



February 14, 2011

CERTIFIED MAIL NO. 70101870000335295991

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston WV 25304

**RE: Title V Permit Renewal Application
Equitrans, LP – Glenville Compressor Station
Permit ID #R30-02100010-2006**

Dear Sir or Madam:

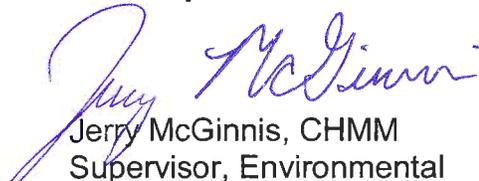
Equitrans, LP (Equitrans) is submitting this Title V Permit Renewal Application for its Glenville Compressor Station (R30-02100010-2006) located at 24 Fairground Road, Glenville, Gilmer County, West Virginia.

Included with this letter are the following required documents:

- Title V Permit Renewal Application (one hardcopy; two electronic)
- Title V Permit Transfer of Ownership documentation at \$200 fee

If you have any questions or comments concerning the enclosed Application, please feel free to contact me.

Sincerely,


Jerry McGinnis, CHMM
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Supervisor, Environmental

**TITLE V PERMIT RENEWAL APPLICATION
EQUITRANS, LP
GLENVILLE COMPRESSOR STATION #37**

PERMIT NO. R30-02100010-2006

GLENVILLE, WEST VIRGINIA

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February 9, 2011

Project 102101.0102

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1. INTRODUCTION

Equitrans, LP (Equitrans) operates a natural gas transmission facility in Glenville, West Virginia referred to as the Glenville Compressor Station #37 (Glenville Station). The Glenville Station is currently operating in accordance with West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality Title V operating permit R30-02100010-2006, last issued on September 7, 2006¹.

The current Title V permit expires September 7, 2011. Equitrans is submitting this timely and complete permit renewal application by the renewal submission deadline of March 7, 2011, (i.e., six months before the expiration of the current permit) in accordance with Series 30, Section 4.1.a.3 of the WVDEP Division of Air Quality (DAQ) Code of State Rules (C.S.R.) §45-30-4.1.a.3. Presuming WVDEP finds this application administratively complete, Equitrans may continue to operate the Glenville Station under the terms of the existing Title V permit until the renewed permit is issued, even if this issuance would occur after the current permit's expiration date.

1.1 FACILITY DESCRIPTION

The Glenville Station is a natural gas gathering facility covered under Standard Industrial Classification (SIC) Code 4922. The station has the potential to operate 24 hours per day, 7 days per week. The station consists of three (3) reciprocating engine/integral compressors (300 hp each)², and one (1) natural gas-fired electric generator (147 hp). The facility also operates a comfort heating boiler, a hot water heater, and storage tanks of various capacities, all of which are considered insignificant sources under Title V.

A description of each source category is included below. A process flow diagram is included as Appendix C.

1.1.1 COMPRESSOR ENGINES

The Glenville Station also includes three (3) natural gas-fired reciprocating engines used to power reciprocating compressors that move the compressed natural gas through pipelines. These engines are two-stroke lean-burn engines rated for 300 hp each. The function of the reciprocating compressors is to raise the discharge pressure of the gas in the pipeline to overcome the effect of frictional losses in the pipeline upstream of the station, in order to maintain the required suction pressure at the next station downstream or at various downstream delivery points.

¹ The current Title V operating permit is issued to Equitable Field Services LLC. As part of this Title V renewal application, a change of the permittee to Equitrans LP is being requested as an administrative amendment. Refer to section 3.1 of this report for details and section 6 for required forms and letters.

² There is a fourth compressor engine located at the Glenville Station which Equitrans is requesting be removed from the Title V permit. Refer to section 3.2 of this report for details.

1.1.2 STORAGE TANKS

The Glenville Station operates two (2) horizontal fixed roof storage tanks each with a capacity of 4,000 gallons. One of the tanks contains oil (Tank 1) and the other contains pipeline condensate (Tank 2).

1.1.3 MISCELLANEOUS SOURCES

Additional combustion sources at the station include a natural gas-fired generator (four-stroke rich-burn engine, rated at 147 hp), a small natural gas-fired boiler for comfort heating (rated at 1.25 MMBtu/hr), and a small natural gas-fired hot water heater (rated at 0.032 MMBtu/hr).

1.2 TITLE V RENEWAL APPLICATION ORGANIZATION

This Title V permit renewal application is organized as follows:

- Section 2 contains an overview of regulatory applicability for the Glenville Station;
- Section 3 contains details of requested permit changes;
- Section 4 contains sample emission source calculations;
- Section 5 contains the required WVDEP application forms;
- Section 6 contains change of ownership application letters and forms;
- Attachment A contains an area map;
- Attachment B contains a plot plan;
- Attachment C contains a process flow diagram;
- Attachment D contains the WVDEP Title V equipment table;
- Attachment E contains a WVDEP emission unit form for each emission unit at the Glenville Station; and
- Attachment F contains site-wide emission calculations.

2. REGULATORY APPLICABILITY

A key objective of a Title V operating permit application is to compile all applicable Clean Air Act-derived requirements into one document. The requirements can be categorized as (1) emission limits and work practice standards, and (2) testing, monitoring, recordkeeping, and reporting requirements. To compile a list of the requirements applicable to a facility, it is first necessary to determine which Federal and State air regulations apply to the facility as a whole, or to individual emission units. This section documents the applicability determinations made for Federal and State air quality regulations. Regulations potentially applicable to Glenville are detailed in the “*Applicable Requirements*” sections of forms provided by the WVDEP contained in Section 5 of this report.

Additional details on applicability for several regulations are presented in this section. Specifically, the remainder of this section summarizes the air permitting requirements and key air quality regulations that apply to the operation of the Glenville Station. Applicability or non-applicability of the following regulatory programs is addressed:

- Prevention of Significant Deterioration (PSD) permitting;
- Title V of the 1990 Clean Air Act Amendments;
- New Source Performance Standards (NSPS);
- National Emission Standards for Hazardous Air Pollutants (NESHAP);
- Compliance Assurance Monitoring (CAM);
- Risk Management Plan (RMP);
- Stratospheric Ozone Protection; and
- West Virginia State Implementation Plan (SIP) regulations.

This review is presented to supplement and/or add clarification to the information provided in the WVDEP Title V application forms, which fulfill the requirement to include citations and descriptions of applicable statutory and administrative code requirements.

In addition to providing a summary of applicable requirements, this section of the application also provides non-applicability determinations for certain regulations, allowing the WVDEP to confirm that identified regulations are not applicable to the Glenville Station. Note that explanations of non-applicability are limited to those regulations for which there may be some question of applicability specific to the operations at the Glenville Station. Regulations that are categorically non-applicable are not discussed (e.g., NSPS Subpart J, *Standards of Performance for Petroleum Refineries*).

2.1 PREVENTION OF SIGNIFICANT DETERIORATION (PSD) SOURCE CLASSIFICATION

Federal construction permitting programs regulate new sources of attainment pollutants under Prevention of Significant Deterioration (PSD) and new sources of non-attainment pollutants under Non-Attainment New Source Review (NNSR). PSD and NNSR regulations apply when a major source makes a change, such as installing new equipment or modifying existing equipment, and a significant increase in emissions results from the change. The Glenville Station is a major source with respect to the NSR program, and as such when undertaking modifications may be subject to NSR permit requirements. Because the Title V permit renewal process is not intended to accommodate any changes or modifications to the facility that are not currently permitted at the facility, NSR/PSD permitting is not triggered by this activity but could be by future activities at the site.

2.2 TITLE V OPERATING PERMIT PROGRAM

Title 40 of the Code of Federal Regulations Part 70 (40 CFR 70) establishes the federal Title V operating permit program. West Virginia has incorporated the provisions of this federal program in its Title V operating permit program in CSR 45-30. The major source thresholds with respect to the West Virginia Title V operating permit program regulations are 10 tons per year (tpy) of a single HAP, 25 tpy of any combination of HAP, and 100 tpy of all other regulated pollutants. The potential emissions of at least one regulated pollutant exceed the corresponding threshold(s) at this facility. Therefore, the Glenville Station is classified as a major source for Title V purposes. The Glenville Station currently operates under Title V operating permit No. R30-02100010-2006. This renewal application is being submitted to meet the requirements of the Title V program.

2.3 NEW SOURCE PERFORMANCE STANDARDS

New Source Performance Standards (NSPS), located in 40 CFR 60, require new, modified, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, except where expressly noted. The following is a summary of applicability and non-applicability determinations for NSPS regulations of relevance to the Glenville Station.

2.3.1 NSPS SUBPARTS D, DA, DB, AND DC

These subparts apply to steam generating units of various sizes, all greater than 10 MMBtu/hr. The Glenville Station does not have any steam generating units greater than 10 MMBtu/hr, therefore the requirements of these subparts do not apply.

2.3.2 NSPS SUBPARTS K, Ka, AND Kb

These subparts apply to storage tanks of certain sizes constructed, reconstructed, or modified during various time periods. Subpart K applies to storage tanks constructed, reconstructed, or

modified prior to 1978, and Subpart Ka applies to those constructed, reconstructed, or modified prior to 1984. Both Subparts K and Ka apply to storage tanks with a capacity greater than 40,000 gallons. Subpart Kb applies to volatile organic liquid (VOL) storage tanks constructed, reconstructed, or modified after July 23, 1984 with a capacity equal to or greater than 75 m³ (~19,813 gallons). Both tanks at the Glenville Station have a capacity of 4,000 gallons. As such, Subparts K, Ka, and Kb do not apply to the storage tanks at the Glenville Station.

2.3.3 NSPS SUBPART KKK – EQUIPMENT LEAKS OF VOC FROM ONSHORE NATURAL GAS PROCESSING PLANTS

A natural gas processing plant is defined as any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. Although this subpart includes requirements for compressors and storage tanks, it only applies to those units located at a processing plant. The operations at the Glenville Station do not meet the definition of a processing plant. Therefore, the requirements of this subpart do not apply to the emission units at the Glenville Station.

2.3.4 NSPS SUBPART LLL – ONSHORE NATURAL GAS PROCESSING: SO₂ EMISSIONS

This subpart applies to each sweetening unit, and each sweetening unit followed by a sulfur recovery unit, at a natural gas processing plant. The Glenville Station does not meet the definition of a natural gas processing facility, nor does the station include a sweetening unit. Therefore, the requirements of this subpart do not apply.

2.3.5 NSPS SUBPART IIII – STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

This Subpart applies to manufacturers, owners, and operators of stationary compression ignition internal combustion engines (ICE) that have been constructed, reconstructed, or modified after various dates, the earliest of which is July 11, 2005. All of the engines at the Glenville Station, including emergency generators, are spark ignition IC engines, and therefore the requirements of this subpart do not apply.

2.3.6 NSPS SUBPART JJJJ – STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES

This subpart applies to manufacturers, owners, and operators of stationary spark ignition internal combustion engines (ICE) that have been constructed, reconstructed, or modified after various dates, the earliest of which is June 12, 2006. All of the engines at the Glenville Station, including emergency generators, were installed prior to 2006 (latest installation date is 1984) and have not been modified or reconstructed, and therefore the requirements of this subpart do not apply.

2.3.7 NON-APPLICABILITY OF ALL OTHER NSPS

NSPS are developed for particular industrial source categories. Other than NSPS developed for natural gas processing plants (Subparts KKK and LLL) and associated equipment (Subparts D-Dc and K-Kb), the applicability of a particular NSPS to the Glenville Station can be readily ascertained based on the industrial source category covered. All other NSPS are categorically not applicable to natural gas processing facilities.

2.4 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

Part 63 NESHAP allowable emission limits are established on the basis of a maximum achievable control technology (MACT) determination for a particular major source. A HAP major source is defined as having potential emissions in excess of 25 tpy for total HAP and/or potential emissions in excess of 10 tpy for any individual HAP. NESHAP apply to sources in specifically regulated industrial source categories (Clean Air Act Section 112(d)) or on a case-by-case basis (Section 112(g)) for facilities not regulated as a specific industrial source type. Besides 40 CFR 63 Subpart A (NESHAP Subpart A), which is similar to 40 CFR 60 Subpart A (NSPS Subpart A), the following NESHAP could potentially apply to the Glenville Station:

40 CFR Part 63 Subpart HH – Oil and Natural Gas Production Facilities

40 CFR Part 63 Subpart HHH – Natural Gas Transmission and Storage Facilities

40 CFR Part 63 Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines (RICE)

40 CFR Part 63 Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters

The applicability of these NESHAP Subparts is discussed in the following sections.

2.4.1 40 CFR 63 SUBPART HH – OIL AND NATURAL GAS PRODUCTION FACILITIES

This MACT standard contains requirements for dehydration units, located at natural gas production facilities. Because the Glenville Station does not meet the definition of a natural gas production facility per 40 CFR §63.761 and does not have dehydration unit, the requirements of this subpart do not apply.

2.4.2 40 CFR 63 SUBPART HHH – NATURAL GAS TRANSMISSION AND STORAGE FACILITIES

This MACT subpart applies to facilities which are major sources of HAP that transport or store natural gas prior to entering the transmission pipeline to end users as defined by 40 CFR §63.1271. Specifically, each dehydration unit at these facilities is subject to this subpart. The Glenville Station does not have a dehydration unit and is a minor source of HAP. Therefore, the requirements of this subpart do not apply to the Glenville Station.

2.4.3 40 CFR 63 SUBPART ZZZZ – STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

This NESHAP applies to stationary reciprocating combustion engines (RICE) at major and minor sources. The Glenville Station is a minor source of HAP. The compressor engines at the Glenville Station were installed in 1943 and have not been reconstructed or modified. The units are classified as 2-stroke, lean-burn, non-emergency units rated for 300 hp each. As such, they are subject to the requirements for existing, 2-stroke, lean-burn, non-emergency, spark ignition (SI) units between 100 and 500 horsepower at area sources. The generator was installed in 1984, is rated for 147 hp and is classified as a 4-stroke, rich burn, non-emergency unit. As such, the generator is subject to the requirements for existing, non-emergency, SI units less than 500 horsepower at area sources. Per 40 CFR §63.6625(h), Equitrans will minimize the engines' time spent at idle and minimize the engines' startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. Equitrans will also comply with the work practice standards in 40 CFR §63.6603 and maintain records to show these standards have been met. Work practice standards include changing the oil and filter, inspecting spark plugs and replacing as necessary and inspecting all hoses and belts and replacing as necessary at intervals specified in the regulation.

2.4.4 40 CFR 63 SUBPART DDDDD – INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS

This MACT standard applies to industrial, commercial, and institutional boilers and process heaters of various sizes and fuel types. The only heaters and boilers at the Glenville Station are a hot water heater and a heating boiler used for comfort heating. Units used for comfort heat or space heat, as well as hot water heaters, are specifically exempt from this subpart. Therefore, no sources at the Glenville Station are subject to any requirements under 40 CFR 63 Subpart DDDDD.

2.5 COMPLIANCE ASSURANCE MONITORING

Under 40 CFR 64, the Compliance Assurance Monitoring (CAM) regulations, facilities are required to prepare and submit monitoring plans for certain emissions units with the initial or renewal Title V operating permit application. CAM Plans are intended to provide an on-going and reasonable assurance of compliance with emission limits for sources that utilize active control devices where existing Title V permit requirements may not be considered sufficient.

Under the general applicability criteria, this regulation only applies to emission units that use a control device to achieve compliance with an emission limit and whose pre-controlled emission levels exceed the major source thresholds under the Title V operating permit program. Because CAM has not been triggered through prior permitting of the facility, CAM is subject for review during this Title V permit renewal. Accordingly, for a subject unit whose pre-controlled emissions are more than the corresponding Title V major source threshold and is not otherwise exempt, a CAM plan must be submitted with this renewal application.

There are no units at the Glenville Compressor Station which utilize active control devices. All units comply with the Title V major source threshold without the use of control devices. As such, the

Glenville Station is not subject to CAM regulations. The R30-02100010-2006 Fact Sheet also states that CAM is not applicable to the engines at the Glenville Station.

2.6 RISK MANAGEMENT PLAN REGULATIONS

Subpart B of 40 CFR 68 outlines requirements for risk management prevention plans pursuant to Section 112(r) of the Clean Air Act. Applicability of the subpart is determined based on the type and quantity of chemicals stored at a facility. Equitrans has evaluated the amount of Section 112(r) substances stored at the Glenville Station and have determined that there are no listed substances stored at quantities greater than the corresponding threshold.

2.7 STRATOSPHERIC OZONE PROTECTION REGULATIONS

The requirements originating from Title VI of the Clean Air Act, entitled *Protection of Stratospheric Ozone*, are contained in 40 CFR 82. Subparts A through E and Subparts G and H of 40 CFR Part 82 are not applicable to the Glenville Station. 40 CFR 82 Subpart F, *Recycling and Emissions Reduction*, potentially applies if the facility operates, maintains, repairs, services, or disposes of appliances that utilize Class I or Class II ozone depleting substances. Subpart F generally requires person completing all repairs, service, or disposal to be properly certified. Certified technician complete all repairs, service, and disposal of any ozone depleting substances at the Glenville Station.

2.8 WEST VIRGINIA SIP REGULATIONS

The Glenville Station is currently permitted under the regulations contained in West Virginia's Title 45 Legislative Rule Department of Environmental Protection Office of Air Quality (WVDEP regulations). A federal operating permit must be issued by the agency upon determination that the facility can reasonably be expected to comply with the WVDEP regulations and all applicable federal requirements. This section of the application highlights applicability of specific West Virginia State Implementation Plan (SIP) regulations that may apply to the Glenville Station. The following information has been retrieved directly from the WDEP Fact Sheet (R30-02100010-2006) and verified through review of the associated regulations.

2.8.1 45 CSR 2: TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGERS

According to 45 CSR 2-3:

No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.

Compliance with this requirement shall be determined in keeping with 40 CFR Part 60, Appendix A, Method 9 or by using approved measurements from continuous opacity monitoring systems.

In addition, according to 45 CSR 2-4:

No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the amount determined [according to fuel burning unit type].

Visible emissions are not expected since only natural gas is combusted in the applicable units, and emissions from sources that burn natural gas have low variability. Therefore, monthly visual emissions checks and recordkeeping will be adequate to demonstrate compliance. However, as stated by the R30-02100010-2006 Fact Sheet, since the boiler (BLR01) has a maximum design heat input less than 10 MMBtu/hr, the unit is exempt from these monitoring, recordkeeping, and reporting (MRR) requirements according to 45 CSR 2-11.

2.8.2 45 CSR 4: TO PREVENT AND CONTROL THE DISCHARGE OF AIR POLLUTANTS INTO THE AIR WHICH CAUSES OR CONTRIBUTES TO AN OBJECTIONABLE ODOR

According to 45 CSR 4-3:

No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

As stated in the R30-02100010-2006 Fact Sheet, the Glenville Station is subject to this requirement. In accordance with their Title V permit, the Glenville Station will maintain appropriate records and take appropriate response measures of all odor complaints.

2.8.3 45 CSR 6: TO PREVENT AND CONTROL AIR POLLUTION FROM COMBUSTION OF REFUSE

According to 45 CSR 6-3.1:

The open burning of refuse by any person is prohibited except for [the exemptions listed in this section].

As stated in the R30-02100010-2006 Fact Sheet, the Glenville Station does not meet any of the exemptions in 45 CSR 6-3.1 and is therefore subject to the requirements of this section. The Glenville Station will adhere to the prohibition of open burning.

2.8.4 45 CSR 10: TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF SULFUR OXIDES

According 45 CSR 10-3:

No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess...of the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

As stated by the R30-02100010-2006 Fact Sheet, WVDEP has determined that 45 CSR 10 is not applicable to the compressor engines at the Glenville Station. This means that the engines are not subject to the sulfur dioxide (SO₂) weight emission standards for fuel burning units and the associated permits and testing, monitoring, recordkeeping, and reporting requirements. Furthermore, the R30-02100010-2006 Fact Sheet states that the boiler at the Glenville Station is exempt from the MRR requirements of this section. Other emission units at the facility are not subject to 45 CSR 10 Section 3 because they do not produce heat or power by indirect heat transfer and are not, by definition, “fuel burning units”.

2.8.5 45 CSR 11: PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

According to 45 CSR 11-5.1:

Any person responsible for the operation of a source of air pollutants emitting 100 tons per year or more in a region classified Priority I or II for any pollutant, shall prepare standby plans for reducing the emission of air pollutants during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency.

As stated in the R30-02100010-2006 Fact Sheet, the Glenville Station is subject to this rule. The Glenville Station is located in West Virginia Air Quality Control Region 8 (USEPA AQCR 232). This region is classified as Priority III for all pollutants according to Table A of 45 CSR 11. However, according 45 CSR 11-5.2, the West Virginia Air Pollution Control Commission can require a facility which is not subject to 45 CSR 11-5.1 to develop a standby plan. As such, the Glenville Station is not subject to 45 CSR 11 until such a time when the Commission requests a standby plan.

2.8.6 45 CSR 13: PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, PERMISSION TO COMMENCE CONSTRUCTION, AND PROCEDURES FOR EVALUATION

According to 45 CSR 13-5:

No person shall cause, suffer, allow or permit the construction, modification, relocation and operation of any stationary source to be commenced without notifying the Secretary of such intent and obtaining a permit to construct, modify, relocate and operate the stationary source as required in this rule or any other applicable rule promulgated by the Secretary.

As stated in the R30-02100010-2006 Fact Sheet, the provisions for construction permits under 45 CSR 13 apply to the Glenville Station. In the event that Equitrans would propose the construction of an additional unit at the Glenville Station, the proper Rule 13 (R13) operating permit application procedures would be followed. The existing units at the Glenville Station were installed prior to the promulgation of this requirement. As such, the Glenville Station does not currently have any permits under this requirement.

2.8.7 45 CSR 17: TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MATERIALS HANDLING, PREPARATION, STORAGE AND OTHER SOURCES OF FUGITIVE PARTICULATE MATTER

According to 45 CSR 17-3.1:

No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.

As stated in the R30-02100010-2006 Fact Sheet, the Glenville Station is subject to this requirement. Due to the nature of the activities at the Glenville Station, it is unlikely that fugitive particulate matter emissions will be emitted. However, Equitrans will take measures to ensure fugitive particulate matter emissions do not cross the property boundary should any such emissions be emitted.

2.8.8 45 CSR 30: REQUIREMENTS FOR OPERATING PERMITS

According to 45 CSR 30-3:

On and after the effective date of the operating program, no person shall violate any requirement of a permit issued under this rule nor shall any person operate any of the following sources, except in compliance with a permit issued under this rule.

As stated in the R30-02100010-2006 Fact Sheet, the Glenville Station is subject to the requirement for an operating permit. The station's Title V permit (R30-02100010-2006) was issued under this rule and this renewal application satisfies the application requirements of 45 CSR 30. Also under this rule, the Glenville Station is subject to operating under the requirements set forth in the issued Title V permit.

2.8.9 NON-APPLICABILITY OF OTHER SIP RULES

A thorough examination of the West Virginia SIP rule applicability to the Glenville Station reveals many SIP regulations that do not apply or impose additional requirements on operations. Such SIP rules include those specific to a particular type of industrial operation that is categorically not applicable to the Glenville Station.

3. REQUESTED PERMIT CHANGES

Equitrans requests that the following changes be incorporated into the Glenville Station Title V Permit. These changes are being requested in accordance with 45 CSR 30-12.7.

3.1 CHANGE OF OWNERSHIP

The current Title V permit (R30-02100010-2006) names Equitable Field Services LLC as the owner and operator of the Glenville Station. Effective January 1, 2005, Equitable Field Services LLC has been disbanded and ownership of the Glenville Station was transferred to Equitrans. Equitrans requests an administrative amendment to name Equitrans as the owner and operator of the Glenville Station. The Title V permit application forms reflect this change and provide the appropriate owner and contact information for Equitrans LP. Section 6 of this report contains the required forms and letters for an administrative amendment as well as a certificate of merger to serve as documentation of the name change. The required fee of \$200 for a permit transfer per 45 CSR 22 is included with this permit application.

3.2 REMOVAL OF UNIT C-004

The current Title V permit (R30-02100010-2006) includes requirements for four identical compressor engines (C-001, C-002, C-003, and C-004). Unit C-004 has not been operated for many years and many integral parts of the engine have been removed to be used as spare parts for the other three compressor engines, leaving it non-operational. As such, Equitrans requests that all references and requirements pertaining to unit C-004 be removed from the Title V permit.

4. SAMPLE EMISSION SOURCE CALCULATIONS

This section of the application provides a discussion of emission calculation methodology used for the emission sources at the Glenville Station.

4.1 COMBUSTION SOURCES

For the combustion sources (compressors, generators, hot water heater, and heating boiler) appropriate AP-42 emission factors were chosen and were then multiplied by heat input (MMBtu/hr) in order to determine the tpy and lb/hr emissions of CO, PM, PM₁₀, PM_{2.5}, NO_x, SO₂, VOC, and HAPs.

As an example, PM₁₀ emissions for Compressor Engine Number 1 (C-001):

Rated Horsepower = 300 hp

Specific Fuel Consumption = 10000 BTU/hp-hr

Potential Hours per year = 8760 hours

Heat Input = Rated Horsepower * Specific Fuel Consumption * (1/1,000,000 MMBtu/BTU)
= 3.00 MMBtu/hr

AP-42 Table 3.2-1 Uncontrolled Emission Factor for 2-stroke Lean-Burn Engines for PM₁₀ (filterable plus condensable) = 0.0483 lb/MMBtu

Emissions = Heat Input * Emission Factor * Permitted Hours * 1 ton/2000 lbs = 0.63 tpy

5. WVDEP APPLICATION FORMS

The WVDEP permit application forms contained in this renewal application include facility-wide and emission source specific forms for the renewal of the Glenville Station Title V permit. The completed Title V permit forms are included in this section.

6. CHANGE OF OWNERSHIP FORMS AND LETTERS

This section includes the following³:

- WVDEP permit transfer cover document;
- Letter from Equitable requesting the administrative amendment;
- Seller letter from Equitable Field Services;
- WVDAQ Title V permit revision form;
- Certificate of merger; and
- WV business certificate for Equitrans.

In accordance with 45 CSR 22, a \$200 fee is included with this notification package.

³ Please note that other documents required for an administrative amendment are included in the attachments to this report as part of the Title V renewal application and have not been duplicated in this section.



February 9, 2011

1710 Pennsylvania Ave,
Charleston WV 25302
www.eqt.com

TEL: (304) 348-3804

Christopher T. Akers
Senior Vice-President

CERTIFIED MAIL 70101870000335295991

John A. Benedict, Director
West Virginia Department of Environmental Protection
Division of Air Quality - Permitting
601 - 57th Street
Charleston, WV 25304

**RE: Transfer of Permit
Glenville Compressor Station
Title V Permit R30-02100010-2006**

Dear Mr. Benedict,

Equitrans, LP (Equitrans), a subsidiary of EQT Corporation, is submitting this letter to notify the West Virginia Department of Environmental Protection (WVDEP) that Equitrans has purchased the Glenville Compressor Station located in Glimmer County, West Virginia from Equitable Field Services, LLC on January 1, 2005. As such, Equitrans requests a change of ownership and permit transfer for Title V Operating Permit R30-02100010, most recently issued on September 7, 2006 and being renewed with this renewal application.

This notification letter also serves to certify that Equitrans has obtained and reviewed a complete copy of the existing permit application and permit. Equitrans will adhere to the design and operating parameters contained in the application and comply with all terms and conditions in the permit. Attached please find the Certificate of Merger stating that Equitable Field Services and Equitrans have merged in a limited partnership and will henceforth be united under the entity of Equitrans, LP.

Attached please find a Permit Transfer Cover Document. Additionally, in accordance with 45 CSR 30.6.4 a Title V administrative modification request is also attached. The Federal Employer I.D. Number for Equitrans is 25-1776875.

The correct company contact information to be referenced or included on any further correspondence is as follows:

Martin Fritz, President
Equitrans, LP
625 Liberty Ave, Suite 1700
Pittsburgh PA 15222
(412) 395-2992

In accordance with 45 CSR 22, a \$200 fee is included with this notification package. Please contact me at (304) 348-3804 if you have any questions or need additional information.

Sincerely,



Christopher T. Akers
Senior Vice President
Equitrans, LP

Enclosures



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304 926 0475 • FAX: 304 926 0479

Joe Manchin, III, Governor
Randy C. Huffman, Cabinet Secretary
www.wvdep.org

PERMIT TRANSFER COVER DOCUMENT

Note: This form MUST be returned with the appropriate buyer, seller or name change request letter(s). Please fill in all applicable information.

1. Current facility name: Glenville Compressor Station # 37
2. WV Division of Air Quality facility ID number: R30-02100010-2006
3. Reason for change request: *(check one box only)*
 Change of Ownership — "Change of ownership" occurs when the effective authority or control of the facility changes. If there has been a transaction involving cash, stock, assets or other items of value, check this box and return this form along with the appropriate seller letter or buyer letter, which must be accompanied by a check for \$200 made payable to the "West Virginia Division of Air Quality," to transfer the Certificate to Operate (CTO) or Certified Emission Statement (CES) for Title V sources.
OR
 Change of Name Only — "Change of name only" occurs when only the name of the facility has changed. If there has been no change in the effective ownership or authority, check this box and return this form along with the name change request letter. There is no charge for a name change.
4. New facility name: Glenville Compressor Station # 37
5. Date new facility qualified with the West Virginia Secretary of State's Office to do business in West Virginia: _____

Note: A copy of the business certificate from the Secretary of State's Office, submitted with the necessary paperwork and fees, if applicable, may expedite your request.

I, the undersigned, certify that all information contained on this form and any supporting documents appended hereto, is true, accurate and complete.

Name: Christopher T. Akers Title: Senior Vice President
Signature: Date: 2/9/11



February 9, 2011

John A. Benedict, Director
West Virginia Department of Environmental Protection
Division of Air Quality - Permitting
601 - 57th Street
Charleston, WV 25304

**RE: Transfer of Permit
Glenville Compressor Station
Title V Permit R30-02100010-2006**

Dear Mr. Benedict,

Equitable Field Services, LLC (EFS), a subsidiary of EQT Corporation, is submitting this letter to notify the West Virginia Department of Environmental Protection (WVDEP) that Equitrans has purchased the Glenville Compressor Station located in Gilmer County, West Virginia from Equitable Field Services, LLC on January 1, 2005.

This notification letter also serves to certify that this permitted facility identified above is in compliance with all the provisions and requirements of the referenced permit and request that you acknowledge the transfer of this permit to the new owner and operator of the permitted facility identified above. Attached please find the Certificate of Merger stating that Equitable Field Services and Equitrans have merged in a limited partnership and will henceforth be united under the entity of Equitrans, LP.

Please contact me at (304) 348-3804 if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Chris Akers', written over a white background.

Christopher T. Akers
Sr. Vice-President – Midstream Operations
Equitable Field Services, LLC (now Equitrans, LP)

Enclosures



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office):

Equitrans, LP

2. Federal Employer ID No. (FEIN):

25-1776875

3. Name of facility (if different from above):

Glenville Compressor Station

4. The applicant is the:

- OWNER OPERATOR BOTH

5A. Applicant's mailing address:

625 Liberty Ave, Suite 1700
Pittsburgh PA 15222

5B. Facility's present physical address:

24 Fairground Road, Glenville, WV 26351
Glenville, Gilmer County, West Virginia

6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? YES NO

- If YES, provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A**.
- If NO, provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? YES NO

- If YES, please explain: Own

- If NO, you are not eligible for a permit for this source.

Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.):

Natural Gas Transmission Facility

9. North American Industry Classification System (NAICS) code for the facility:

48621

11A. DAQ Plant ID No. (for existing facilities only):

021 - 00010

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):

R30-02100010-2006

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Interstate 79 North to the Burnsville exit (Number 79). Take Route 5 North towards Glenville. Station is on left very near the intersection of Routes 5 and 19 (approximately 16 miles on Route 5).

12.B. New site address (if applicable):	12C. Nearest city or town: Glenville	12D. County: Gilmer
12.E. UTM Northing (KM): 4420.84 km	12F. UTM Easting (KM): 515.90 km	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Change of ownership from Equitable Field Services, LLC to Equitrans, LP

14A. Provide the date of anticipated installation or change: N/A – If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: 01/01/2005	14B. Date of anticipated Start-Up if a permit is granted: N/A
--	--

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? YES NO

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**) .
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **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 found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

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.

SIGNATURE 
(Please use blue ink)

DATE: 2/9/11
(Please use blue ink)

35B. Printed name of signee: Christopher T. Akers

35C. Title: Senior Vice President

35D. E-mail: cakers@EQT.com

36E. Phone: 304-348-3804

36F. FAX: 412-395-3166

36A. Printed name of contact person (if different from above): Jerry McGinnis

36B. Title: Supervisor, Environmental

36C. E-mail: jmcginnis@eqt.com

36D. Phone: (412) 395-2548

36E. FAX: (412) 395-2156

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input type="checkbox"/> Attachment B: Map(s) | <input type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input type="checkbox"/> Attachment D: Regulatory Discussion | <input type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input type="checkbox"/> Attachment E: Plot Plan | <input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input type="checkbox"/> Attachment P: Public Notice |
| <input type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms |
| <input type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:
 - For Title V Administrative Amendments:
 - NSR permit writer should notify Title V permit writer of draft permit,
 - For Title V Minor Modifications:
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
 - NSR permit writer should notify Title V permit writer of draft permit.
 - For Title V Significant Modifications processed in parallel with NSR Permit revision:
 - NSR permit writer should notify a Title V permit writer of draft permit,
 - Public notice should reference both 45CSR13 and Title V permits,
 - EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

WV DEP DIVISION OF AIR QUALITY
601 57TH STREET SE
CHARLESTON, WV 25304-2345

9674 0889

PAGE: 1

PAYMENT SUMMARY

VENDOR NO: 76884
VOUCHER NO: 0000021442

VOUCHER DATE: 01/20/11

REF. DOC.	REFERENCE NUMBER	REF. DATE	DOCUMENT AMOUNT	DISCOUNT/ADJ AMOUNT	NET AMOUNT
SELLER INVCE	CKRQST011811 03221662 2011-J MCGINNIS-CO ID#10300037	01/18/11	200.00	0.00	200.00
TOTALS:			200.00	0.00	200.00

(Detach Here)

EQT Gathering, LLC
P.O. Box 23007
Pittsburgh, PA 15222-6007

60-160/433

CHECK DATE
01/20/2011

CHECK NUMBER
0000021442

PAY...TWO HUNDRED DOLLARS 00 CENTS

TO THE ORDER OF: WV DEP DIVISION OF AIR QUALITY
601 57TH STREET SE
CHARLESTON, WV 25304-2345

\$*****200.00

Pay to the order of

THE BANK OF NEW YORK MELLON
PITTSBURGH, PENNSYLVANIA

Delaware

PAGE 1

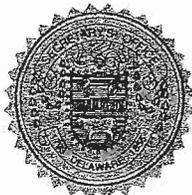
The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"EQUITABLE FIELD SERVICES, LLC", A DELAWARE LIMITED LIABILITY COMPANY,

WITH AND INTO "EQUITRANS, L.P." UNDER THE NAME OF "EQUITRANS, L.P.", A LIMITED PARTNERSHIP ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF PENNSYLVANIA, AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-NINTH DAY OF DECEMBER, A.D. 2004, AT 4:32 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE FIRST DAY OF JANUARY, A.D. 2005.



3904534 8100M

040950725

Harriet Smith Windsor
Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 3589633

DATE: 12-31-04

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:55 PM 12/29/2004
FILED 04:32 PM 12/29/2004
SRV 040950725 - 3386398 FILE

**STATE OF DELAWARE
CERTIFICATE OF MERGER OF A
DOMESTIC LIMITED LIABILITY COMPANY INTO
A FOREIGN LIMITED PARTNERSHIP**

Pursuant to Title 6, Section 18-209 of the Delaware Limited Liability Company Act.

First: The name of the surviving limited partnership is Equitrans, L.P., a foreign limited partnership.

Second: The jurisdiction in which this limited partnership was formed is Pennsylvania.

Third: The name of the limited liability company being merged into the limited partnership is Equitable Field Services, LLC, a Delaware limited liability company

Fourth: The Agreement and Plan of Merger has been approved and executed by each of the business entities which is to merge. The effective time of the merger is January 1, 2005 at 12:10 a.m. EST.

Fifth: The name of the surviving foreign limited partnership is Equitrans, L.P.

Sixth: An Agreement of Merger is on file at the place of business of the surviving foreign limited partnership and the address thereof is One Oxford Centre, Suite 3300, Pittsburgh, Pennsylvania 15219.

Seventh: A copy of the Agreement and Plan of Merger will be furnished by the surviving foreign limited partnership, on request and without cost, to any member of any domestic limited liability company or any person holding an interest in any other business entity, which is to merge or consolidate.

Eighth: The surviving foreign limited partnership agrees that it may be served with process in the State of Delaware in any action, suit or proceeding for the enforcement of any obligation of any domestic limited liability company which is to merge or consolidate, irrevocably appoints the Secretary of State as its agent to accept service of process in any such action, suit, or proceeding and the address to which a copy of such process shall be mailed to by the Secretary of State is One Oxford Centre, Suite 3300, Pittsburgh, Pennsylvania 15219, ATTN: Law Department.

IN WITNESS WHEREOF, said limited partnership has caused this certificate to be signed by it's general partner, this 29th day of December, 2004.

EQUITRANS, L.P.
By: ET Blue Grass Company,
its General Partner


David K. Dewey, Vice President of
ET Blue Grass Company,
General Partner



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE

Charleston, WV 25304

Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office): Equitrans, LP	2. Facility Name or Location: Glenville Compressor Station #37
3. DAQ Plant ID No.: 021 — 00010	4. Federal Employer ID No. (FEIN): 25 - 1776875
5. Permit Application Type: <input type="checkbox"/> Initial Permit When did operations commence? MM/DD/YYYY <input checked="" type="checkbox"/> Permit Renewal What is the expiration date of the existing permit? 09/07/2011 <input type="checkbox"/> Update to Initial/Renewal Permit Application	
6. Type of Business Entity: <input type="checkbox"/> Corporation <input type="checkbox"/> Governmental Agency <input type="checkbox"/> LLC <input type="checkbox"/> Partnership <input checked="" type="checkbox"/> Limited Partnership	7. Is the Applicant the: <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> 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: 1	
9. Governmental Code: <input checked="" type="checkbox"/> Privately owned and operated; 0 <input type="checkbox"/> County government owned and operated; 3 <input type="checkbox"/> Federally owned and operated; 1 <input type="checkbox"/> Municipality government owned and operated; 4 <input type="checkbox"/> State government owned and operated; 2 <input type="checkbox"/> District government owned and operated; 5	
10. Business Confidentiality Claims Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: 625 Liberty Ave, Suite 1700		
City: Pittsburgh	State: PA	Zip: 15222
Telephone Number: (412) 395-2548	Fax Number: (412) 395-2156	

12. Facility Location		
Street: 24 Fairground Road	City: Glenville	County: Gilmer
UTM Easting: 515.90 km	UTM Northing: 4420.84 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Interstate 79 North to the Burnsville exit (Number 79). Take Route 5 North towards Glenville. Station is on left very near the intersection of Routes 5 and 19 (approximately 16 miles on Route 5).		
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the affected state(s).	
Is facility located within 100 km of a Class I Area ¹ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area ¹ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
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: Christopher T. Akers		Title: Senior Vice President – Midstream Operations
Street or P.O. Box: 625 Liberty Avenue, Suite 1700		
City: Pittsburgh	State: PA	Zip: 15222
Telephone Number: (304) 348-3804	Fax Number: (412) 395-3166	
E-mail address: cakers@eqt.com		
Environmental Contact: Jerry McGinnis		Title: Supervisor, Environmental
Street or P.O. Box: 625 Liberty Avenue, Suite 1700		
City: Pittsburgh	State: PA	Zip: 15222
Telephone Number: (412) 395-2548	Fax Number: (412) 395-2156	
E-mail address: jmcginnis@eqt.com		
Application Preparer: Christi Wilson		Title: Managing Consultant
Company: Trinity Consultants		
Street or P.O. Box: 5320 Spectrum Drive, Suite A		
City: Frederick	State: MD	Zip: 21703
Telephone Number: (724) 360-8148	Fax Number: (240) 379-7491	
E-mail address: cwilson@trinityconsultants.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 Transmission Facility	Natural gas storage and transmission	48621	4922

Provide a general description of operations.

The Glenville Compressor Station #37 is a natural gas transmission facility covered by Standard Industrial Classification (SIC) 4922. The station has the potential to operate seven (7) days per week, twenty-four hours per day. The station consists of three (3) 300-hp natural gas internal combustion reciprocating engines, one (1) heating boiler, one (1) hot water tank, one (1) electric generator, two (2) 4000 gallon storage tanks containing oil and pipeline condensates, exclusively, and two (2) 300 gallon tanks containing scrubber oil.

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 checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS	<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"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

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 Part 60 Subpart D: The boilers is below the 250 MMBtu/hr threshold (exempt per 40 CFR 60.40(a))</p> <p>40 CFR Part 60 Subpart Da: The boiler is below the 250 MMBtu/hr threshold (exempt per 40 CFR 60.40Da(a))</p> <p>40 CFR Part 60 Subpart Db: The boiler is below the 100 MMBtu/hr threshold (exempt per 40 CFR 60.40b(a))</p> <p>40 CFR Part 60 Subpart Dc: The boiler is below the 10 MMBtu/hr threshold (exempt per 40 CFR 60.40c(a))</p> <p>40 CFR Part 60 Subpart K: Total tank capacity is less than 40,000 gallons (exempt per 40 CFR 60.110(c))</p> <p>40 CFR Part 60 Subpart Ka: No tanks greater than 40,000 gallons (exempt per 40 CFR 60.110a(a))</p>
<input checked="" type="checkbox"/> Permit Shield

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

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.

40 CFR Part 60 Subpart Kb: No tanks greater than 75 m³ (exempt per 40 CFR 60.110b(a))

40 CFR Part 60 Subpart KKK: Operations and units at the Glenville Station do not meet the definition of applicable process units given in 40 CFR 60.631

40 CFR Part 60 Subpart LLL: No sweetening units on site (exempt per 40 CFR 60.640(a))

40 CFR Part 60 Subpart IIII: No CI engines (exempt per 40 CFR 60.4200(a))

40 CFR Part 63 Subpart HH: Station does not meet the definition of a natural gas production facility given in 40 CFR 63.761

40 CFR Part 63 Subpart HHH: No glycol dehydration units (exempt per 40 CFR 63.1270(b))

40 CFR Part 63 Subpart DDDDD: Hot water heater is specifically exempt per 40 CFR 63.7491(h) and heating boiler is exempt per 40 CFR 63.7491(o) for meeting the definition of a process heater given in 40 CFR 63.7575

40 CFR 64: Exempt from CAM, no units utilize control devices (exempt per 40 CFR 64.2(a)(2))

45 CSR 10: Not applicable to engines or boiler per R30-02100010-2006 Fact Sheet

45 CSR 2: Boiler is exempt from testing and monitoring for being less than 10 MMBtu/hr per 45 CSR 2-11.1

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).

All references to a TV Permit Condition in section 20 refer to Permit Number R30-02100010-2006 condition numbers.

Open Burning: 45CSR§6-3.1	(TV Permit Condition 3.1.1)
Open Burning Exemptions: 45CSR§6-3.2	(TV Permit Condition 3.1.2)
Asbestos: 40 CFR 61 and 45CSR15	(TV Permit Condition 3.1.3)
Odor: 45CSR§4-3.1	(TV Permit Condition 3.1.4)
Standby Plan for Reducing Emissions: 45CSR§11-5.2	(TV Permit Condition 3.1.5)
Emission Inventory: W.Va. Code § 22-5-4(a)(14)	(TV Permit Condition 3.1.6)
Ozone-depleting Substances: 40 C.F.R. 82, Subpart F	(TV Permit Condition 3.1.7)
Risk Management Plan: 40 C.F.R. 68	(TV Permit Condition 3.1.8)

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.)

Open Burning: Open burning shall be prohibited (45CSR§6-3.1, TV Permit Condition 3.1.1).

Open Burning Exemptions: Notification will be sent if open burning occurs (45CSR§6-3.2, TV Permit Condition 3.1.2)

Asbestos: Must notify the Secretary at least ten working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary per notification requirements of 40 CFR §61.145(b)(3)(i). Prior to demolition or construction, buildings will be inspected for asbestos (TV Permit Condition 3.1.3)

Odor: Permittee shall prohibit the emission any pollutant(s) which may cause objectionable odor in a public location (45CSR§4-3.1, TV Permit Condition 3.1.4).

Standby Plan for Reducing Emissions: If requested by the Supervisor, permittee shall prepare a standby plan (45CSR§11.5-2, TV Permit Condition 3.1.5).

Emission Inventory: Permittee shall submit, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality (W. Va. Code §22-5-4(a)(14), TV Permit Condition 3.1.6).

Ozone-Depleting Substances: Permittee will prohibit the maintenance, service, repair, or disposal of appliance containing ozone-depleting substances (40 CFR §§82.154 and 82.156, TV Permit Condition 3.1.7.a).

Risk Management Plan: Should the facility become subject 40 CFR 68, the owner/operator will submit a risk management plan (40 CFR 68, TV Permit Condition 3.1.8).

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 rule citation and/or permit with the condition number.

Fugitive Particulate Matter: 45CSR§17-3.1	(TV Permit Condition 3.1.9)
Stack Testing: WV Code § 22 -5-4(a)(15) and 45CSR13	(TV Permit Condition 3.3.1)
Monitoring Information: 45CSR§30-5.1.c.2.A	(TV Permit Condition 3.4.1)
Retention of Records: 45CSR§30-5.1.c.2.B	(TV Permit Condition 3.4.2)
Odors: 45CSR§30-5.1.c	(TV Permit Condition 3.4.3)
Responsible Official: 45CSR§§30-4.4 and 5.1.c.3.D	(TV Permit Condition 3.5.1)
Confidential Treatment: 45CSR§30-5.1.c.3.E	(TV Permit Condition 3.5.2)
Certified Emissions Statement: 45CSR§30-8	(TV Permit Condition 3.5.4)
Compliance Certification: 45CSR§30-5.3.e	(TV Permit Condition 3.5.5)

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.)

Fugitive Particulate Matter: Fugitive particulate matter is not permitted to be emitted over the property boundary (45CSR§17-3.1, TV Permit Condition 3.1.9). Any request for variance (less than 10 days) shall be submitted to the Director (45CSR§17-5.1). Any violation greater than 10 days will require the submission of a control program to the Director (45CSR§17-4.1).

Stack Testing: Stack testing is conducted in accordance with the 2006 Title V permit and the Secretary may option to witness any stack testing (TV Permit Condition 3.3.1). The Secretary may approve or specific additional or alternative testing (TV Permit Conditions 3.3.1.a and 3.3.1.b). All stack testing shall be conducted in accordance with approved test protocols. Protocols shall be submitted to the Secretary in writing at least 30 days prior to testing for approval. The Secretary must be notified 15 days prior to testing (TV Permit Condition 3.3.1.c). WV Code §22-5-4(a)(15) and 45CSR13

Monitoring Information: Permittee shall keep records of monitoring information including: date and place of sampling, date of analyses, company performing analyses, analytical techniques or methods, and operating conditions at time of sampling (45CSR§30-5.1.c.2.A, TV Permit Condition 3.4.1).

Retention of Records: Permittee shall retain records of all required monitoring data and support information for at least 5 years (45CSR§30.5.1.c.2.B, TV Permit Condition 3.4.2).

Odors: Permittee shall maintain a record of all odor complaints received, any investigation performed in response, and any responsive actions taken (45CSR§30-5.1.c, TV Permit Condition 3.4.3).

Responsible Official: Any application form, report, or compliance certification required by permit to be submitted to the DAQ or USEPA shall contain a certification by the responsible official (45CSR§30-4.4, 45CSR§5.1.c.3.D, TV Permit Condition 3.5.1).

Confidential Treatment: Permittee may request confidential treatment for the submission of reporting (45CSR§30-5.1.c.3.E, TV Permit Condition 3.5.2).

Certified Emissions Statement: Permittee shall submit a certified emissions statement and pay fees on an annual basis (45CSR§30-8, TV Permit Condition 3.5.4).

Compliance Certification: The permittee shall certify compliance with the conditions of this permit annually on the forms provided by the DAQ (45CSR§30-5.3.e, TV Permit Condition 3.5.5)

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 rule citation and/or permit with the condition number.

Semi-annual Monitoring Reports: 45CSR§30-5.1.c.3.A	(TV Permit Condition 3.5.6)
Supplemental Deviation Reports: 45CSR§30-5.1.c.3.C	(TV Permit Condition 3.5.8.a)
Reporting Deviations: 45CSR§30-5.1.c.3.B	(TV Permit Condition 3.5.8.b)
New Applicable Requirements: 45CSR§30-4.3.h.1.B	(TV Permit Condition 3.5.9)
Emergency Operating Scenario: 45CSR§30-12.7	(TV Permit Condition 3.8)

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.)

Semi-Annual Monitoring Reports: Permittee shall submit semi-annual reports of any required monitoring (45CSR§30-5.1.c.3.A, TV Permit Condition 3.5.6).

Supplemental Reports: Any deviation resulting in an emergency or upset condition shall be reported by telephone or fax within one working day. A written report of such deviation shall be submitted and certified within 10 days of deviation (TV Permit Condition 3.5.8.a.1). Any deviation posing an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or fax. A written report of such deviation shall be submitted and certified within 10 days of deviation (TV Permit Condition 3.5.8.a.2). (45CSR§30-5.1.c.3.C).

Reporting Deviations: In reporting deviations, permittee shall include probable cause for deviation and any corrective action or preventative measures taken (45CSR30-5.1.c.3.B).

New Applicable Requirements: If any applicable requirement is promulgated during the term of the permit, the permittee will meet such requirements on a timely basis (45CSR§30-4.3.h.1.B).

Emergency Operating Scenario: Provide written notification of engine replacement due to emergency to the Director within 5 days of replacement (45CSR§30-12.7, TV Permit Condition 3.8.e).

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

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

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	40.9
Nitrogen Oxides (NO _x)	140
Lead (Pb)	2.22 E -06
Particulate Matter (PM _{2.5}) ¹	2.07
Particulate Matter (PM ₁₀) ¹	2.07
Total Particulate Matter (TSP)	2.07
Sulfur Dioxide (SO ₂)	2.99 E -02
Volatile Organic Compounds (VOC)	4.96
Hazardous Air Pollutants ²	Potential Emissions
Total HAP	3.36
For individual HAPs, see Attachment F – Emission Calculations	
Regulated Pollutants other than Criteria and HAP	Potential Emissions
CO ₂ e	6,065
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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	<p>19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO₂, 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> <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: <u>1 - 4,000 gallon Oil Tank</u> <u>1 - 4,000 gallon Pipeline Condensate Tank</u> <u>1 - 0.03 MMBtu/hr Hot Water Heater</u></p> <p>Negligible emissions from tanks and maintenance degreaser/cold cleaner. Emissions from hot water heater: 2.18E-9, 2.60E-9, 1.56E-11, 1.43E-10, and 1.97E-10 lb/hr CO, NO_x, SO₂, VOC and PM respectively and 9.55E-9, 1.14E-8, 6.82E-11, 6.25E-10, and 8.64E-10 tpy CO, NO_x, SO₂, VOC and PM respectively.</p>

24. Insignificant Activities (Check all that apply)

<input checked="" type="checkbox"/>	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. 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: <u>VOC emissions from leaking valves, compressors, and connectors</u> _____ _____ _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input 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 checked="" 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 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 checked="" 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 checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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: Christopher T. Akers

Title: Senior Vice President – Midstream Operations

Responsible official's signature:

Signature:  Signature Date: 2/9/11
 (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 type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

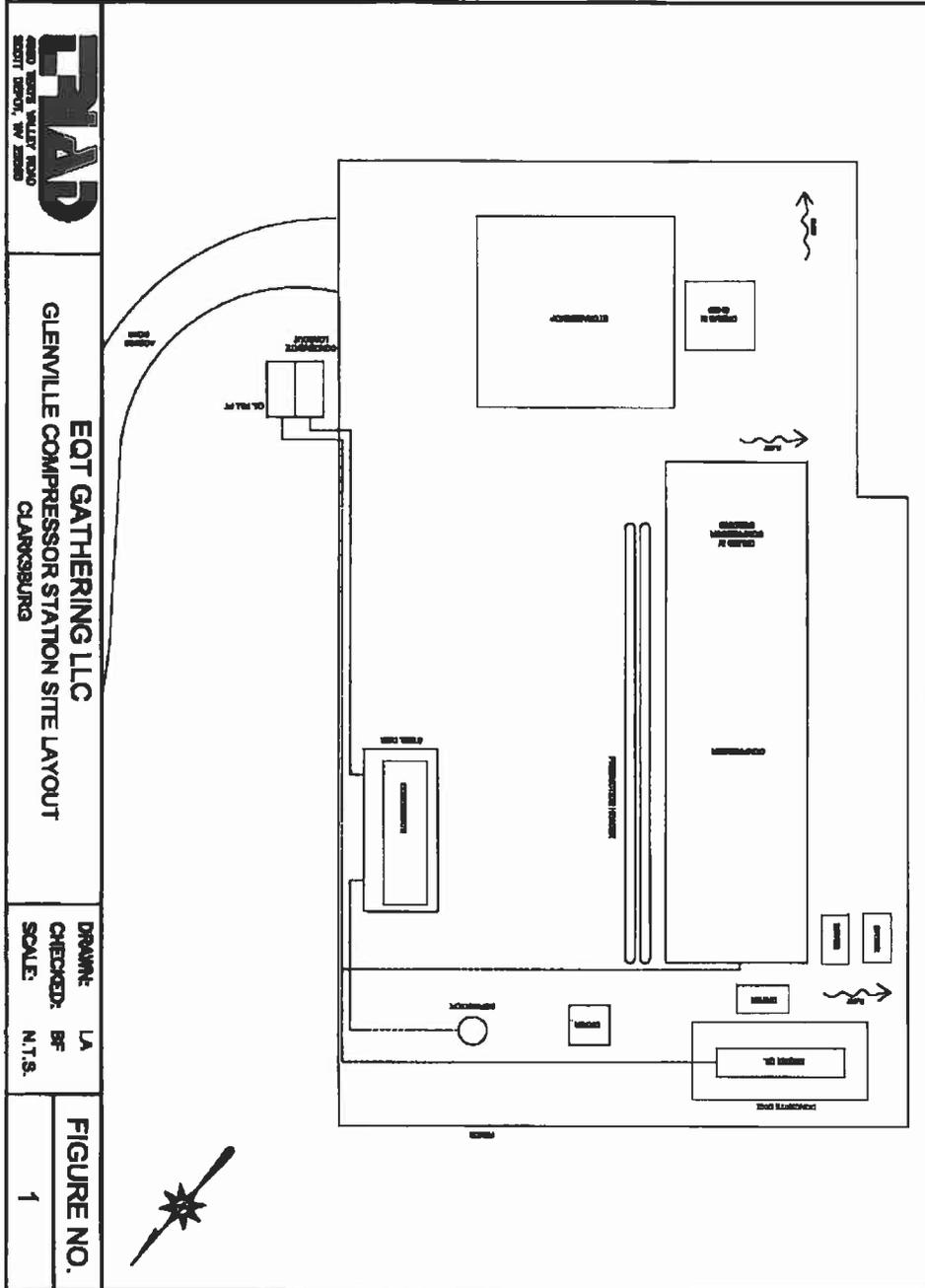
All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

APPENDIX A – AREA MAP

APPENDIX B – PLOT PLAN

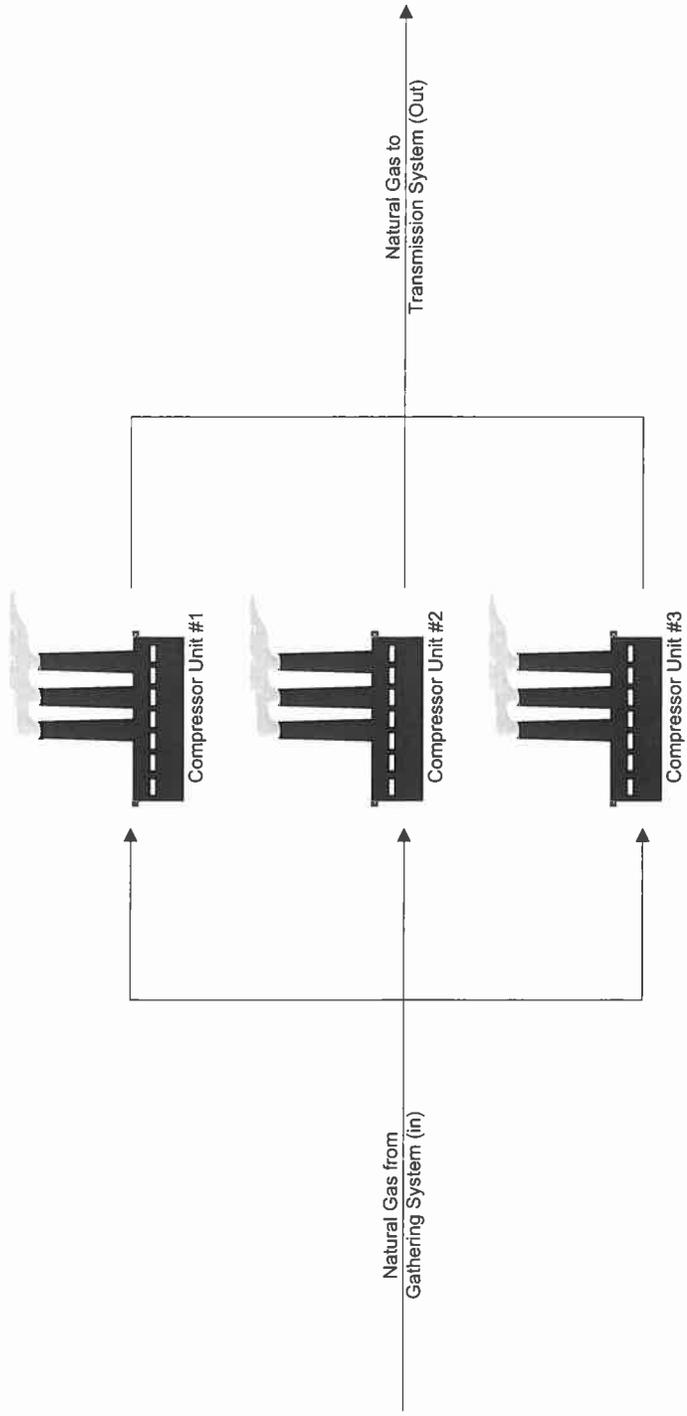
Glennville

Site Sketch



APPENDIX C – PROCESS FLOW DIAGRAM

Glenville Compressor Station Process Flow Diagram



APPENDIX D – WVDEP TITLE V EQUIPMENT TABLE

APPENDIX E – WVDEP EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: BLR01	Emission unit name: BLR01	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.):
Heating boiler, 1.25 MMBtu/hr

Manufacturer: N/A	Model number: N/A	Serial number: N/A
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Construction date: 1992	Installation date: 1992	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1.25 MMBtu/hr

Maximum Hourly Throughput: 0.00101 MMscf/hr	Maximum Annual Throughput: 8.9 MMscf/yr	Maximum Operating Schedule: 24 hours per day, 7 days per week, 8760 hours per year
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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: 1.25 MMBtu/hr	Type and Btu/hr rating of burners: N/A
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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

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	H ₂ S < 1.0 gr/100 scf	N/A	1,233 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.09	0.37
Nitrogen Oxides (NO _x)	0.10	0.44
Lead (Pb)	5.07 E -07	2.22 E -06
Particulate Matter (PM _{2.5})	7.70 E -03	3.37 E -02
Particulate Matter (PM ₁₀)	7.70 E -03	3.37 E -02
Total Particulate Matter (TSP)	7.70 E -03	3.37 E -02
Sulfur Dioxide (SO ₂)	6.08 E -04	2.66 E -03
Volatile Organic Compounds (VOC)	5.58 E -03	2.44 E -02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAP	1.91 E -03	8.39 E -03
For individual HAPs, see Attachment F – Emission Calculations		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO _{2e}	146	641
<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>To calculate potential emissions, AP-42 factors were taken from Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (External Combustion Sources – Natural Gas Combustion, dated 7/1998). The fuel consumption for the boiler, 1.25 MMBtu/hr was divided by the source specific higher heating value, 1,233 Btu/scf, to find the maximum fuel consumption in MMscf/hr. The AP-42 emission factors (in lb/MMscf) were multiplied by the engine's fuel usage (in MMscf/hr as previously calculated) to get potential emissions in pounds per hour. To determine tons per year, the pounds per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs per ton.</p> <p>To calculate greenhouse gas emissions, emission factors for natural gas combustion from 40 CFR Part 98 were used. These emission factors (in kg/MMBtu) were multiplied by the fuel usage rating in MMBtu/hr and multiplied by 2.2046 lb/kg to get the pound per hour emission rate. To determine tons per year, the pound per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs/ton.</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.

Opacity: 45CSR§2-3.1

(Permit R30-02100010-2006 Condition 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.)

Opacity: Permittee will not permit emission of smoke and/or particulate matter greater than 10 percent opacity based on a six minute block average (45CSR§2-3.1, TV Permit Condition 4.1.1). Opacity is measured to determine compliance in accordance with 40 CFR Part 60 Appendix A, Method 9, or a continuous monitoring device (45CSR§2-3.2).

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: C-001	Emission unit name: C-001	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.):
Reciprocating Engine/Integral Compressor, 300 hp

Manufacturer: Clark	Model number: RA-32	Serial number: 22262
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Construction date: 1943	Installation date: 1943	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
300 hp

Maximum Hourly Throughput: 0.00243 MMscf/hr	Maximum Annual Throughput: 21.3 MMscf/yr	Maximum Operating Schedule: 24 hours per day, 7 days per week, 8760 hours per year
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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: 300 hp	Type and Btu/hr rating of burners: N/A
--	--

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

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	H ₂ S < 1.0 gr/100 scf	N/A	1,233 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.16	5.07
Nitrogen Oxides (NO _x)	9.51	41.65
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.14	0.63
Particulate Matter (PM ₁₀)	0.14	0.63
Total Particulate Matter (TSP)	0.14	0.63
Sulfur Dioxide (SO ₂)	1.76 E -03	7.76 E -03
Volatile Organic Compounds (VOC)	0.36	1.58
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	0.24	1.05
For individual HAPs, see Attachment F – Emission Calculations		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	351	1,537
<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>To calculate potential emissions, AP-42 factors were taken from Chapter 3.2, Table 3.2-1 (Uncontrolled Emission Factors for 2-stroke Lean-Burn Engines, dated 7/2000). The specific fuel consumption for the engine, 10,000 Btu/hp-hr, was multiplied by the engine rating, 300 hp, and then divided by 1,000,000 Btu per MMBtu to convert to units of MMBtu/hr. The AP-42 emission factors (in lb/MMBtu) were multiplied by the engine's fuel usage (in MMBtu/hr as previously calculated) to get potential emissions in pounds per hour. To determine tons per year, the pounds per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs per ton.</p> <p>To calculate greenhouse gas emissions, emission factors for natural gas combustion from 40 CFR Part 98 were used. These emission factors (in kg/MMBtu) were multiplied by the fuel usage rate in MMBtu/hr (as previously calculated) and multiplied by 2.2046 lb/kg to get the pound per hour emission rate. To determine tons per year, the pound per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs/ton.</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.

RICE MACT: 40 CFR 63 Subpart ZZZZ

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.)

RICE MACT: Permittee will minimize the engine's time spent at idle and minimize the engines' startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes (40CFR§63.6625(h)). Permittee will comply with applicable work practice standards: change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first and replace as necessary (40CFR§6603 and Table 2d to Subpart ZZZZ of 40CFR63). Permittee will also operate and maintain the engine in accordance with manufacturer's suggestions and maintain records showing that all work practices have been met (40 CFR63).

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: C-002	Emission unit name: C-002	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.):
Reciprocating Engine/Integral Compressor, 300 hp

Manufacturer: Clark	Model number: RA-32	Serial number: 22263
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Construction date: 1943	Installation date: 1943	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
300 hp

Maximum Hourly Throughput: 0.00243 MMscf/hr	Maximum Annual Throughput: 21.3 MMscf/yr	Maximum Operating Schedule: 24 hours per day, 7 days per week, 8760 hours per year
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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: 300 hp	Type and Btu/hr rating of burners: N/A
--	--

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

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	H ₂ S < 1.0 gr/100 scf	N/A	1,233 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.16	5.07
Nitrogen Oxides (NO _x)	9.51	41.65
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.14	0.63
Particulate Matter (PM ₁₀)	0.14	0.63
Total Particulate Matter (TSP)	0.14	0.63
Sulfur Dioxide (SO ₂)	1.76 E -3	7.73 E -3
Volatile Organic Compounds (VOC)	0.36	1.58
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	0.24	1.05
For individual HAPs, see Attachment F – Emission Calculations		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO _{2e}	351	1,537

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.).

To calculate potential emissions, AP-42 factors were taken from Chapter 3.2, Table 3.2-1 (Uncontrolled Emission Factors for 2-stroke Lean-Burn Engines, dated 7/2000). The specific fuel consumption for the engine, 10,000 Btu/hp-hr, was multiplied by the engine rating, 300 hp, and then divided by 1,000,000 Btu per MMBtu to convert to units of MMBtu/hr. The AP-42 emission factors (in lb/MMBtu) were multiplied by the engine's fuel usage (in MMBtu/hr as previously calculated) to get potential emissions in pounds per hour. To determine tons per year, the pounds per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs per ton.

To calculate greenhouse gas emissions, emission factors for natural gas combustion from 40 CFR Part 98 were used. These emission factors (in kg/MMBtu) were multiplied by the fuel usage rate in MMBtu/hr (as previously calculated) and multiplied by 2.2046 lb/kg to get the pound per hour emission rate. To determine tons per year, the pound per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs/ton.

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.

RICE MACT: 40 CFR 63 Subpart ZZZZ

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.)

RICE MACT: Permittee will minimize the engine's time spent at idle and minimize the engines' startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes (40CFR§63.6625(h)). Permittee will comply with applicable work practice standards: change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first and replace as necessary (40CFR§6603 and Table 2d to Subpart ZZZZ of 40CFR63). Permittee will also operate and maintain the engine in accordance with manufacturer's suggestions and maintain records showing that all work practices have been met (40 CFR63).

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: C-003	Emission unit name: C-0031	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.):
Reciprocating Engine/Integral Compressor, 300 hp

Manufacturer: Clark	Model number: RA-32	Serial number: 22261
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Construction date: 1943	Installation date: 1943	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
300 hp

Maximum Hourly Throughput: 0.00243 MMscf/hr	Maximum Annual Throughput: 21.3 MMscf/yr	Maximum Operating Schedule: 24 hours per day, 7 days per week, 8760 hours per year
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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: 300 hp	Type and Btu/hr rating of burners: N/A
--	--

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

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	H ₂ S < 1.0 gr/100 scf	N/A	1,233 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.16	5.07
Nitrogen Oxides (NO _x)	9.51	41.65
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	0.14	0.63
Particulate Matter (PM ₁₀)	0.14	0.63
Total Particulate Matter (TSP)	0.14	0.63
Sulfur Dioxide (SO ₂)	1.76 E -03	7.73 E -03
Volatile Organic Compounds (VOC)	0.36	1.58
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	0.24	1.05
For individual HAPs, see Attachment F – Emission Calculations		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	351	1,537

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.).

To calculate potential emissions, AP-42 factors were taken from Chapter 3.2, Table 3.2-1 (Uncontrolled Emission Factors for 2-stroke Lean-Burn Engines, dated 7/2000). The specific fuel consumption for the engine, 10,000 Btu/hp-hr, was multiplied by the engine rating, 300 hp, and then divided by 1,000,000 Btu per MMBtu to convert to units of MMBtu/hr. The AP-42 emission factors (in lb/MMBtu) were multiplied by the engine's fuel usage (in MMBtu/hr as previously calculated) to get potential emissions in pounds per hour. To determine tons per year, the pounds per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs per ton.

To calculate greenhouse gas emissions, emission factors for natural gas combustion from 40 CFR Part 98 were used. These emission factors (in kg/MMBtu) were multiplied by the fuel usage rate in MMBtu/hr (as previously calculated) and multiplied by 2.2046 lb/kg to get the pound per hour emission rate. To determine tons per year, the pound per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs/ton.

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.

RICE MACT: 40 CFR 63 Subpart ZZZZ

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.)

RICE MACT: Permittee will minimize the engine's time spent at idle and minimize the engines' startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes (40CFR§63.6625(h)). Permittee will comply with applicable work practice standards: change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first and replace as necessary (40CFR§6603 and Table 2d to Subpart ZZZZ of 40CFR63). Permittee will also operate and maintain the engine in accordance with manufacturer's suggestions and maintain records showing that all work practices have been met (40 CFR63).

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: G-001	Emission unit name: G-001	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.):
Reciprocating Engine/Generator, 200 hp

Manufacturer: Generac	Model number: SG-100	Serial number: 58369
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Construction date: 1984	Installation date: 1984	Modification date(s): N/A
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
147 hp

Maximum Hourly Throughput: 0.00126 MMscf/hr	Maximum Annual Throughput: 11.0 MMscf/yr	Maximum Operating Schedule: 24 hours per day, 7 days per week, 8760 hours per year
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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: 147 hp	Type and Btu/hr rating of burners: N/A
--	--

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

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	H ₂ S < 1.0 gr/100 scf	N/A	1,233 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	5.78	25.31
Nitrogen Oxides (NO _x)	3.43	15.04
Lead (Pb)	N/A	N/A
Particulate Matter (PM _{2.5})	3.02 E -02	1.32 E -01
Particulate Matter (PM ₁₀)	3.02 E -02	1.32 E -01
Total Particulate Matter (TSP)	3.02 E -02	1.32 E -01
Sulfur Dioxide (SO ₂)	9.14 E -04	4.00 E -03
Volatile Organic Compounds (VOC)	4.60 E -02	2.01 E -01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	5.04 E -02	2.21 E -01
For individual HAPs, see Attachment F – Emission Calculations		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO _{2e}	182	796
<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>To calculate potential emissions, AP-42 factors were taken from Chapter 3.2, Table 3.2-3 (Uncontrolled Emission Factors for 4-stroke Rich-Burn Engines, dated 7/2000). The fuel consumption rate of the engine in MMscf/hr was multiplied by the site specific higher heating value, 1,233 Btu/scf, to determine heat input in MMBtu/hr. The AP-42 emission factors (in lb/MMBtu) were multiplied by the engine's fuel usage (in MMBtu/hr as previously calculated) to get potential emissions in pounds per hour. To determine tons per year, the pounds per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs per ton.</p> <p>To calculate greenhouse gas emissions, emission factors for natural gas combustion from 40 CFR Part 98 were used. These emission factors (in kg/MMBtu) were multiplied by the fuel usage rate in MMBtu/hr (as previously calculated) and multiplied by 2.2046 lb/kg to get the pound per hour emission rate. To determine tons per year, the pound per hour value was multiplied by 8,760 hours per year and divided by 2,000 lbs/ton.</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.

RICE MACT: 40 CFR Subpart ZZZZ

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.)

RICE MACT: Permittee will minimize the engine's time spent at idle and minimize the engines' startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes (40CFR§6625(h)). Permittee will comply with applicable work practice standards: change oil and filter every 1,440 hours of operation or annually, whichever comes first; inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first and replace as necessary (40CFR§6603(a) and Table 2d to Subpart ZZZZ of 40CFR63).

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.

APPENDIX F – SITE-WIDE EMISSION CALCULATIONS

Equitrans - Glenville Compressor Station
Facility-Wide Emissions Summary

Pollutant	Engine #1 (C-001)		Engine #2 (C-002)		Engine #3 (C-003)	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Carbon Monoxide (CO)	1.16	5.07	1.16	5.07	1.16	5.07
Nitrogen Oxides (NO _x)	9.51	41.65	9.51	41.65	9.51	41.65
Lead (Pb)	-	-	-	-	-	-
Particulate Matter (PM _{2.5})	1.45E-01	6.35E-01	1.45E-01	6.35E-01	1.45E-01	6.35E-01
Particulate Matter (PM ₁₀)	1.45E-01	6.35E-01	1.45E-01	6.35E-01	1.45E-01	6.35E-01
Total Particulate Matter (TSP)	1.45E-01	6.35E-01	1.45E-01	6.35E-01	1.45E-01	6.35E-01
Sulfur Dioxide (SO ₂)	1.76E-03	7.73E-03	1.76E-03	7.73E-03	1.76E-03	7.73E-03
Volatle Organic Compounds (VOC)	3.60E-01	1.58E+00	3.60E-01	1.58E+00	3.60E-01	1.58E+00
Total HAPs	2.39E-01	1.05E+00	2.39E-01	1.05E+00	2.39E-01	1.05E+00
Carbon Dioxide (CO ₂)	351	1,536	351	1,536	351	1,536
Nitrous Oxide (N ₂ O)	6.61E-04	2.90E-03	6.61E-04	2.90E-03	6.61E-04	2.90E-03
Methane (CH ₄)	6.61E-03	2.90E-02	6.61E-03	2.90E-02	6.61E-03	2.90E-02
Carbon Equivalent Emissions (CO ₂ e) ⁸	351	1,537	351	1,537	351	1,537

Carbon Dioxide (CO₂): 1
Methane (CH₄): 21
Nitrous Oxide (N₂O): 310

Equitrans - Glenville Compressor Stati
Facility-Wide Emissions Summary

Pollutant	Hot Water Heater		Generator #1 (G-001)		Boiler (BLR01)		Site-Wide TOTAL	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Carbon Monoxide (CO)	0.00	0.01	5.78	25.31	0.09	0.37	9	41
Nitrogen Oxides (NO _x)	0.00	0.01	3.43	15.04	0.10	0.44	32	140
Lead (Pb)	1.30E-08	1.82E-09	-	-	5.07E-07	2.22E-06	5.20E-07	2.22E-06
Particulate Matter (PM _{2.5})	1.97E-04	8.64E-04	3.02E-02	1.32E-01	7.70E-03	3.37E-02	4.73E-01	2.07E+00
Particulate Matter (PM ₁₀)	1.97E-04	8.64E-04	3.02E-02	1.32E-01	7.70E-03	3.37E-02	4.73E-01	2.07E+00
Total Particulate Matter (TSP)	1.97E-04	8.64E-04	3.02E-02	1.32E-01	7.70E-03	3.37E-02	4.73E-01	2.07E+00
Sulfur Dioxide (SO ₂)	1.56E-05	6.82E-05	9.14E-04	4.00E-03	6.08E-04	2.66E-03	6.83E-03	2.99E-02
Volatile Organic Compounds (VOC)	1.43E-04	6.25E-04	4.60E-02	2.01E-01	5.38E-03	2.44E-02	1.13E+00	4.96E+00
Total HAPs	4.89E-05	2.14E-04	5.04E-02	2.21E-01	1.91E-03	8.39E-03	7.68E-01	3.36E+00
Carbon Dioxide (CO ₂)	4	16	182	795	146	640	1,383	6,059
Nitrous Oxide (N ₂ O)	7.05E-06	3.09E-05	3.43E-04	1.50E-03	2.76E-04	1.21E-03	2.61E-03	1.14E-02
Methane (CH ₄)	7.05E-05	3.09E-04	3.43E-03	1.50E-02	2.76E-03	1.21E-02	2.61E-02	1.14E-01
Carbon Equivalent Emissions (CO ₂ e) ^a	4	16	182	796	146	641	1,385	6,065

Equitrans - Glennville Compressor Station
Facility-Wide HAP Summary

Pollutant	Engine #1 (C-001)		Engine #2 (C-002)		Engine #3 (C-003)		Hot Water Heater	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
HAPs:								
Acetaldehyde	2.33E-02	1.02E-01	2.33E-02	1.02E-01	2.33E-02	1.02E-01	-	-
Acrolein	2.33E-02	1.02E-01	2.33E-02	1.02E-01	2.33E-02	1.02E-01	-	-
Benzene	5.82E-03	2.55E-02	5.82E-03	2.55E-02	5.82E-03	2.55E-02	5.45E-08	2.39E-07
Biphenyl	1.19E-05	5.19E-05	1.19E-05	5.19E-05	1.19E-05	5.19E-05	-	-
1,3-Butadiene	2.46E-03	1.08E-02	2.46E-03	1.08E-02	2.46E-03	1.08E-02	-	-
Carbon Tetrachloride	1.82E-04	7.98E-04	1.82E-04	7.98E-04	1.82E-04	7.98E-04	-	-
Chlorobenzene	1.33E-04	5.83E-04	1.33E-04	5.83E-04	1.33E-04	5.83E-04	-	-
Chloroform	1.41E-04	6.19E-04	1.41E-04	6.19E-04	1.41E-04	6.19E-04	-	-
Dichlorobenzene	-	-	-	-	-	-	3.11E-08	1.36E-07
1,3-Dichloropropene	1.31E-04	5.76E-04	1.31E-04	5.76E-04	1.31E-04	5.76E-04	-	-
Ethylbenzene	3.24E-04	1.42E-03	3.24E-04	1.42E-03	3.24E-04	1.42E-03	-	-
Ethylene Dibromide	2.20E-04	9.64E-04	2.20E-04	9.64E-04	2.20E-04	9.64E-04	-	-
Formaldehyde	1.66E-01	7.25E-01	1.66E-01	7.25E-01	1.66E-01	7.25E-01	1.95E-06	8.53E-06
Methanol	7.44E-03	3.26E-02	7.44E-03	3.26E-02	7.44E-03	3.26E-02	-	-
Methylene Chloride	4.41E-04	1.93E-03	4.41E-04	1.93E-03	4.41E-04	1.93E-03	-	-
n-Hexane	1.34E-03	5.85E-03	1.34E-03	5.85E-03	1.34E-03	5.85E-03	4.67E-05	2.05E-04
Perylene	1.49E-08	6.53E-08	1.49E-08	6.53E-08	1.49E-08	6.53E-08	-	-
Phenol	1.26E-04	5.53E-04	1.26E-04	5.53E-04	1.26E-04	5.53E-04	-	-
Styrene	1.64E-04	7.20E-04	1.64E-04	7.20E-04	1.64E-04	7.20E-04	-	-
1,1,2,2-Tetrachloroethane	1.99E-04	8.71E-04	1.99E-04	8.71E-04	1.99E-04	8.71E-04	-	-
Toluene	2.89E-03	1.27E-02	2.89E-03	1.27E-02	2.89E-03	1.27E-02	8.82E-08	3.86E-07
1,1,2-Trichloroethane	1.58E-04	6.92E-04	1.58E-04	6.92E-04	1.58E-04	6.92E-04	-	-
2,2,4-Trimethylpentane	2.54E-03	1.11E-02	2.54E-03	1.11E-02	2.54E-03	1.11E-02	-	-
Vinyl Chloride	7.41E-05	3.25E-04	7.41E-05	3.25E-04	7.41E-05	3.25E-04	-	-
Xylene	8.04E-04	3.52E-03	8.04E-04	3.52E-03	8.04E-04	3.52E-03	-	-

Equitrans - Glennville Compressor Station
Facility-Wide HAP Summary

Pollutant	Engine #1 (C-001)		Engine #2 (C-002)		Engine #3 (C-003)		Hot Water Heater	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Polycyclic Organic Matter:								
Acenaphthene	3.99E-06	1.75E-05	3.99E-06	1.75E-05	3.99E-06	1.75E-05	4.67E-11	2.05E-10
Acenaphthylene	9.51E-06	4.17E-05	9.51E-06	4.17E-05	9.51E-06	4.17E-05	4.67E-11	2.05E-10
Anthracene	2.15E-06	9.43E-06	2.15E-06	9.43E-06	2.15E-06	9.43E-06	6.23E-11	2.73E-10
Benz(a)anthracene	1.01E-06	4.42E-06	1.01E-06	4.42E-06	1.01E-06	4.42E-06	4.67E-11	2.05E-10
Benz(a)pyrene	1.70E-08	7.46E-08	1.70E-08	7.46E-08	1.70E-08	7.46E-08	3.11E-11	1.36E-10
Benz(b)fluoranthene	2.55E-08	1.12E-07	2.55E-08	1.12E-07	2.55E-08	1.12E-07	4.67E-11	2.05E-10
Benz(e)pyrene	7.02E-08	3.07E-07	7.02E-08	3.07E-07	7.02E-08	3.07E-07	-	-
Benz(o,g,h,i)perylene	7.44E-08	3.26E-07	7.44E-08	3.26E-07	7.44E-08	3.26E-07	3.11E-11	1.36E-10
Benzo(k)fluoranthene	1.28E-08	5.60E-08	1.28E-08	5.60E-08	1.28E-08	5.60E-08	4.67E-11	2.05E-10
Chrysene	2.02E-06	8.83E-06	2.02E-06	8.83E-06	2.02E-06	8.83E-06	4.67E-11	2.05E-10
Dibenzo(a,h)anthracene	-	-	-	-	-	-	3.11E-11	1.36E-10
7,12-Dimethylbenz(a)anthracene	-	-	-	-	-	-	4.15E-10	1.82E-09
Fluoranthene	1.08E-06	4.74E-06	1.08E-06	4.74E-06	1.08E-06	4.74E-06	7.79E-11	3.41E-10
Fluorene	5.07E-06	2.22E-05	5.07E-06	2.22E-05	5.07E-06	2.22E-05	7.27E-11	3.18E-10
Indeno(1,2,3-c,d)pyrene	2.98E-08	1.30E-07	2.98E-08	1.30E-07	2.98E-08	1.30E-07	4.67E-11	2.05E-10
3-Methylchloranthrene	-	-	-	-	-	-	4.67E-11	2.05E-10
2-Methylnaphthalene	6.42E-05	2.81E-04	6.42E-05	2.81E-04	6.42E-05	2.81E-04	6.23E-10	2.73E-09
Naphthalene	2.89E-04	1.27E-03	2.89E-04	1.27E-03	2.89E-04	1.27E-03	1.58E-08	6.93E-08
PAH	4.02E-04	1.76E-03	4.02E-04	1.76E-03	4.02E-04	1.76E-03	-	-
Phenanthrene	1.06E-05	4.64E-05	1.06E-05	4.64E-05	1.06E-05	4.64E-05	4.41E-10	1.93E-09
Pyrene	1.75E-06	7.67E-06	1.75E-06	7.67E-06	1.75E-06	7.67E-06	1.30E-10	5.68E-10
Metals:								
Arsenic	-	-	-	-	-	-	5.19E-09	7.28E-10
Beryllium	-	-	-	-	-	-	3.11E-10	4.37E-11
Cadmium	-	-	-	-	-	-	2.85E-08	4.00E-09
Chromium	-	-	-	-	-	-	3.63E-08	5.09E-09
Cobalt	-	-	-	-	-	-	2.18E-09	3.06E-10
Lead	-	-	-	-	-	-	1.30E-08	1.82E-09
Manganese	-	-	-	-	-	-	9.86E-09	1.38E-09
Mercury	-	-	-	-	-	-	6.75E-09	9.46E-10
Nickel	-	-	-	-	-	-	5.45E-08	7.64E-09
Selenium	-	-	-	-	-	-	6.23E-10	8.73E-11
TOTAL HAP:	0.24	1.05	0.24	1.05	0.24	1.05	0.00	0.00

Equitrans - Glenville Compressor
Facility-Wide HAP Summary

Pollutant	Generator #1 (G-001)		Boiler (BLR01)		Site-Wide TOTAL	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
HAPs:						
Acetaldehyde	4.33E-03	1.90E-02	-	-	7.42E-02	3.25E-01
Acrolein	4.09E-03	1.79E-02	-	-	7.41E-02	3.25E-01
Benzene	2.45E-03	1.08E-02	2.13E-06	9.32E-06	1.99E-02	8.72E-02
Biphenyl	-	-	-	-	3.56E-05	1.56E-04
1,3-Butadiene	1.03E-03	4.51E-03	-	-	8.41E-03	3.68E-02
Carbon Tetrachloride	2.75E-05	1.20E-04	-	-	5.74E-04	2.51E-03
Chlorobenzene	2.00E-05	8.78E-05	-	-	4.20E-04	1.84E-03
Chloroform	2.13E-05	9.32E-05	-	-	4.45E-04	1.95E-03
Dichlorobenzene	-	-	1.22E-06	5.33E-06	1.25E-06	5.46E-06
1,3-Dichloropropene	1.97E-05	8.64E-05	-	-	4.14E-04	1.81E-03
Ethylbenzene	3.85E-05	1.69E-04	-	-	1.01E-03	4.43E-03
Ethylene Dibromide	3.31E-05	1.45E-04	-	-	6.94E-04	3.04E-03
Formaldehyde	3.18E-02	1.39E-01	7.60E-05	3.33E-04	5.29E-01	2.32E+00
Methanol	4.75E-03	2.08E-02	-	-	2.71E-02	1.19E-01
Methylene Chloride	6.40E-05	2.80E-04	-	-	1.39E-03	6.08E-03
n-Hexane	-	-	1.82E-03	7.99E-03	5.88E-03	2.57E-02
Perylene	-	-	-	-	4.47E-08	1.96E-07
Phenol	-	-	-	-	3.79E-04	1.66E-03
Styrene	1.85E-05	8.10E-05	-	-	5.12E-04	2.24E-03
1,1,2,2-Tetrachloroethane	3.93E-05	1.72E-04	-	-	6.36E-04	2.79E-03
Toluene	8.67E-04	3.80E-03	3.45E-06	1.51E-05	9.54E-03	4.18E-02
1,1,2-Trichloroethane	2.38E-05	1.04E-04	-	-	4.98E-04	2.18E-03
2,2,4-Trimethylpentane	-	-	-	-	7.61E-03	3.33E-02
Vinyl Chloride	1.12E-05	4.89E-05	-	-	2.33E-04	1.02E-03
Xylene	3.03E-04	1.33E-03	-	-	2.71E-03	1.19E-02

Equitrans - Glenville Compressor
Facility-Wide HAP Summary

Pollutant	Generator #1 (G-001)		Boiler (BLR01)		Site-Wide TOTAL	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Polycyclic Organic Matter:						
Acenaphthene	-	-	1.82E-09	7.99E-09	1.20E-05	5.24E-05
Acenaphthylene	-	-	1.82E-09	7.99E-09	2.85E-05	1.25E-04
Anthracene	-	-	2.43E-09	1.07E-08	6.46E-06	2.83E-05
Benzo(a)anthracene	-	-	1.82E-09	7.99E-09	3.03E-06	1.33E-05
Benzo(a)pyrene	-	-	1.22E-09	5.33E-09	5.24E-08	2.29E-07
Benzo(b)fluoranthene	-	-	1.82E-09	7.99E-09	7.85E-08	3.44E-07
Benzo(e)pyrene	-	-	-	-	2.11E-07	9.22E-07
Benzo(g,h,i)perylene	-	-	1.22E-09	5.33E-09	2.24E-07	9.83E-07
Benzo(k)fluoranthene	-	-	1.82E-09	7.99E-09	4.02E-08	1.76E-07
Chrysene	-	-	1.82E-09	7.99E-09	6.05E-06	2.65E-05
Dibenzo(a,h)anthracene	-	-	1.22E-09	5.33E-09	1.25E-09	5.46E-09
7,12-Dimethylbenz(a)anthracene	-	-	1.62E-08	7.10E-08	1.66E-08	7.29E-08
Fluoranthene	-	-	3.04E-09	1.33E-08	3.25E-06	1.42E-05
Fluorene	-	-	2.84E-09	1.24E-08	1.52E-05	6.66E-05
Indeno(1,2,3-c,d)pyrene	-	-	1.82E-09	7.99E-09	9.12E-08	4.00E-07
3-Methylchloranthrene	-	-	1.82E-09	7.99E-09	1.87E-09	8.20E-09
2-Methylnaphthalene	-	-	2.43E-08	1.07E-07	1.93E-04	8.44E-04
Naphthalene	1.51E-04	6.61E-04	6.18E-07	2.71E-06	1.02E-03	4.46E-03
PAH	2.19E-04	9.59E-04	-	-	1.43E-03	6.24E-03
Phenanthrene	-	-	1.72E-08	7.55E-08	3.18E-05	1.39E-04
Pyrene	-	-	5.07E-09	2.22E-08	5.26E-06	2.30E-05
Metals:						
Arsenic	-	-	2.03E-07	8.88E-07	2.08E-07	8.89E-07
Beryllium	-	-	1.22E-08	5.33E-08	1.25E-08	5.33E-08
Cadmium	-	-	1.12E-06	4.88E-06	1.14E-06	4.89E-06
Chromium	-	-	1.42E-06	6.22E-06	1.46E-06	6.22E-06
Cobalt	-	-	8.52E-08	3.73E-07	8.73E-08	3.73E-07
Lead	-	-	5.07E-07	2.22E-06	5.20E-07	2.22E-06
Manganese	-	-	3.85E-07	1.69E-06	3.95E-07	1.69E-06
Mercury	-	-	2.64E-07	1.15E-06	2.70E-07	1.16E-06
Nickel	-	-	2.13E-06	9.32E-06	2.18E-06	9.33E-06
Selenium	-	-	2.43E-08	1.07E-07	2.50E-08	1.07E-07
TOTAL HAP:	0.05	0.22	0.00	0.01	0.77	3.36

Engine #1 (C-001)

Source Designation:	Compressor
Manufacturer:	Clark
Model No.:	RA-32
Year Installed:	1943
Stroke Cycle:	2-stroke
Type of Burn:	Lean burn
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Rated Horsepower (bhp):	300
Heat Input (MMBtu/hr)	3.00
Specific Fuel Consumption (Btu/bhp-hr)	10,000
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00243
Maximum Fuel Consumption at 100% Load (MMscf/yr):	21.3

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	26,280

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	3.17E+00	lb/MMBtu
CO ^a	3.86E-01	lb/MMBtu
SO ₂ ^a	5.88E-04	lb/MMBtu
Total Particulate Matter (TSP) ^a	4.83E-02	lb/MMBtu
PM ₁₀ (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
PM _{2.5} (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
VOC ^a	1.20E-01	lb/MMBtu
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d,e}	(tons/yr) ^f
NO _x	9.51E+00	4.17E+01
CO	1.16E+00	5.07E+00
SO ₂	1.76E-03	7.73E-03
Total Particulate Matter (TSP)	1.45E-01	6.35E-01
PM ₁₀ (Filterable + Condensable)	1.45E-01	6.35E-01
PM _{2.5} (Filterable + Condensable)	1.45E-01	6.35E-01
VOC	3.60E-01	1.58E+00
CO ₂	3.51E+02	1.54E+03
CH ₄	6.61E-03	2.90E-02
N ₂ O	6.61E-04	2.90E-03

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMBtu)^d	Potential Emissions (lb/hr)^d	Potential Emissions (tons/yr)^f
HAPs:			
Acetaldehyde	7.76E-03	2.33E-02	1.02E-01
Acrolein	7.78E-03	2.33E-02	1.02E-01
Benzene	1.94E-03	5.82E-03	2.55E-02
1,3-Butadiene	8.20E-04	2.46E-03	1.08E-02
Biphenyl	3.95E-06	1.19E-05	5.19E-05
Carbon Tetrachloride	6.07E-05	1.82E-04	7.98E-04
Chlorobenzene	4.44E-05	1.33E-04	5.83E-04
Chloroform	4.71E-05	1.41E-04	6.19E-04
1,3-Dichloropropene	4.38E-05	1.31E-04	5.76E-04
Ethylbenzene	1.08E-04	3.24E-04	1.42E-03
Ethylene Dibromide	7.34E-05	2.20E-04	9.64E-04
Methanol	2.48E-03	7.44E-03	3.26E-02
Methylene Chloride	1.47E-04	4.41E-04	1.93E-03
n-Hexane	4.45E-04	1.34E-03	5.85E-03
Perylene	4.97E-09	1.49E-08	6.53E-08
Phenol	4.21E-05	1.26E-04	5.53E-04
Styrene	5.48E-05	1.64E-04	7.20E-04
1,1,2,2-Tetrachloroethane	6.63E-05	1.99E-04	8.71E-04
Toluene	9.63E-04	2.89E-03	1.27E-02
1,1,2-Trichloroethane	5.27E-05	1.58E-04	6.92E-04
2,2,4-Trimethylpentane	8.46E-04	2.54E-03	1.11E-02
Vinyl Chloride	2.47E-05	7.41E-05	3.25E-04
Xylene	2.68E-04	8.04E-04	3.52E-03
Formaldehyde	5.52E-02	1.66E-01	7.25E-01
Polycyclic Organic Matter:			
Acenaphthene	1.33E-06	3.99E-06	1.75E-05
Acenaphthylene	3.17E-06	9.51E-06	4.17E-05
Anthracene	7.18E-07	2.15E-06	9.43E-06
Benz(a)anthracene	3.36E-07	1.01E-06	4.42E-06
Benzo(a)pyrene	5.68E-09	1.70E-08	7.46E-08
Benzo(b)fluoranthene	8.51E-09	2.55E-08	1.12E-07
Benzo(e)pyrene	2.34E-08	7.02E-08	3.07E-07
Benzo(g,h,i)perylene	2.48E-08	7.44E-08	3.26E-07
Benzo(k)fluoranthene	4.26E-09	1.28E-08	5.60E-08
Chrysene	6.72E-07	2.02E-06	8.83E-06
Fluoranthene	3.61E-07	1.08E-06	4.74E-06
Fluorene	1.69E-06	5.07E-06	2.22E-05
Indeno(1,2,3-c,d)pyrene	9.93E-09	2.98E-08	1.30E-07
2-Methylnaphthalene	2.14E-05	6.42E-05	2.81E-04
Naphthalene	9.63E-05	2.89E-04	1.27E-03
PAH	1.34E-04	4.02E-04	1.76E-03
Phenanthrene	3.53E-06	1.06E-05	4.64E-05
Pyrene	5.84E-07	1.75E-06	7.67E-06
Total HAP		0.24	1.05

^a Emission factor from AP-42 Section 3.2, Table 3.2-1 "Uncontrolled Emission Factors for 2-stroke Lean-burn Engines," Supplement F, August 2000.

^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion

^d Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (lb/MMBtu).

^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) × 2.2046 (lb/kg)

^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).

Engine #2 (C-002)

Source Designation:	Compressor
Manufacturer:	Clark
Model No.:	RA-32
Year Installed:	1943
Stroke Cycle:	2-stroke
Type of Burn:	Lean burn
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Rated Horsepower (bhp):	300
Heat Input (MMBtu/hr)	3.00
Specific Fuel Consumption (Btu/bhp-hr)	10,000
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00243
Maximum Fuel Consumption at 100% Load (MMscf/yr):	21.3

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	26,280

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	3.17E+00	lb/MMBtu
CO ^a	3.86E-01	lb/MMBtu
SO ₂ ^a	5.88E-04	lb/MMBtu
Total Particulate Matter (TSP) ^a	4.83E-02	lb/MMBtu
PM ₁₀ (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
PM _{2.5} (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
VOC ^a	1.20E-01	lb/MMBtu
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d, e}	(tons/yr) ^f
NO _x	9.51E+00	4.17E+01
CO	1.16E+00	5.07E+00
SO ₂	1.76E-03	7.73E-03
Total Particulate Matter (TSP)	1.45E-01	6.35E-01
PM ₁₀ (Filterable + Condensable)	1.45E-01	6.35E-01
PM _{2.5} (Filterable + Condensable)	1.45E-01	6.35E-01
VOC	3.60E-01	1.58E+00
CO ₂	3.51E+02	1.54E+03
CH ₄	6.61E-03	2.90E-02
N ₂ O	6.61E-04	2.90E-03

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMBtu) ^a	Potential Emissions (lb/hr) ^d	Potential Emissions (tons/yr) ^f
HAPs:			
Acetaldehyde	7.76E-03	2.33E-02	1.02E-01
Acrolein	7.78E-03	2.33E-02	1.02E-01
Benzene	1.94E-03	5.82E-03	2.55E-02
Biphenyl	3.95E-06	1.19E-05	5.19E-05
1,3-Butadiene	8.20E-04	2.46E-03	1.08E-02
Carbon Tetrachloride	6.07E-05	1.82E-04	7.98E-04
Chlorobenzene	4.44E-05	1.33E-04	5.83E-04
Chloroform	4.71E-05	1.41E-04	6.19E-04
1,3-Dichloropropene	4.38E-05	1.31E-04	5.76E-04
Ethylbenzene	1.08E-04	3.24E-04	1.42E-03
Ethylene Dibromide	7.34E-05	2.20E-04	9.64E-04
Methanol	2.48E-03	7.44E-03	3.26E-02
Methylene Chloride	1.47E-04	4.41E-04	1.93E-03
n-Hexane	4.45E-04	1.34E-03	5.85E-03
Perylene	4.97E-09	1.49E-08	6.53E-08
Phenol	4.21E-05	1.26E-04	5.53E-04
Styrene	5.48E-05	1.64E-04	7.20E-04
1,1,2,2-Tetrachloroethane	6.63E-05	1.99E-04	8.71E-04
Toluene	9.63E-04	2.89E-03	1.27E-02
1,1,2-Trichloroethane	5.27E-05	1.58E-04	6.92E-04
2,2,4-Trimethylpentane	8.46E-04	2.54E-03	1.11E-02
Vinyl Chloride	2.47E-05	7.41E-05	3.25E-04
Xylene	2.68E-04	8.04E-04	3.52E-03
Formaldehyde	5.52E-02	1.66E-01	7.25E-01
Polycyclic Organic Matter:			
Acenaphthene	1.33E-06	3.99E-06	1.75E-05
Acenaphthylene	3.17E-06	9.51E-06	4.17E-05
Anthracene	7.18E-07	2.15E-06	9.43E-06
Benz(a)anthracene	3.36E-07	1.01E-06	4.42E-06
Benzo(a)pyrene	5.68E-09	1.70E-08	7.46E-08
Benzo(b)fluoranthene	8.51E-09	2.55E-08	1.12E-07
Benzo(e)pyrene	2.34E-08	7.02E-08	3.07E-07
Benzo(g,h,i)perylene	2.48E-08	7.44E-08	3.26E-07
Benzo(k)fluoranthene	4.26E-09	1.28E-08	5.60E-08
Chrysene	6.72E-07	2.02E-06	8.83E-06
Fluoranthene	3.61E-07	1.08E-06	4.74E-06
Fluorene	1.69E-06	5.07E-06	2.22E-05
Indeno(1,2,3-c,d)pyrene	9.93E-09	2.98E-08	1.30E-07
2-Methylnaphthalene	2.14E-05	6.42E-05	2.81E-04
Naphthalene	9.63E-05	2.89E-04	1.27E-03
PAH	1.34E-04	4.02E-04	1.76E-03
Phenanthrene	3.53E-06	1.06E-05	4.64E-05
Pyrene	5.84E-07	1.75E-06	7.67E-06
Total HAP		0.24	1.05

- ^a Emission factor from AP-42 Section 3.2, Table 3.2-1 "Uncontrolled Emission Factors for 2-stroke Lean-burn Engines," Supplement F, August 2000.
- ^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion
- ^d Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (lb/MMBtu).
- ^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) × 2.2046 (lb/kg)
- ^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).

Engine #3 (C-003)

Source Designation:	Compressor
Manufacturer:	Clark
Model No.:	RA-32
Year Installed:	1943
Stroke Cycle:	2-stroke
Type of Burn:	Lean burn
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Rated Horsepower (bhp):	300
Heat Input (MMBtu/hr)	3.00
Specific Fuel Consumption (Btu/bhp-hr)	10,000
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00243
Maximum Fuel Consumption at 100% Load (MMscf/yr):	21.3

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	26,280

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	3.17E+00	lb/MMBtu
CO (controlled) ^a	3.86E-01	lb/MMBtu
SO ₂ ^a	5.88E-04	lb/MMBtu
Total Particulate Matter (TSP) ^a	4.83E-02	lb/MMBtu
PM ₁₀ (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
PM _{2.5} (Filterable + Condensable) ^a	4.83E-02	lb/MMBtu
VOC (controlled) ^a	1.20E-01	lb/MMBtu
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d, e}	(tons/yr) ^f
NO _x	9.51E+00	4.17E+01
CO	1.16E+00	5.07E+00
SO ₂	1.76E-03	7.73E-03
Total Particulate Matter (TSP)	1.45E-01	6.35E-01
PM ₁₀ (Filterable + Condensable)	1.45E-01	6.35E-01
PM _{2.5} (Filterable + Condensable)	1.45E-01	6.35E-01
VOC	3.60E-01	1.58E+00
CO ₂	3.51E+02	1.54E+03
CH ₄	6.61E-03	2.90E-02
N ₂ O	6.61E-04	2.90E-03

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMBtu) ^a	Potential Emissions (lb/hr) ^d	Potential Emissions (tons/yr) ^f
HAPs:			
Acetaldehyde	7.76E-03	2.33E-02	1.02E-01
Acrolein	7.78E-03	2.33E-02	1.02E-01
Benzene	1.94E-03	5.82E-03	2.55E-02
Biphenyl	3.95E-06	1.19E-05	5.19E-05
1,3-Butadiene	8.20E-04	2.46E-03	1.08E-02
Carbon Tetrachloride	6.07E-05	1.82E-04	7.98E-04
Chlorobenzene	4.44E-05	1.33E-04	5.83E-04
Chloroform	4.71E-05	1.41E-04	6.19E-04
1,3-Dichloropropene	4.38E-05	1.31E-04	5.76E-04
Ethylbenzene	1.08E-04	3.24E-04	1.42E-03
Ethylene Dibromide	7.34E-05	2.20E-04	9.64E-04
Methanol	2.48E-03	7.44E-03	3.26E-02
Methylene Chloride	1.47E-04	4.41E-04	1.93E-03
n-Hexane	4.45E-04	1.34E-03	5.85E-03
Perylene	4.97E-09	1.49E-08	6.53E-08
Phenol	4.21E-05	1.26E-04	5.53E-04
Styrene	5.48E-05	1.64E-04	7.20E-04
1,1,2,2-Tetrachloroethane	6.63E-05	1.99E-04	8.71E-04
Toluene	9.63E-04	2.89E-03	1.27E-02
1,1,2-Trichloroethane	5.27E-05	1.58E-04	6.92E-04
2,2,4-Trimethylpentane	8.46E-04	2.54E-03	1.11E-02
Vinyl Chloride	2.47E-05	7.41E-05	3.25E-04
Xylene	2.68E-04	8.04E-04	3.52E-03
Formaldehyde	5.52E-02	1.66E-01	7.25E-01
Polycyclic Organic Matter:			
Acenaphthene	1.33E-06	3.99E-06	1.75E-05
Acenaphthylene	3.17E-06	9.51E-06	4.17E-05
Anthracene	7.18E-07	2.15E-06	9.43E-06
Benz(a)anthracene	3.36E-07	1.01E-06	4.42E-06
Benzo(a)pyrene	5.68E-09	1.70E-08	7.46E-08
Benzo(b)fluoranthene	8.51E-09	2.55E-08	1.12E-07
Benzo(e)pyrene	2.34E-08	7.02E-08	3.07E-07
Benzo(g,h,i)perylene	2.48E-08	7.44E-08	3.26E-07
Benzo(k)fluoranthene	4.26E-09	1.28E-08	5.60E-08
Chrysene	6.72E-07	2.02E-06	8.83E-06
Fluoranthene	3.61E-07	1.08E-06	4.74E-06
Fluorene	1.69E-06	5.07E-06	2.22E-05
Indeno(1,2,3-c,d)pyrene	9.93E-09	2.98E-08	1.30E-07
2-Methylnaphthalene	2.14E-05	6.42E-05	2.81E-04
Naphthalene	9.63E-05	2.89E-04	1.27E-03
PAH	1.34E-04	4.02E-04	1.76E-03
Phenanthrene	3.53E-06	1.06E-05	4.64E-05
Pyrene	5.84E-07	1.75E-06	7.67E-06
Total HAP		0.24	1.05

^a Emission factor from AP-42 Section 3.2, Table 3.2-3 "Uncontrolled Emission Factors for 4-stroke Rich-burn Engines," Supplement F, August 2000.

^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion

^d Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (lb/MMBtu).

^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) × 2.2046 (lb/kg)

^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).

Hot Water Heater

Source Designation:	Hot Water Heater
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Heat Input (MMBtu/hr)	0.03
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00003
Maximum Fuel Consumption at 100% Load (MMscf/yr):	0.2

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	280

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	1.00E+02	lb/MMScf
CO ^a	8.40E+01	lb/MMScf
SO ₂ ^a	6.00E-01	lb/MMScf
Total Particulate Matter (TSP) ^a	7.60E+00	lb/MMScf
PM ₁₀ (Filterable + Condensable) ^a	7.60E+00	lb/MMScf
PM _{2.5} (Filterable + Condensable) ^a	7.60E+00	lb/MMScf
VOC ^a	5.50E+00	lb/MMScf
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d, e}	(tons/yr) ^f
NO _x	2.60E-03	1.14E-02
CO	2.18E-03	9.55E-03
SO ₂	1.56E-05	6.82E-05
Total Particulate Matter (TSP)	1.97E-04	8.64E-04
PM ₁₀ (Filterable + Condensable)	1.97E-04	8.64E-04
PM _{2.5} (Filterable + Condensable)	1.97E-04	8.64E-04
VOC	1.43E-04	6.25E-04
CO ₂	3.74E+00	1.64E+01
CH ₄	7.05E-05	3.09E-04
N ₂ O	7.05E-06	3.09E-05

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMScf) ^a	Potential Emissions (lb/hr) ^d	Potential Emissions (tons/yr) ^f
<u>HAPs:</u>			
Benzene	2.10E-03	5.45E-08	2.39E-07
Dichlorobenzene	1.20E-03	3.11E-08	1.36E-07
Formaldehyde	7.50E-02	1.95E-06	8.53E-06
n-Hexane	1.80E+00	4.67E-05	2.05E-04
Toluene	3.40E-03	8.82E-08	3.86E-07
<u>Polycyclic Organic Matter:</u>			
Acenaphthene	1.80E-06	4.67E-11	2.05E-10
Acenaphthylene	1.80E-06	4.67E-11	2.05E-10
Anthracene	2.40E-06	6.23E-11	2.73E-10
Benz(a)anthracene	1.80E-06	4.67E-11	2.05E-10
Benzo(a)pyrene	1.20E-06	3.11E-11	1.36E-10
Benzo(b)fluoranthene	1.80E-06	4.67E-11	2.05E-10
Benzo(g,h,i)perylene	1.20E-06	3.11E-11	1.36E-10
Benzo(k)fluoranthene	1.80E-06	4.67E-11	2.05E-10
Chrysene	1.80E-06	4.67E-11	2.05E-10
Dibenzo(a,h)anthracene	1.20E-06	3.11E-11	1.36E-10
7,12-Dimethylbenz(a)anthracene	1.60E-05	4.15E-10	1.82E-09
Fluoranthene	3.00E-06	7.79E-11	3.41E-10
Fluorene	2.80E-06	7.27E-11	3.18E-10
Indeno(1,2,3-c,d)pyrene	1.80E-06	4.67E-11	2.05E-10
3-Methylchloranthrene	1.80E-06	4.67E-11	2.05E-10
2-Methylnaphthalene	2.40E-05	6.23E-10	2.73E-09
Naphthalene	6.10E-04	1.58E-08	6.93E-08
Phenanthrene	1.70E-05	4.41E-10	1.93E-09
Pyrene	5.00E-06	1.30E-10	5.68E-10
<u>Metals:</u>			
Arsenic	2.00E-04	5.19E-09	7.28E-10
Beryllium	1.20E-05	3.11E-10	4.37E-11
Cadmium	1.10E-03	2.85E-08	4.00E-09
Chromium	1.40E-03	3.63E-08	5.09E-09
Cobalt	8.40E-05	2.18E-09	3.06E-10
Lead	5.00E-04	1.30E-08	1.82E-09
Manganese	3.80E-04	9.86E-09	1.38E-09
Mercury	2.60E-04	6.75E-09	9.46E-10
Nickel	2.10E-03	5.45E-08	7.64E-09
Selenium	2.40E-05	6.23E-10	8.73E-11
Total HAP		4.89E-05	2.14E-04

- ^a Emission factor from AP-42 Section 1.4, Tables 1.4-1, 1.4-2, and 1.4-3.
- ^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion
- ^d Emission Rate (lb/hr) = Rated Capacity (MMScf/hr) × Emission Factor (lb/MMScf)
- ^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) x 2.2046 (lb/kg)
- ^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).

Generator #1 (G-001)

Source Designation:	Generator
Manufacturer:	Generac
Model No.:	SG-100
Year Installed:	1984
Stroke Cycle:	4-stroke
Type of Burn:	Rich burn
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Rated Horsepower (bhp):	147
Heat Input (MMBtu/hr)	1.55
Specific Fuel Consumption (Btu/bhp-hr)	10,569
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00126
Maximum Fuel Consumption at 100% Load (MMscf/yr):	11.0

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	13,609

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	2.21E+00	lb/MMBtu
CO ^a	3.72E+00	lb/MMBtu
SO ₂ ^a	5.88E-04	lb/MMBtu
Total Particulate Matter (TSP) ^a	1.94E-02	lb/MMBtu
PM ₁₀ (Filterable + Condensable) ^a	1.94E-02	lb/MMBtu
PM _{2.5} (Filterable + Condensable) ^a	1.94E-02	lb/MMBtu
VOC ^a	2.96E-02	lb/MMBtu
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d, e}	(tons/yr) ^f
NO _x	3.43E+00	1.50E+01
CO	5.78E+00	2.53E+01
SO ₂	9.14E-04	4.00E-03
Total Particulate Matter (TSP)	3.02E-02	1.32E-01
PM ₁₀ (Filterable + Condensable)	3.02E-02	1.32E-01
PM _{2.5} (Filterable + Condensable)	3.02E-02	1.32E-01
VOC	4.60E-02	2.01E-01
CO ₂	1.82E+02	7.95E+02
CH ₄	3.43E-03	1.50E-02
N ₂ O	3.43E-04	1.50E-03

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMBtu) ^a	Potential Emissions (lb/hr) ^d	Potential Emissions (tons/yr) ^f
<u>HAPs:</u>			
Acetaldehyde	2.79E-03	4.33E-03	1.90E-02
Acrolein	2.63E-03	4.09E-03	1.79E-02
Benzene	1.58E-03	2.45E-03	1.08E-02
1,3-Butadiene	6.63E-04	1.03E-03	4.51E-03
Carbon Tetrachloride	1.77E-05	2.75E-05	1.20E-04
Chlorobenzene	1.29E-05	2.00E-05	8.78E-05
Chloroform	1.37E-05	2.13E-05	9.32E-05
1,3-Dichloropropene	1.27E-05	1.97E-05	8.64E-05
Ethylbenzene	2.48E-05	3.85E-05	1.69E-04
Ethylene Dibromide	2.13E-05	3.31E-05	1.45E-04
Methanol	3.06E-03	4.75E-03	2.08E-02
Methylene Chloride	4.12E-05	6.40E-05	2.80E-04
Styrene	1.19E-05	1.85E-05	8.10E-05
1,1,2,2-Tetrachloroethane	2.53E-05	3.93E-05	1.72E-04
Toluene	5.58E-04	8.67E-04	3.80E-03
1,1,2-Trichloroethane	1.53E-05	2.38E-05	1.04E-04
Vinyl Chloride	7.18E-06	1.12E-05	4.89E-05
Xylene	1.95E-04	3.03E-04	1.33E-03
Formaldehyde	2.05E-02	3.18E-02	1.39E-01
<u>Polycyclic Organic Matter:</u>			
Naphthalene	9.71E-05	1.51E-04	6.61E-04
PAH	1.41E-04	2.19E-04	9.59E-04
Total HAP		0.05	0.22

- ^a Emission factor from AP-42 Section 3.2, Table 3.2-3 "Uncontrolled Emission Factors for 4-stroke Rich-burn Engines," Supplement F, July 2000.
- ^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion
- ^d Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (lb/MMBtu).
- ^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) × 2.2046 (lb/kg)
- ^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).

Boiler (BLR01)

Source Designation:	Boiler
Year Installed:	1992
Fuel Used:	Natural Gas
Higher Heating Value (HHV) (Btu/scf):	1,233
Heat Input (MMBtu/hr)	1.25
Maximum Fuel Consumption at 100% Load (MMscf/hr):	0.00101
Maximum Fuel Consumption at 100% Load (MMscf/yr):	8.9

Operational Details:

Potential Annual Hours of Operation (hr/yr):	8,760
Potential Fuel Consumption (MMBtu/yr):	10,950

Criteria and Manufacturer Specific Pollutant Emission Factors:

Pollutant	Emission Factors	Units
NO _x ^a	1.00E+02	lb/MMScf
CO ^a	8.40E+01	lb/MMScf
SO ₂ ^a	6.00E-01	lb/MMScf
Total Particulate Matter (TSP) ^a	7.60E+00	lb/MMScf
PM ₁₀ (Filterable + Condensable) ^a	7.60E+00	lb/MMScf
PM _{2.5} (Filterable + Condensable) ^a	7.60E+00	lb/MMScf
VOC ^a	5.50E+00	lb/MMScf
CO ₂ ^b	5.30E+01	kg/MMBtu
CH ₄ ^b	1.00E-03	kg/MMBtu
N ₂ O ^b	1.00E-04	kg/MMBtu

Criteria and Manufacturer Specific Pollutant Emission Rates:

Pollutant	Potential Emissions	
	(lb/hr) ^{d, e}	(tons/yr) ^f
NO _x	1.01E-01	4.44E-01
CO	8.52E-02	3.73E-01
SO ₂	6.08E-04	2.66E-03
Total Particulate Matter (TSP)	7.70E-03	3.37E-02
PM ₁₀ (Filterable + Condensable)	7.70E-03	3.37E-02
PM _{2.5} (Filterable + Condensable)	7.70E-03	3.37E-02
VOC	5.58E-03	2.44E-02
CO ₂	1.46E+02	6.40E+02
CH ₄	2.76E-03	1.21E-02
N ₂ O	2.76E-04	1.21E-03

Hazardous Air Pollutant (HAP) Potential Emissions:

Pollutant	Emission Factor (lb/MMScf)^a	Potential Emissions (lb/hr)^d	Potential Emissions (tons/yr)^f
HAPs:			
Benzene	2.10E-03	2.13E-06	9.32E-06
Dichlorobenzene	1.20E-03	1.22E-06	5.33E-06
Formaldehyde	7.50E-02	7.60E-05	3.33E-04
n-Hexane	1.80E+00	1.82E-03	7.99E-03
Toluene	3.40E-03	3.45E-06	1.51E-05
Polycyclic Organic Matter:			
Acenaphthene	1.80E-06	1.82E-09	7.99E-09
Acenaphthylene	1.80E-06	1.82E-09	7.99E-09
Anthracene	2.40E-06	2.43E-09	1.07E-08
Benz(a)anthracene	1.80E-06	1.82E-09	7.99E-09
Benzo(a)pyrene	1.20E-06	1.22E-09	5.33E-09
Benzo(b)fluoranthene	1.80E-06	1.82E-09	7.99E-09
Benzo(g,h,i)perylene	1.20E-06	1.22E-09	5.33E-09
Benzo(k)fluoranthene	1.80E-06	1.82E-09	7.99E-09
Chrysene	1.80E-06	1.82E-09	7.99E-09
Dibenzo(a,h)anthracene	1.20E-06	1.22E-09	5.33E-09
7,12-Dimethylbenz(a)anthracene	1.60E-05	1.62E-08	7.10E-08
Fluoranthene	3.00E-06	3.04E-09	1.33E-08
Fluorene	2.80E-06	2.84E-09	1.24E-08
Indeno(1,2,3-c,d)pyrene	1.80E-06	1.82E-09	7.99E-09
3-Methylchloranthrene	1.80E-06	1.82E-09	7.99E-09
2-Methylnaphthalene	2.40E-05	2.43E-08	1.07E-07
Naphthalene	6.10E-04	6.18E-07	2.71E-06
Phenanthrene	1.70E-05	1.72E-08	7.55E-08
Pyrene	5.00E-06	5.07E-09	2.22E-08
Metals:			
Arsenic	2.00E-04	2.03E-07	8.88E-07
Beryllium	1.20E-05	1.22E-08	5.33E-08
Cadmium	1.10E-03	1.12E-06	4.88E-06
Chromium	1.40E-03	1.42E-06	6.22E-06
Cobalt	8.40E-05	8.52E-08	3.73E-07
Lead	5.00E-04	5.07E-07	2.22E-06
Manganese	3.80E-04	3.85E-07	1.69E-06
Mercury	2.60E-04	2.64E-07	1.15E-06
Nickel	2.10E-03	2.13E-06	9.32E-06
Selenium	2.40E-05	2.43E-08	1.07E-07
Total HAP		1.91E-03	8.39E-03

- ^a Emission factor from AP-42 Section 1.4, Tables 1.4-1, 1.4-2, and 1.4-3.
- ^b Greenhouse gas emission factors are from 40 CFR Part 98 for natural gas combustion
- ^d Emission Rate (lb/hr) = Rated Capacity (MMscf/hr) × Emission Factor (lb/MMScf).
- ^e Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (kg/MMBtu) x 2.2046 (lb/kg)
- ^f Annual Emissions (tons/yr)_{Potential} = (lb/hr)_{Emissions} × (Maximum Allowable Operating Hours, 8,760 hr/yr) × (1 ton/2000 lb).