTU/$ft^3$ |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 2.3 | 10.07 |
| Nitrogen Oxides ($NO_X$) | 18.39 | 80.55 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | <0.01 |
| Particulate Matter ($PM_{10}$) | 0.07 | 0.31 |
| Total Particulate Matter (TSP) | 0.07 | 0.31 |
| Sulfur Dioxide ($SO_2$) | <0.01 | 0.02 |
| Volatile Organic Compounds (VOC) | 6.97 | 30.53 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | 0.39 | 1.69 |
| Benzene | 0.01 | 0.06 |
| Toluene | <0.01 | 0.03 |
| Ethylbenzene | <0.01 | <0.01 |
| n-Hexane | <0.01 | 0.01 |
| Xylene | <0.01 | 0.01 |
| Acetaldehyde | 0.05 | 0.24 |
| Acrolein | 0.05 | 0.24 |
| 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, NOx, and VOC Emission Rates based on Manufacturer's Information.
PM and SO2 emission rates are from AIRS (3/90).
HAP emission factors were obtained from Table 3.2-1 of AP-42 (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.**

____ 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?** _X_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:** | **Emission unit name:** | **List any control devices associated with this emission unit:** |
|---|---|---|
| EN05 | S05 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Caterpillar Emergency Back-up Generator

| **Manufacturer:** | **Model number:** | **Serial number:** |
|---|---|---|
| Caterpillar | G342 | |
| **Construction date:** | **Installation date:** | **Modification date(s):** |
| | 2003 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
225 HP

| **Maximum Hourly Throughput:** | **Maximum Annual Throughput:** | **Maximum Operating Schedule:** |
|---|---|---|
| 0.0018 MMscf/hr | | 500 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| **Does this emission unit combust fuel?** _X_Yes ___ No | **If yes, is it?** ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 225 HP | **Type and Btu/hr rating of burners:** |

**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.**
Pipeline Quality Natural Gas – 0.0018 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/100 $ft^3$ | N/A | 1,000 BTU/$ft^3$ |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 6.79 | 1.70 |
| Nitrogen Oxides ($NO_X$) | 6.4 | 1.60 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | <0.01 |
| Particulate Matter ($PM_{10}$) | 0.03 | 0.01 |
| Total Particulate Matter (TSP) | 0.03 | 0.01 |
| Sulfur Dioxide ($SO_2$) | <0.01 | <0.01 |
| Volatile Organic Compounds (VOC) | 0.05 | 0.01 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | <0.01 | 0.01 |
| Benzene | <0.01 | <0.01 |
| Toluene | <0.01 | <0.01 |
| Ethylbenzene | <0.01 | <0.01 |
| n-Hexane | <0.01 | <0.01 |
| Xylene | <0.01 | <0.01 |
| Acetaldehyde | <0.01 | <0.01 |
| Acrolein | <0.01 | <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, NOx, VOC, PM and SO2 Emission limits permitted in R13-2503.
HAP emission factors were obtained from Table 3.2-3 of AP-42 (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 – Emissions generated from the operation of the emergency generator shall not exceed specified rates for NOx, CO, NMVOC, PM-10 and SO2 (TV 6.1.1, R13-2503, A.1).

45 CSR 13 – The emergency generator shall not be utilized for more than 500 hours per year (TV 6.1.2, R13-2503, A.2)

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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 – Maintain an operating log of the hours the generator was run. These documents shall be kept on site for no less than 5 years (TV 6.4.1, R13-2503, B.1)

**Are you in compliance with all applicable requirements for this emission unit?** _X_ 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:** | **Emission unit name:** | **List any control devices associated with this emission unit:** |
|---|---|---|
| EN06 | S06 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Caterpillar Emergency Back-up Generator

| **Manufacturer:** | **Model number:** | **Serial number:** |
|---|---|---|
| Caterpillar | G342 | |
| **Construction date:** | **Installation date:** | **Modification date(s):** |
| | 2003 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
225 HP

| **Maximum Hourly Throughput:** | **Maximum Annual Throughput:** | **Maximum Operating Schedule:** |
|---|---|---|
| 0.0018 MMscf/hr | | 500 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| **Does this emission unit combust fuel?** _X_Yes ___ No | **If yes, is it?** ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 225 HP | **Type and Btu/hr rating of burners:** |

**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.**
Pipeline Quality Natural Gas – 0.0018 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/100 $ft^3$ | N/A | 1,000 BTU/$ft^3$ |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 6.79 | 1.70 |
| Nitrogen Oxides ($NO_X$) | 6.4 | 1.60 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | <0.01 |
| Particulate Matter ($PM_{10}$) | 0.03 | 0.01 |
| Total Particulate Matter (TSP) | 0.03 | 0.01 |
| Sulfur Dioxide ($SO_2$) | <0.01 | <0.01 |
| Volatile Organic Compounds (VOC) | 0.05 | 0.01 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | <0.01 | 0.01 |
| Benzene | <0.01 | <0.01 |
| Toluene | <0.01 | <0.01 |
| Ethylbenzene | <0.01 | <0.01 |
| n-Hexane | <0.01 | <0.01 |
| Xylene | <0.01 | <0.01 |
| Acetaldehyde | <0.01 | <0.01 |
| Acrolein | <0.01 | <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, NOx, VOC, PM and SO2 Emission limits permitted in R13-2503.
HAP emission factors were obtained from Table 3.2-3 of AP-42 (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 – Emissions generated from the operation of the emergency generator shall not exceed specified rates for NOx, CO, NMVOC, PM-10 and SO2 (TV 6.1.1, R13-2503, A.1).

45 CSR 13 – The emergency generator shall not be utilized for more than 500 hours per year (TV 6.1.2, R13-2503, A.2)

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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 – Maintain an operating log of the hours the generator was run. These documents shall be kept on site for no less than 5 years (TV 6.4.1, R13-2503, B.1)

**Are you in compliance with all applicable requirements for this emission unit?** _X_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: | Emission unit name: | List any control devices associated with this emission unit: |
|---|---|---|
| DEHY01 | DEHY01 | DEHY (Flare) |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Dehydration Unit Still

| Manufacturer: | Model number: | Serial number: |
|---|---|---|
| Latoka | | |
| **Construction date:** | **Installation date:** | **Modification date(s):** |
| | 1984 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
17.0 mmcf/day

| Maximum Hourly Throughput: | Maximum Annual Throughput: | Maximum Operating Schedule: |
|---|---|---|
| 17.0 mmcf/day | | 8760 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| Does this emission unit combust fuel? ___ Yes _X_ No | If yes, is it? __ Indirect Fired __Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** N/A | **Type and Btu/hr rating of burners:** unknown |

**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.**
N/A

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

| Fuel Type | Max. Sulfur Content | Max. Ash Content | BTU Value |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

*Emissions Data*

| Criteria Pollutants | Potential Emissions | |
|---|---|---|
| | PPH | TPY |
| Carbon Monoxide (CO) | 0.13 | 0.57 |
| Nitrogen Oxides ($NO_X$) | 0.02 | 0.10 |
| Lead (Pb) | | |
| Particulate Matter ($PM_{2.5}$) | <0.01 | 0.01 |
| Particulate Matter ($PM_{10}$) | <0.01 | 0.01 |
| Total Particulate Matter (TSP) | <0.01 | 0.01 |
| Sulfur Dioxide ($SO_2$) | <0.01 | <0.01 |
| Volatile Organic Compounds (VOC) | 7.1 | 31.09 |

| Hazardous Air Pollutants | Potential Emissions | |
|---|---|---|
| | PPH | TPY |
| Benzene | 0.09 | 0.40 |
| Toluene | 0.20 | 0.89 |
| Ethylbenzene | 0.02 | 0.08 |
| Xylene | 0.20 | 0.86 |
| n-Hexane | 0.12 | 0.52 |

| 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.).**
Emissions are combined from the Still (DEHY01) and the Flare Pilot (DEHY)

VOC and HAP Emissions from Still based on GlyCALC with 95% destruction efficiency.
NOx and CO Emissions factors based on AP-42 Table 13.5.1.
VOc, PM, and SO2 emissions factors from the pilot based on AP-42 Table 1.4-2.

*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 – Flare control device shall be operated and maintained to achieve a minimum of 95% reduction of HAPs (TV 5.1.5, R13-2497, A.1)

45CSR13 – The maximum wet gas processed through the still column shall not exceed 25.0 MMscf/day or 9,125 MMscf/year (TV 5.1.6, R13-2497, A.2)

45 CSR 13/40 CFR 60.18 – The glycol dehydration still column shall be equipped with a flare to control organic compound emissions (TV 5.1.7, R13-2497, A.4).

45 CSR 13 – Visible emissions requirements (TV 5.1.8, R13-2497, A.5)

45 CSR 13 – Operating requirements for flare (TV 5.1.9, R13-2497, A.7)

45 CSR 13 – Flare control device shall be used only when net heating value of gas being combusted is 200 BTU/scf or greater (TV 5.1.10, R13-2497, A.7)

45 CSR 13 – Exit velocity requirements for flare (TV 5.1.11, R13-2497. A.8)

45 CSR 13 – Flare shall only burn off-gases from dehydration still column emission point and sufficient natural gas to meet TV 5.1.10 (TV 5.1.12, R13-2497, A.9)

45 CSR 10-4.1 – SO2 emissions shall not exceed 2,000 ppm by volume (TV 5.1.13, R13-2497, B.4).

45 CSR 10-5.1 – H2S emissions shall not exceed 50 gr/100 cu ft (TV 5.1.14, R13-2497, B.4).

____ 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 – At a minimum of once per year, sample and analyze the inlet gas stream to the station utilizing gas chromatography for the presence of Sulfur (TV 5.2.2, R13-2497, B.5)

45 CSR 30-5.1.c – At a minimum of once per year, sample and analyze the inlet gas stream (to the station) utilizing gas chromatography for the presence of $H_2S$ (TV 5.2.3, R13-2497, B.6).

45 CSR 13 – All required records shall be maintained on site for a period of five years (TV 5.4.4, R13-2497, B.8).

45 CSR 30-5.1.c – The permittee shall maintain a record of the wet natural gas throughput through the dehydration system to demonstrate compliance with section 5.1.6 of this permit.

**Are you in compliance with all applicable requirements for this emission unit?** _X_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: | Emission unit name: | List any control devices associated with this emission unit: |
|---|---|---|
| RBR01 | RBR01 | N/A |

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**
Dehydration unit reboiler

| Manufacturer: | Model number: | Serial number: |
|---|---|---|
| Latoka | SO 4251 | |

| Construction date: | Installation date: | Modification date(s): |
|---|---|---|
| | 1984 | N/A |

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**
1.0 MMBtu/hr

| Maximum Hourly Throughput: | Maximum Annual Throughput: | Maximum Operating Schedule: |
|---|---|---|
| 1.0 MMBtu/hr | | 8760 hrs/yr |

*Fuel Usage Data* **(fill out all applicable fields)**

| Does this emission unit combust fuel? _X_Yes ___ No | If yes, is it? ___ Indirect Fired _X_Direct Fired |
|---|---|
| **Maximum design heat input and/or maximum horsepower rating:** 1.0 MMBtu/hr | **Type and Btu/hr rating of burners:** |

**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/100 $ft^3$ | N/A | |
| | | | |
| | | | |
| | | | |

| *Emissions Data* | | |
|---|---|---|
| Criteria Pollutants | Potential Emissions | |
| | PPH | TPY |
| Carbon Monoxide (CO) | 0.01 | 0.03 |
| Nitrogen Oxides ($NO_X$) | 0.04 | 0.15 |
| Lead (Pb) | N/A | N/A |
| Particulate Matter ($PM_{2.5}$) | <0.01 | 0.01 |
| Particulate Matter ($PM_{10}$) | <0.01 | 0.01 |
| Total Particulate Matter (TSP) | <0.01 | 0.01 |
| Sulfur Dioxide ($SO_2$) | <0.01 | <0.01 |
| Volatile Organic Compounds (VOC) | <0.01 | 0.02 |
| Hazardous Air Pollutants | Potential Emissions | |
| | PPH | TPY |
| Formaldehyde | <0.01 | <0.01 |
| Benzene | <0.01 | <0.01 |
| Toluene | <0.01 | <0.01 |
| n-Hexane | <0.01 | <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.).**
NOx and CO emission factors were obtained from AP-42 Table 1.4-1VOC, PM, and SO2 emission factors were obtained from Table 1.4-2 of AP-42 (7/93).
HAPS emission factors were obtained from Table 1.4-3 of AP-42 (7/93).

*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).

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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.)**

**Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No**

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

# ATTACHMENT G - Air Pollution Control Device Form

| Control device ID number: DEHY (1C) | List all emission units associated with this control device. DEHY01 | |
|---|---|---|
| **Manufacturer:** Dominion In-house | **Model number:** | **Installation date:** 1984 |

**Type of Air Pollution Control Device:**

| | | |
|---|---|---|
| ___ Baghouse/Fabric Filter | ___ Venturi Scrubber | ___ Multiclone |
| ___ Carbon Bed Adsorber | ___ Packed Tower Scrubber | ___ Single Cyclone |
| ___ Carbon Drum(s) | ___ Other Wet Scrubber | ___ Cyclone Bank |
| ___ Catalytic Incinerator | ___ Condenser | ___ Settling Chamber |
| ___ Thermal Incinerator | _X_ Flare | ___ Other (describe)_____ |
| ___ Wet Plate Electrostatic Precipitator | | ___ 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 | | 95% |
| Benzene | | 95% |
| Ethylbenzene | | 95% |
| n-Hexane | | 95% |
| Toluene | | 95% |
| Xylene | | 95% |

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**
0.00035 mmSCF/hr

**Is this device subject to the CAM requirements of 40 C.F.R. 64?** ___ Yes _X_ 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.**

45 CSR 6-4.1 – Particulate Matter emission limit (TV **5.1.1**, 45 CSR 13, R13-2497, B.3) – DEHY
45 CSR 6-4.3 – Visible Emission limit (TV **5.1.2**, 45 CSR 13, R13-2497, B.3) – DEHY
45 CSR 6-4.5 – Incinerator operating requirements (TV **5.1.3**) – DEHY
45 CSR 6-4.6 – Incinerator odor prevention requirements (TV **5.1.4**) – DEHY
45 CSR 13 – Operational Requirements (TV **5.1.5**, 45 CSR 13, R13-2497, A.1) – DEHY
45 CSR 13 – Maximum Throughput Limits (TV **5.1.6**, 45 CSR 13, R13-2497, A.2) – DEHY
45 CSR 13 – Operation and Maintenance of APCE (TV **5.1.7**, 45 CSR 13, R13-2497, A.4) – DEHY
45 CSR 13 – No visible emissions (TV **5.1.8**, 45 CSR 13, R13-2497, A.5) – DEHY
45 CSR 13 – Flare shall be operated at all times (TV **5.1.9**, 45 CSR 13, R13-2497, A.6) – DEHY

## ATTACHMENT G - Air Pollution Control Device Form

45 CSR 13 – Net heating value of the gas being combusted is 200 Btu/scf (TV **5.1.10**, 45 CSR 13, R13-2497, A.7) – DEHY
45 CSR 13 – Flare exit velocity (TV **5.1.11**, 45 CSR 13, R13-2497, A.8) – DEHY
45 CSR 13 – Burn off-gases only (TV **5.1.12**, 45 CSR 13, R13-2497, A.9) – DEHY
45 CSR 10-4.1 – Sulfur Dioxide emission limit (TV **5.1.13**, 45 CSR 13, R13-2497, B.4) – DEHY
45 CSR 10-5.1 – Hydrogen Sulfide emission limit (TV **5.1.14**, 45 CSR 13, R13-2497, B.4) – DEHY

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

Monitoring
45 CSR 30-5.1.c - Visual emission checks (TV **5.2.1**) – DEHY
45 CSR 13 - Compliance with 5.1.13 will be demonstrated by annual inlet gas sampling (TV **5.2.2**, 45 CSR 13, R13-2407, B.5) – DEHY
45 CSR 30-5.1.c – Compliance with 5.1.14 will be demonstrated by annual inlet gas sampling (TV **5.2.3**, 45 CSR 13, R13-2497, B.6) – DEHY

Recordkeeping
45 CSR 13 – Pilot Flame Absence records shall be maintained to demonstrate compliance with 5.1.9 (TV **5.4.1**, 45 CSR 13, R13-2497, B.1) – DEHY
45 CSR 13 – Flare design evaluation records shall be maintained to demonstrate compliance with 5.1.10 and 5.1.11 (TV **5.4.2**, 45 CSR 13, R13-2497, B.2) – DEHY
45 CSR 30-5.1.c – Visible Emission Test records shall be maintained to demonstrate compliance with 5.1.2 and 5.2.1 (TV **5.4.3**) – DEHY
45 CSR 13 – Record retention (TV **5.4.4**, 45 CSR 13, R13-2497, B.8) – DEHY
45 CSR 30-5.1.c – Throughput records shall be maintained to demonstrate compliance with 5.1.6 (TV **5.4.5**) – DEHY

Reporting
45 CSR 30-5.1.c – Reporting of Visible Emission Limit Exceedances (TV **5.5.1**) – DEHY

# APPENDIX F

# P.E. CERTIFICATION

AMEC Earth & Environmental, Inc.
2200 Gateway Centre Boulevard, Suite 205
Morrisville, NC 27560

Tel – (919) 447-2750
Fax – (919) 447-2751

www.amec.com

## 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 12 / 17 / 2010

WV License No. 18653

Phone (918) 447-2750