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August 9, 2016
Project No. 16-291

Ms. Carrie McCumbers
Title V Program Manager
West Virginia DEP
Division of Air Quality
601 57th Street, S.E.
Charleston, West Virginia 25304



Renewal of Title V Permit R30-083-00101-2012
Energy Corporation of America
Ellamore Compressor Station
Ellamore, West Virginia

Dear Ms. McCumbers:

Please find enclosed two (2) copies of the Title V renewal application package for the Ellamore Compressor Station. In accordance with the Title V Completeness Checklist Energy Corporation of America is requesting a permit shield.

Should you have any questions or require additional information, please advise.

Sincerely,

Lori Steele
Senior Environmental Scientist

Cc: Travis Wendel

Enclosures

**August 2016
Project No. 16-291**

REGULATION 30 PERMIT RENEWAL APPLICATION

PERMIT NUMBER R30-08300101-2012

**ENERGY CORPORATION OF AMERICA
ELLAMORE COMPRESSOR STATION
ELLAMORE, WEST VIRGINIA**

PREPARED BY:

**MSES Consultants, Inc.
P.O. Drawer 190
Clarksburg, West Virginia 26302-0190
(304) 624-9700**

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11. Mailing Address		
Street or P.O. Box: 500 Corporate Landing		
City: Charleston	State: WV	Zip: 25311
Telephone Number: (304) 472-6100	Fax Number: (304) 472-0479	

12. Facility Location		
Street: County Route 151	City: Ellamore	County: Randolph
UTM Easting: 581.271 km	UTM Northing: 4,306.625 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Proceed east from the town of Ellamore on County route 151 for approximately 3 miles to the station which is located on the left side of the road and visible.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Maryland Virginia	
Is facility located within 100 km of a Class I Area¹? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the area(s). Otter Creek Wilderness Area Dolly Sods Wilderness Area	
If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input 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: Joe Farris		Title: District Manager
Street or P.O. Box: 500 Corporate Landing		
City: Charleston	State: WV	Zip: 25311
Telephone Number: (304) 472-6100	Fax Number: (304) 472-0479	
E-mail address: jfarris@eca.com		
Environmental Contact: Eric Martin		Title: Pipeline Analyst
Street or P.O. Box: P.O. Box 459		
City: Buckhannon	State: WV	Zip: 26201
Telephone Number: (304) 472-6100	Fax Number: (304) 472-0479	
E-mail address: emartin@eca.com		
Application Preparer: Travis Wendel		Title: Permit Technician
Company: Energy Corporation of America		
Street or P.O. Box: 101 Heritage Run Road, Suite 1		
City: Indiana	State: PA	Zip: 15701
Telephone Number: (724) 463-8400	Fax Number: (724) 463-9750	
E-mail address: twendel@eca.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	Natural Gas	486210	4922

Provide a general description of operations.

The Ellamore Station is a natural gas transmission facility covered by NAICS 486210 and SIC 4922. The station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. The station consists of one (1) 600-hp and one (1) 800-hp natural gas fired reciprocating engines, one (1) 120-hp emergency generator, one (1) heating system boiler, one (1) dehydrator re-boiler, one (1) glycol regenerator, one (1) glycol absorber, one (1) liquids knockout system, a flare that controls emissions from the dehydration unit, two (2) 1,000-gallon storage tanks, and one (1) 630 gallon storage tank.

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

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

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

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input checked="" 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 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>45 CSR21 – Regulation to Prevent and Control Air Pollution from the emission of Volatile Organic Compounds: Ellamore compressor station is not located in Cabell, Kanawha, Putnam, Wayne, or Wood counties that are affected by 45CSR21.</p> <p>45CSR27 – To Prevent and Control the emissions of Toxic Air pollutants: Natural gas is included as a petroleum product and contains less than 5% Benzene by weight. 45CSR27-2.4 exempts equipment “used in the production and distribution of petroleum products that such equipment does not produce or contact materials containing more than 5% Benzene by weight.</p>
<p><input checked="" type="checkbox"/> Permit Shield</p>

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 60 Subpart GG – Standard of Performance for stationary gas turbines. There are no turbines at the Ellamore Compressor station.

40 CFR 60 Subpart K – Standard of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978. All tanks are below 40,000 gallons in capacity.

40 CFR 60 Subpart Ka – Standard of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. All tanks are below 40,000 gallons in capacity.

40 CFR 60 Subpart Kb – Standard of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after July 23, 1984. All tanks storing volatile organic liquids are below 75 m³ in capacity.

40 CFR 63 Subpart HH – national emission standards for hazardous air pollutants from oil and natural gas production facilities. The Ellamore compressor station is not a natural gas production facility.

40 CFR 63 Subpart HHH – National emission standards for hazardous air pollutants from natural gas transmission and storage facilities. The facility transports less than 8 MM standard cubic feet of natural gas per day. The facilities potential to emit is below the applicability threshold due to operation of the flare which controls emissions from the dehydrator.

40 CFR 60 Subpart KKK – Standard of performance for equipment leaks of VOC from onshore natural gas processing plants. Ellamore station is not engaged in the extraction of natural gas or in the fractionation of mixed natural gas liquids to natural gas products.

40 CFR 60 Subpart LLL – Standards of performance for onshore natural gas processing: SO₂ emissions. There are no sweetening units at the Ellamore station.

40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines. There are no turbines at the Ellamore station.

40 CFR 60 Subpart IIII – Standards of Performance for Stationary compression Ignition Internal Combustion Engines: There are no compression ignition engines at this facility.

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in 60.4230(a)(4).

40 CFR 60 Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution: This subpart does not apply because it is a transmission facility making it exempt from the requirements for gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers. No storage vessels have been constructed, modified, or reconstructed after August 23, 2011 in accordance with 60.5365(e).

40 CFR 64 – The facility does not have any pollutant-specific emissions units (PSEU) that satisfy all of the applicability criteria requirements of 40CFR64.2(a) therefore, the facility is not subject to the Compliance Assurance Monitoring (CAM) rule.

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).

45CSR6-3.1 – The open burning refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR6-3.1.

45CSR6-3.2 – The exemptions listed in 45CSR6-3.1.

40CFR61.145(b) and 45CSR34 – thoroughly inspect the facility, or part of the facility, prior to commencement of demolition and renovation for the presence of asbestos and complying with 40CFR61.145, 61.148 and 61.150. Notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the secretary. If subject to the notification requirements of 40CFR61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health – Environmental health requires a copy of this notice to be sent to them.

45CSR4-3.1 State-Enforceable Only – 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.

45CSR11-5.2 – When requested by the Secretary, prepare standby plans for reducing emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 CSR11.

W.Va. Code 22-5-4(a)(14) – Submit, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.

40 C.F.R. 82, Subpart F – Ozone-depleting substances.

40 C.F.R. 68 – Risk Management Plan. Submit a risk management plan if the source becomes subject.

45CSR2-3.1, BL1, BL2 – 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.

Permit Shield

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

WV Code 22-8-4(a)(15) and 45CSR13 – the secretary may require tests to determine compliance with emission limits. The Secretary, or his duly authorized representative, may at his opinion witness or conduct such tests. Should the secretary exercise his option to conduct such tests, the operator shall provide all necessary sampling connections and sampling ports to be located in such a manner as the secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices.

The Secretary may approve or specify additional of alternative testing to the test methods specifically in the permit for demonstrating compliance with 40CFR Parts 60, 61, and 63, if applicable, in accordance with the secretary's delegated authority and any established equivalency determination methods which are applicable.

The Secretary may approve or specify additional or alternative testing to demonstrate compliance with applicable requirements which do not involve federal delegation.

All periodic tests to determine mass emission limits from or air pollutant concentrations is discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the secretary. In addition, notify the secretary at least fifteen (15) days prior to any testing so the secretary may have the opportunity to observe such tests.

45CSR30-5.1.c.2.A – Keep records of monitoring information that include the date, place as defined in the permit and time of sampling or measurements; the date(s) of analyses performed; the company or entity that performed the analyses; the analytical techniques or methods used; the results of the analyses; and the operating conditions existing at the time of sampling or measurement.

45CSR30-5.1.c.2.B. – Retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date.

45CSR30-5.1.c. State-Enforceable only. – For the purpose to such a complaint, and any responsive action(s) taken.

45CSR30-4.4 and 5.1c.3D – Any application from, report, or compliance certification requirements to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

45CSR30-5.1.c.3.E – confidential treatment for the submission of reporting required under 45CSR30-4.1.c.3. pursuant to the limitations and procedures of WV Code 22-5-10 and 45 CSR31.

45CSR30-8. – Submit a certified emission statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.

45CSR30-5.3.e. – Certify compliance with the condition of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, certifications may be required more frequently under an applicable requirement. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. Maintain a copy of the certification on site for five (5) years from submittal of the certification.

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.

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.)

45CFR30-5.1.c.3.A. – Submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR30-4.4.

45CSR30-5.1.c.3.C. – Promptly submit supplemental reports and notices of any deviations resulting from emergency or upset conditions.

40CSR30-5.1.c.3.B. – Report probable cause of deviations and any corrective actions or preventative measures taken in accordance with any rules of the secretary

40CSR30-4.3.h.1.B. – Meet any new applicable requirement on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

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)	149.48
Nitrogen Oxides (NO _x)	158.30
Lead (Pb)	
Particulate Matter (PM _{2.5}) ¹	
Particulate Matter (PM ₁₀) ¹	1.31
Total Particulate Matter (TSP)	1.31
Sulfur Dioxide (SO ₂)	0.05
Volatile Organic Compounds (VOC)	4.80
Hazardous Air Pollutants²	Potential Emissions
Total HAPs	5.64
Benzene	0.41
Ethyl Benzene	0.80
Formaldehyde	2.07
n-Hexane	0.42
Toluene	0.81
Xylenes	1.12
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Carbon Dioxide	7218.80
Methane	42.92
Nitrous Oxide	0.0091
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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input checked="" type="checkbox"/>	18. Emergency road flares.
<input 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:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

24. Insignificant Activities (Check all that apply)

<input type="checkbox"/>	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: _____ _____ _____ _____ _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input checked="" 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 checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input checked="" 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 checked="" type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input checked="" 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.

24. Insignificant Activities (Check all that apply)

<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 owners/operators must still get a permit if otherwise requested.)
<input checked="" 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 checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input 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 checked="" 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 checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" 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 checked="" 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 fines 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: Joe Farris

Title: District Manager

Responsible official's signature:

Signature: *Joe Farris*

Signature Date: 8-8-2016

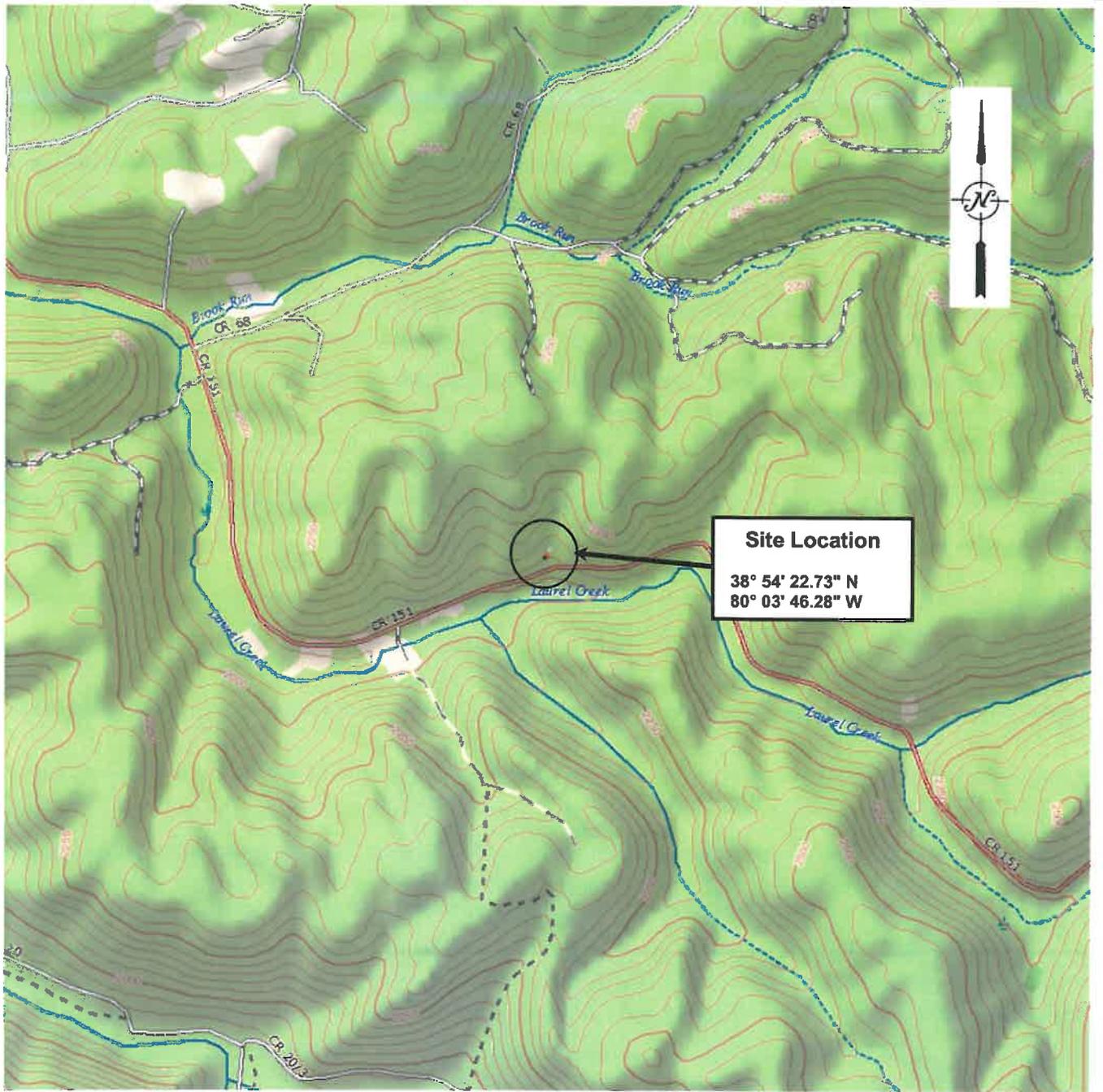
(Must be signed and dated in blue ink)

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

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

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

ATTACHMENT A
Area Map



Reference:
 XMap® 6 © DeLorme,
 Yarmouth, Me 04096
 Source Data: Delorme
 North America
 Topographic Data 2011
 USGS Quadrangle:
 Ellamore, WV

Vicinity Map

Scale 1" = 2000'

MSES Consultants, Inc.
 Clarksburg, West Virginia

**Energy Corporation of
 America
 Ellamore Compressor Sta.
 Ellamore, WV**

Title V Air Permit Renewal

Project No. 16-291

Figure 1

ATTACHMENT B

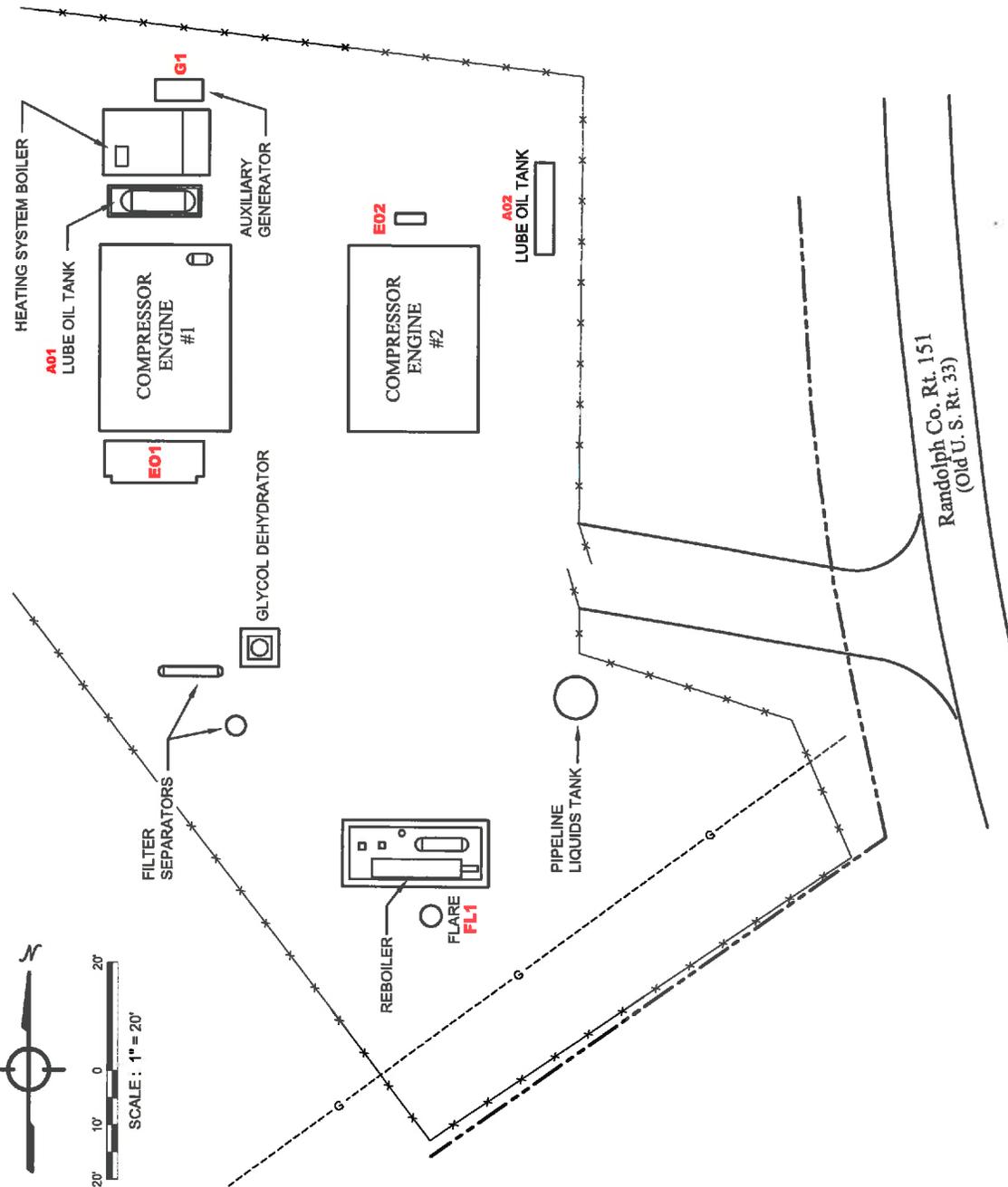
Plot Plan(s)



LEGEND

- x --- FENCE LINE
- --- PROPERTY BOUNDARY
- G --- NATURAL GAS PIPELINE
- FL1 EMISSION POINT

SIGNIFICANT EMISSION UNITS	
Emission Point ID Number	Equipment Category
FL1	Glycol Dehydrator / Flare
E01	Recip Engine / Integral Compressor No. 11701
E02	Recip Engine / Recip Compressor No. 11702
G1	Recip Engine / Generator No. 117G1



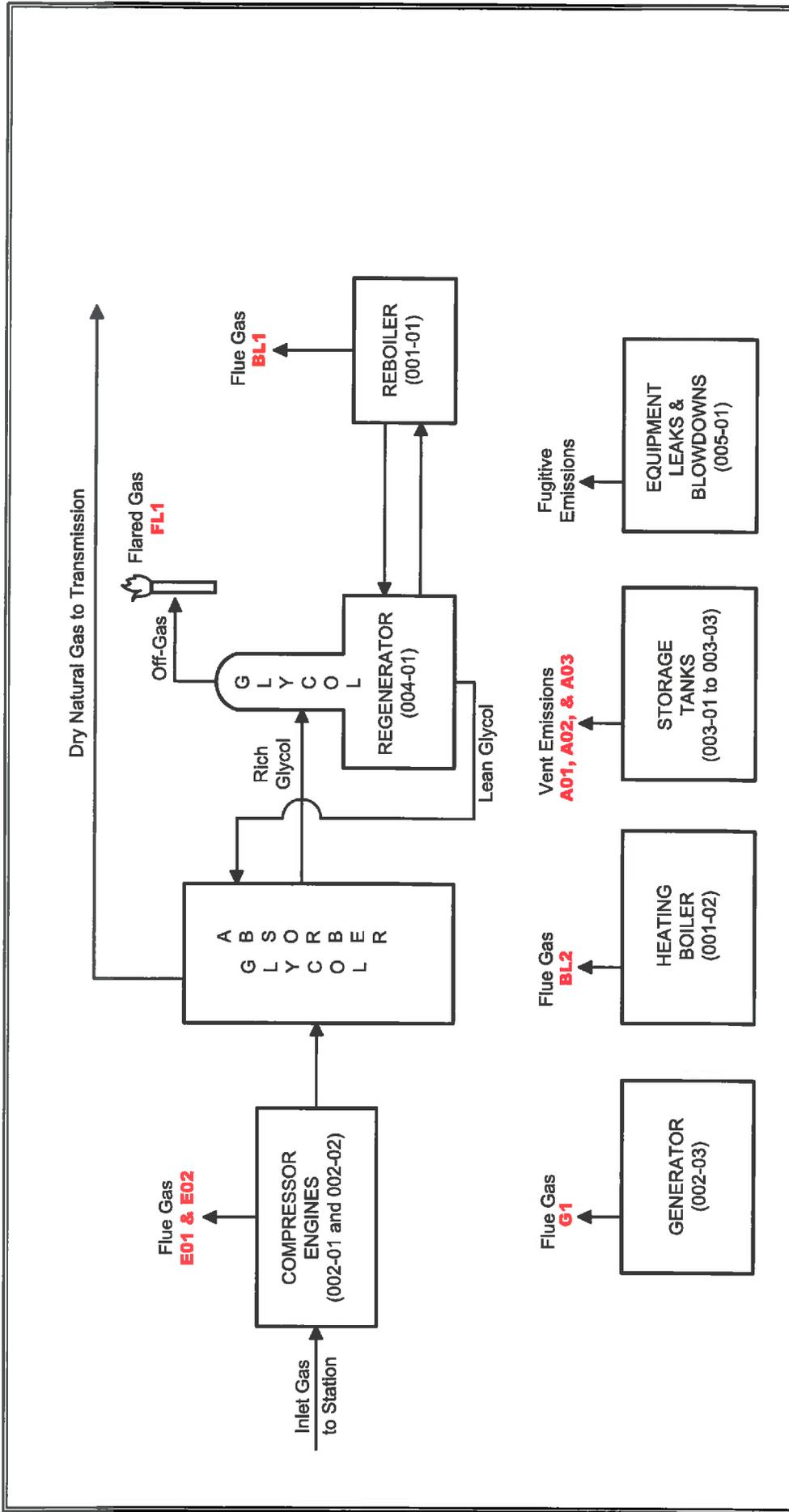
ENERGY CORPORATION OF AMERICA
ELLAMORE COMPRESSOR STATION
PLAN VIEW

Drawn by:	RLA/SBRC	9/11	Scale:	AS SHOWN
Engineer:	LLB	9/11		
Checked by:	LLS	9/11	Date:	

Prepared by **MSES consultants, inc.**

ATTACHMENT C

Process Flow Diagram(s)



ENERGY CORPORATION OF AMERICA

ELLAMORE COMPRESSOR STATION
PROCESS FLOW DIAGRAM

Drawn by	KLA	9/11	Scale	NONE
Engineer	LLS	9/11		
Checked by	SARC/LLS	9/11		
		Date		

Prepared by **MSES consultants, inc.**

ATTACHMENT D

Emission Units Table

ATTACHMENT E
Emission Unit Form(s)

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 002-01	Emission unit name: Engine # 1 E01	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Ajax 600DPC 2SLB natural gas fired reciprocating internal combustion engine for compression of natural gas

Manufacturer: Ajax	Model number: 600DPC	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1981	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 600 HP

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

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

Maximum design heat input and/or maximum horsepower rating: 600 HP	Type and Btu/hr rating of burners:
--	---

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

Natural gas

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	2.08	9.13
Nitrogen Oxides (NO _x)	17.12	74.98
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.21	0.91
Particulate Matter (PM ₁₀)	0.21	0.91
Total Particulate Matter (TSP)	0.26	1.14
Sulfur Dioxide (SO ₂)	0.0038	0.017
Volatile Organic Compounds (VOC)	0.65	2.84
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.30	1.31
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	594	2602
Methane	7.83	34.30
<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>AP-42 Table 3.2-1 emission factors for all pollutants except sulfur dioxide which is mass balance calculation. Potential to emit assumes 8,760 hours of operations per year at design capacity.</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.

40 CFR 636603(a). If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart.

40 CFR 63, Subpart ZZZZ, Table 2d – 8.a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.

40 CFR 63.6605(a) – You must be in compliance with the emission limitations, operating limitations, and other requirements in the subpart that apply to you at all times.

40 CFR 63.6645(a)(5) – The permittee shall meet the applicable general provisions specified in Table 8 of 40 C.F.R. 63, Subpart ZZZZ with the exception of 63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b)-(e), (g) and (h) which to not apply.

40 CFR 63, Subpart ZZZZ, Table 6 – 9.a. Work or Management Practices i. Operate and maintain the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

45 CSR30-12.7.c. May temporarily replace a failed engine in an emergency situation.

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.)

40 CFR 63.6625 – The permittee shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 C.F.R. 63.6625(e), (h), and (j).

40 CFR 63.6655 – The permittee shall comply with recordkeeping requirements of 40 C.F.R. 63.6655(a), (b), (d), and (e).

40 CFR 63.6640(b) – The permittee shall report each instance in which they did not meet each operating limitation in 4.1.1. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements of 40 C.F.R. 63.6650.

40 CFR 63.6640(e) – The permittee shall report each instance in which they did not meet the requirements in Table 8 of this subpart that applies.

45 CSR30-12.7.c. Provide written notification within five (5) days.

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: 002-02	Emission unit name: Engine # 2 E02	List any control devices associated with this emission unit: None
---	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Waukesha L7042G 4-Stroke Rich Burn natural gas fired reciprocating internal combustion engine for compression of natural gas

Manufacturer: Waukesha	Model number: L7042G	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1982	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 800 HP

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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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: 800 HP	Type and Btu/hr rating of burners:
--	---

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

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	31.55	138.17
Nitrogen Oxides (NO _x)	18.74	82.08
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.08	0.35
Particulate Matter (PM ₁₀)	0.08	0.35
Total Particulate Matter (TSP)	0.16	0.72
Sulfur Dioxide (SO ₂)	0.0059	0.026
Volatile Organic Compounds (VOC)	0.25	1.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.17	0.76
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	932.8	4086
Methane	1.95	8.54
<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>AP-42 Table 3.2-3 emission factors for all pollutants except sulfur dioxide which is mass balance calculation. Potential to emit assumes 8,760 hours of operations per year at design capacity.</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.

40 CFR 636603(a) and Table 2d – Change oil and filter every 2,160 hours of operation or annually, whichever comes first; Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirement.

40 CFR 63.6603(f) – An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators...must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine.

40 CFR 63.6625(j) – If you own or operate a stationary SI engine that is subject to the work, operation or management practices in...items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement.

40 CFR 63.6605(a) and 63.6640– You must be in compliance with the emission limitations, operating limitations, and other requirements in the subpart that apply to you at all times.

40 C.F.R. 63, Subpart ZZZZ Table 8 – The permittee shall meet the applicable general provisions specified. The permittee shall comply with the continuous compliance requirements of **40 C.F.R. 63.6635**.

40 CFR 63, Subpart ZZZZ, Table 6 – Operate and maintain the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

45 CSR30-12.7.c. – May temporarily replace a failed engine in an emergency situation.

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.)

40 CFR 63.6625 – The permittee shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 C.F.R. 63.6625(a), (b), (h), and (k).

40 CFR 63.6612, 63.6615, 63.6620, Table 3, Table 4, and Table 5 – The permittee shall comply with the testing requirements in 40 C.F.R. 63.6612, 63.6615, and 63.6620 and Tables 3, 4, and 5 to 40 C.F.R. Subpart ZZZZ.

40 CFR 63.6655 – The permittee shall comply with recordkeeping requirements of 40 C.F.R. 63.6655(a), (b), and (d).

40 CFR 63.6640(b) – The permittee shall report each instance in which they did not meet each operating limitation in 4.1.1. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements of 40 C.F.R. 63.6650.

40 CFR 63.6640(e) – The permittee shall report each instance in which they did not meet the requirements in Table 8 of this subpart that applies.

40 CFR 63.6645 – The permittee shall comply with the notification requirements in 40 C.F.R. 63.6645.

40 CFR 63.6650 – The permittee shall comply with the reporting requirements in 40 C.F.R. 63.6650(a), (b), (c), (d), (e), and (f).

45 CSR30-12.7.c. - Provide written notification within five (5) days.

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: 002-03	Emission unit name: Generator G1	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Onan modified Ford LRG-245L 4-Stroke Rich Burn natural gas fired reciprocating internal combustion engine for emergency power generation

Manufacturer: Ford	Model number: LRG-425L	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 05/01/2005	Modification date(s): MM/DD/YYYY
---	---	--

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 120 HP

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 500 hours
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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: 120 HP	Type and Btu/hr rating of burners:
--	---

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

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	4.72	1.181
Nitrogen Oxides (NO _x)	2.81	0.702
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.012	0.003
Particulate Matter (PM ₁₀)	0.012	0.003
Total Particulate Matter (TSP)	0.025	0.006
Sulfur Dioxide (SO ₂)	0.0009	0.0002
Volatile Organic Compounds (VOC)	0.038	1.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.026	0.007
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	139.7	34.93
Methane	0.29	0.073
<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>AP-42 Table 3.2-3 emission factors for all pollutants except sulfur dioxide which is mass balance calculation. Potential to emit assumes 500 hours of operations per year at design capacity.</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.

40 CFR 636603(a). If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart.

40 CFR 63, Subpart ZZZZ, Table 2d – 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 replace as necessary; and Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.

40 CFR 63.6605(a) – You must be in compliance with the emission limitations, operating limitations, and other requirements in the subpart that apply to you at all times.

40 CFR 63.6645(a)(5) – The permittee shall meet the applicable general provisions specified in Table 8 of 40 C.F.R. 63, Subpart ZZZZ with the exception of 63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b)-(e), (g) and (h) which to not apply.

40 CFR 63, Subpart ZZZZ, Table 6 – Operate and maintain the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

45 CSR30-12.7.c. May temporarily replace a failed engine in an emergency situation.

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.)

40 CFR 63.6625 – The permittee shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 C.F.R. 63.6625(e), (h), and (j).

40 CFR 63.6655 – The permittee shall comply with recordkeeping requirements of 40 C.F.R. 63.6655(a), (b), (d), and (e).

40 CFR 63.6640(b) – The permittee shall report each instance in which they did not meet each operating limitation in 4.1.1. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements of 40 C.F.R. 63.6650.

40 CFR 63.6640(e) – The permittee shall report each instance in which they did not meet the requirements in Table 8 of this subpart that applies.

45 CSR30-12.7.c. – Provide written notification within five (5) days.

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:
004-01

Emission unit name:
TEG Dehydrator

List any control devices associated with this emission unit:
Flare FL1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
NATCO 12-Tray TEG natural gas dehydrator

Manufacturer:
NATCO

Model number:
NA

Serial number:
NA

Construction date:
MM/DD/YYYY

Installation date:
01/01/1982

Modification date(s):
MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 15 mmscf/day

Maximum Hourly Throughput:
625,000 scf/hr

Maximum Annual Throughput:
5,475 mmscf/year

Maximum Operating Schedule:
8760 hours per year

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? Yes No

If yes, is it?

Indirect Fired Direct Fired

Maximum design heat input and/or maximum horsepower rating:

Type and Btu/hr rating of burners:

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

NONE

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	3.686	16.14
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.0936	0.41
Ethyl Benzene	0.1822	0.80
Toluene	0.1858	0.81
Xylene	0.2568	1.12
Hexane	0.0954	0.42
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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

GRI GlyCalc software used to calculate emissions from dehydration unit still vent. Potential to emit assumes 8,760 hours of operations per year at design capacity with no control device.

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.

40CFR63.760(f)(6) – The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in 63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

40CFR63.764(a), (b), (d), (e) – Table 2 of Part 63 Subpart HH specifies the provisions of Subpart A (General Provisions) of Part 63 that apply and those that do not apply to owners and operators of affected sources subject to this subpart. All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in 63.13. Reports may be submitted on electronic media. Except as specified in paragraph (e)(1) of this requirement, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section. Determine the optimum glycol circulation rate; operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate; maintain a record of the determination.

45CSR30-5.1.c. – If the annual emissions of benzene from the dehydration unit ever equals or exceeds 0.90 megagram per year (1 tpy) as calculated per 63.772(b)(2), the permittee shall comply with section d(2)(i) through (iii) of 63.764.

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.)

45CSR30-5.1.c. – Monitor and record actual operating parameters associated with the dehydration system. These parameters shall be measured periodically, with the exception of wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values. Periodically, shall be interpreted as sufficient enough to reflect annual variation and, therefore, this term is operating parameter and site dependent. Compliance with this condition also demonstrates compliance with sulfur dioxide and hydrogen sulfide limits.

45CSR30-5.1.c. – The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286.

40CFR63.772(b)(2)(i) – Determine the actual average benzene emissions. Determine the actual average annual benzene emissions using the model GRI-GLYCalc Version 3.0 or higher. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit.

45CSR30-5.1.c. – For the purposes of documenting compliance with the emission limitations, HAP major source thresholds, as well as the 1 ton per year benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GLYCalc emission estimates.

45CSR30-5.1.c. – The permittee shall submit by March 31st of the following year, an emission summary for the dehydration unit (FL1), which incorporates the wet gas testing results. The permittee shall also supply a copy of the most recent report with the facility's subsequent Title V renewal application. These reports shall include the actual annual average emission estimate for the calendar year of the sample, modeled using GLYCalc V3 or higher software, which incorporates site specific parameters measured. The permittee shall also supply all supporting documentation where site specific operating parameters are tabulated to define the annual average values. The report shall also incorporate a copy of the lab analysis obtained from the wet gas testing as well as a description of how and where the sample was taken. The report shall include a reference to all sampling and analytical methods utilized. Additionally, the permittee shall identify where the compressor station is located with respect to a custody transfer point, which is referenced with 40 CFR 63, Subpart HH as the point where the gas enters into a natural gas transmission and/or storage pipeline. This report shall be signed by a responsible official upon submittal.

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: FLLP1	Emission unit name: Dehydrator Flare	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
natural gas fired dehydrator flare to control emissions from dehydrator still vent

Manufacturer: NA	Model number: NA	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1999	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 0.4 mmbtu/hr

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 0.4 mmbtu/hr	Type and Btu/hr rating of burners: 0.4 mmbtu/hr
--	---

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

Natural gas

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.148	0.65
Nitrogen Oxides (NO _x)	0.027	0.12
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.003	0.013
Particulate Matter (PM ₁₀)	0.003	0.013
Total Particulate Matter (TSP)	0.003	0.013
Sulfur Dioxide (SO ₂)	0.00026	0.0012
Volatile Organic Compounds (VOC)	0.0056	0.025
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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

AP-42 Table 13.5-1 for NO_x, CO, and VOC. Table 1.4-2 for PM. SO₂ calculated using a mass balance. Potential to emit assumes 8,760 hours of operation per year at design capacity.

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.

R13-2347, A.1. The emissions from the 0.4 MMBtu/hr dehydrator flare shall not exceed the following maximum hourly (lb/hr) and annual (tpy) limits: NO_x – 0.027 lb/hr and 0.12 tpy; CO – 0.15 lb/hr and 0.65 tpy; VOC – 0.196 lb/hr and 0.83 tpy; SO₂ – 0.02 lb/hr and 0.088 tpy; and PM₁₀ – 0.002 lb/hr and 0.008 tpy.

R13-2347, A.2., C.3. The 0.4 MMBtu/hr NATCO Model SHV-2.0L dehydrator flare shall be constructed, operated, and maintained in accordance with all information submitted in Permit Application R13-2347 and any amendments thereto. The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

45CSR6-4.1., R13-2347, B.2. The particulate matter discharged from open flare shall not exceed 0.11 lb/hr.

45CSR6-4.3., R13-2347, B.2. Visible particulate matter emissions from open flare shall not equal or exceed twenty (20%) percent opacity.

45CSR6-4.4., R13-2347, B.2. The provisions of 45CSR6-4.3. shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up.

45CSR6-4.5. The emission of particles of unburned or partially burned refuse or ash from the flare which are large enough to be individually distinguished in the open air shall not be allowed or permitted.

45CSR6-4.6., R13-2347, B.2. The flare, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

45CSR10-4.1. No person shall suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in 45CSR10-4.1.a through 45CSR10-4.1e.

45CSR10-5.1. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in an concentration greater than 50 grams per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U.S.EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.

454CSR30-12.7. Potential HAP emissions from entire facility may not exceed 10 tpy of a single HAP or 25 tpy of any combination of HAPs. Flare shall be operated at all times when emissions may be vented to it. Flare shall operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Flare shall operate with a flame present at all times. Minimum net heating value of gas being combusted shall be 300 Btu/scf. The exit velocity shall not exceed 60 ft/sec.

45CSR30-5.1.c. A design evaluation may be required. No flare compliance assessment required unless requested by the Director.

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.)

45CSR30-5.1.c. – In order to demonstrate compliance with the continuous flame requirements the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device.

45CSR30-5.1.c. – Visual emission checks of each emission point specified shall be conducted monthly. If visible emissions are observed at any emission point, compliance shall be determined by conducting tests in accordance with Method 9 of 40 CFR 60, Appendix A. Maintain records.

45CSR30-5.1.c. The permittee shall conduct a 40 C.F.R. Part 60 Appendix A, Method 22 opacity test for at least two hours.

45CSR30-5.1.c. The permittee shall conduct a flare design evaluation.

45CSR30-5.1.c. The Director may require the permittee to conduct a flare compliance assessment.

45CSR30-5.1.c. The permittee shall maintain records of times and duration of periods when the pilot flame was absent.

45CSR30-5.1.c. The permittee shall maintain a record of the flare design evaluation.

45CSR30-5.1.c. The permittee shall maintain records of testing.

45CSR30-5.1.c. The permittee shall maintain records of on-going monitoring.

45CSR30-5.1.c. The permittee shall maintain records of the visible emission opacity tests.

45CSR30-5.1.c. The permittee shall maintain a record of all potential to emit (PTE) HAP calculations for the entire facility.

R13-2347, B.3. Any and all malfunctions of the 0.4 MMBtu/hr dehydrator flare shall be documented in writing and certified by a responsible official.

45CSR30-5.1.c. The permittee shall submit a testing protocol thirty (30) days prior to testing and shall submit a notification of the testing date fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.

45CSR30-5.1.c. Any violations of the allowable visible emission requirement for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence.

45CSR30-5.1.c. Any violations of the flare design and operation criteria shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days.

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: 001-01	Emission unit name: Dehydrator Reboiler BL1	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
natural gas fired dehydrator reboiler

Manufacturer: NA	Model number: NA	Serial number:
Construction date: MM/DD/YYYY	Installation date: 01/01/1982	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 0.75 mmbtu/hr

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.75 mmbtu/hr	Type and Btu/hr rating of burners: 0.75 mmbtu/hr

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

Natural gas

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.062	9.13
Nitrogen Oxides (NO _x)	0.074	74.98
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.006	0.91
Particulate Matter (PM ₁₀)	0.006	0.91
Total Particulate Matter (TSP)	0.006	1.14
Sulfur Dioxide (SO ₂)	0.0005	0.017
Volatile Organic Compounds (VOC)	0.004	2.84
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	88.24	385.2
Methane	0.002	0.007
Nitrous Oxide	0.002	0.007
<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>AP-42 Tables 1.4-1 and 1.4-2 emission factors for all pollutants except sulfur dioxide which is mass balance calculation. Potential to emit assumes 8,760 hours of operations per year at design capacity.</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.

45CSR2-3.1. – 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.

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.)

45CSR30-5.1.c. – At such reasonable times as the Secretary may designate, the permittee shall conduct visible emissions observations using Method 22 for the purpose of demonstrating compliance with 45CSR2-3.1. If visible emissions are observed, the permittee shall conduct a Method 9 reading unless the cause for visible emissions is corrected within 24 hours. Records of observations will be kept for at least 5 years from the date of observation.

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: 001-02	Emission unit name: Heater System Boiler BL2	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 natural gas boiler for heater system

Manufacturer: NA	Model number: NA	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1965	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 0.216 mmbtu/hr

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 0.216 mmbtu/hr	Type and Btu/hr rating of burners: 0.216 mmbtu/hr
--	---

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

Natural gas

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			1020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.018	0.078
Nitrogen Oxides (NO _x)	0.021	0.093
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.0016	0.007
Particulate Matter (PM ₁₀)	0.0016	0.007
Total Particulate Matter (TSP)	0.0016	0.007
Sulfur Dioxide (SO ₂)	0.00014	0.00062
Volatile Organic Compounds (VOC)	0.0012	0.0051
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	25.412	111.3
Methane	0.0005	0.0021
Nitrous Oxide	0.0005	0.002
<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>AP-42 Tables 1.4-1 and 1.4-2 emission factors for all pollutants except sulfur dioxide which is mass balance calculation. Potential to emit assumes 8,760 hours of operations per year at design capacity.</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.

45CSR2-3.1. – 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.

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.)

45CSR30-5.1.c. – At such reasonable times as the Secretary may designate, the permittee shall conduct visible emissions observations using Method 22 for the purpose of demonstrating compliance with 45CSR2-3.1. If visible emissions are observed, the permittee shall conduct a Method 9 reading unless the cause for visible emissions is corrected within 24 hours. Records of observations will be kept for at least 5 years from the date of observation.

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: 003-01	Emission unit name: Lube Oil Tank A01	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Above ground horizontal lube oil tank.

Manufacturer: NA	Model number: NA	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1965	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1000 gallons

Maximum Hourly Throughput: 1000 gallons	Maximum Annual Throughput: 1500 gallons	Maximum Operating Schedule: 8,760 hr/year
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Fuel Usage Data (fill out all applicable fields)

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

Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners:
--	---

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

NA

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.0000	0.0000
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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

EPA Tanks Equations Procedures.
Potential to emit assumes one (1) turnover per hour and 1.5 turnovers per year.

Applicable Requirements

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

Permit Shield

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

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 003-02	Emission unit name: Lube Oil Tank A02	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Above ground horizontal lube oil tank.

Manufacturer: NA	Model number: NA	Serial number:
Construction date: MM/DD/YYYY	Installation date: 01/01/1985	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1000 gallons

Maximum Hourly Throughput: 1000 gallons	Maximum Annual Throughput: 1500 gallons	Maximum Operating Schedule: 8,760 hr/year
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes <u> X </u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners:

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

NA

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.0000	0.0000
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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

EPA Tanks Equations Procedures.
Potential to emit assumes one (1) turnover per hour and 1.5 turnovers per year.

Applicable Requirements

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

Permit Shield

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

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 003-03	Emission unit name: Pipeline Liquids Tank A03	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Above ground horizontal pipeline liquids tank (A03). Replaced the 1000 gallon below ground pipeline liquids tank (B01).

Manufacturer: NA	Model number: NA	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 07/01/2006	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 630 gallons

Maximum Hourly Throughput: 630 gallons	Maximum Annual Throughput: 2520 gallons	Maximum Operating Schedule: 8,760 hr/year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes <u> X </u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners:
--	---

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

NA

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.90	0.002
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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

EPA Tanks Equations Procedures.
Potential to emit assumes one (1) turnover per hour and four (4) turnovers per year.

Applicable Requirements

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

Permit Shield

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

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:

005-01

Emission unit name:

Fugitive Emissions

List any control devices associated with this emission unit:

None

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

VOC emissions from blowdowns and equipment leaks

Manufacturer:

NA

Model number:

NA

Serial number:

Construction date:

MM/DD/YYYY

Installation date:

NA

Modification date(s):

MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): NA

Maximum Hourly Throughput:

NA

Maximum Annual Throughput:

NA

Maximum Operating Schedule:

8,760 hr/year

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

NA

Type and Btu/hr rating of burners:

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

NA

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.0542	0.241
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Methane	1.74	7.60

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.).

EPA Fugitive Estimation Procedures.

Applicable Requirements

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

Permit Shield

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

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

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

ATTACHMENT G

Air Pollution Control Device Form

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:
FL1

List all emission units associated with this control device.

FLLP1, 004-01

Manufacturer:

NATCO

Model number

SHV-2.0L

Installation date:

1999

Type of Air Pollution Control Device:

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

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

Pollutant	Capture Efficiency	Control Efficiency
VOC	99%	98%

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

Maximum 60 cfm of still vent gas. Minimum Btu value is 300.

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

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** No pollutant specific limit.

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

Monthly Method 22-like visible emission checks. Presence of a pilot light or flame.

ATTACHMENT I

Dehydration Unit Calculations

Case Name: Ellimore Dehy Unit

File Name: C:\Program Files\GRI-GLYCalc4\ellamore 2016 BTEX.ddf

Date: March 31, 2016

DESCRIPTION:

Description: Ellimore compliance evaluation 2013

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

CONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.0773	1.856	0.3388
Ethane	0.0247	0.594	0.1084
Propane	0.0143	0.342	0.0625
Isobutane	0.0047	0.114	0.0208
n-Butane	0.0095	0.227	0.0414
Isopentane	0.0051	0.122	0.0223
n-Pentane	0.0005	0.013	0.0024
n-Hexane	0.0044	0.105	0.0192
Heptanes	0.0044	0.105	0.0192
Benzene	0.0045	0.108	0.0197
Toluene	0.0146	0.351	0.0641
Xylenes	0.0064	0.153	0.0278
C8+ Heavies	0.0363	0.870	0.1588
Total Emissions	0.2067	4.961	0.9054
Total Hydrocarbon Emissions	0.2067	4.961	0.9054
Total VOC Emissions	0.1046	2.511	0.4582
Total HAP Emissions	0.0299	0.717	0.1308
Total BTEX Emissions	0.0255	0.611	0.1116

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	1.5469	37.125	6.7753
Ethane	0.4949	11.876	2.1674
Propane	0.2853	6.848	1.2498
Isobutane	0.0950	2.279	0.4160
n-Butane	0.1892	4.541	0.8288
Isopentane	0.1019	2.446	0.4465
n-Pentane	0.0108	0.258	0.0471
n-Hexane	0.0877	2.105	0.3841
Heptanes	0.0879	2.109	0.3850
Benzene	0.0899	2.157	0.3937
Toluene	0.2925	7.020	1.2812
Xylenes	0.1271	3.050	0.5567
C8+ Heavies	0.7251	17.402	3.1758
Total Emissions	4.1341	99.219	18.1074
Total Hydrocarbon Emissions	4.1341	99.219	18.1074
Total VOC Emissions	2.0924	50.217	9.1646

Total HAP Emissions	0.5972	14.333	2.6157
Total BTEX Emissions	0.5095	12.228	2.2316

EQUIPMENT REPORTS:

COMBUSTION DEVICE

Ambient Temperature: 80.00 deg. F
 Excess Oxygen: 0.00 %
 Combustion Efficiency: 95.00 %
 Supplemental Fuel Requirement: 2.60e-002 MM BTU/hr

Component	Emitted	Destroyed
Methane	5.00%	95.00%
Ethane	5.00%	95.00%
Propane	5.00%	95.00%
Isobutane	5.00%	95.00%
n-Butane	5.00%	95.00%
Isopentane	5.00%	95.00%
n-Pentane	5.00%	95.00%
n-Hexane	5.00%	95.00%
Heptanes	5.00%	95.00%
Benzene	5.00%	95.00%
Toluene	5.00%	95.00%
Xylenes	5.00%	95.00%
C8+ Heavies	5.00%	95.00%

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25 and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages: 1.25
 Calculated Dry Gas Dew Point: 1.27 lbs. H2O/MMSCF
 Temperature: 75.0 deg. F
 Pressure: 300.0 psig
 Dry Gas Flow Rate: 8.5000 MMSCF/day
 Glycol Losses with Dry Gas: 0.0125 lb/hr
 Wet Gas Water Content: Saturated
 Calculated Wet Gas Water Content: 71.04 lbs. H2O/MMSCF
 Calculated Lean Glycol Recirc. Ratio: 6.05 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	1.79%	98.21%
Carbon Dioxide	99.81%	0.19%
Nitrogen	99.99%	0.01%
Methane	99.99%	0.01%
Ethane	99.95%	0.05%
Propane	99.90%	0.10%
Isobutane	99.84%	0.16%
n-Butane	99.78%	0.22%
Isopentane	99.73%	0.27%
n-Pentane	99.65%	0.35%

n-Hexane	99.28%	0.72%
Heptanes	98.35%	1.65%
Benzene	75.37%	24.63%
Toluene	62.25%	37.75%
Xylenes	35.94%	64.06%
C8+ Heavies	91.71%	8.29%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	7.51%	92.49%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	0.50%	99.50%
n-Pentane	0.50%	99.50%
n-Hexane	0.50%	99.50%
Heptanes	0.50%	99.50%
Benzene	5.00%	95.00%
Toluene	7.90%	92.10%
Xylenes	12.90%	87.10%
C8+ Heavies	12.03%	87.97%

STREAM REPORTS:

WET GAS STREAM

Temperature: 75.00 deg. F
 Pressure: 314.70 psia
 Flow Rate: 3.55e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.50e-001	2.52e+001
Carbon Dioxide	1.52e-001	6.24e+001
Nitrogen	4.41e-001	1.16e+002
Methane	9.44e+001	1.42e+004
Ethane	3.77e+000	1.06e+003
Propane	7.24e-001	2.99e+002
Isobutane	1.09e-001	5.92e+001
n-Butane	1.57e-001	8.54e+001
Isopentane	5.66e-002	3.82e+001
n-Pentane	4.50e-003	3.03e+000
n-Hexane	1.52e-002	1.22e+001
Heptanes	5.70e-003	5.34e+000
Benzene	5.00e-004	3.65e-001
Toluene	9.00e-004	7.75e-001

Xylenes	2.00e-004	1.98e-001
C8+ Heavies	5.50e-003	8.75e+000
Total Components	100.00	1.59e+004

 DRY GAS STREAM

Temperature: 75.00 deg. F
 Pressure: 314.70 psia
 Flow Rate: 3.54e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	2.68e-003	4.51e-001
Carbon Dioxide	1.52e-001	6.23e+001
Nitrogen	4.42e-001	1.16e+002
Methane	9.45e+001	1.42e+004
Ethane	3.78e+000	1.06e+003
Propane	7.25e-001	2.98e+002
Isobutane	1.09e-001	5.91e+001
n-Butane	1.57e-001	8.52e+001
Isopentane	5.65e-002	3.81e+001
n-Pentane	4.49e-003	3.02e+000
n-Hexane	1.51e-002	1.22e+001
Heptanes	5.61e-003	5.25e+000
Benzene	3.77e-004	2.75e-001
Toluene	5.61e-004	4.82e-001
Xylenes	7.20e-005	7.13e-002
C8+ Heavies	5.05e-003	8.03e+000
Total Components	100.00	1.59e+004

 LEAN GLYCOL STREAM

Temperature: 75.00 deg. F
 Flow Rate: 2.49e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.98e+001	1.40e+003
Water	1.43e-001	2.01e+000
Carbon Dioxide	8.56e-013	1.20e-011
Nitrogen	9.33e-014	1.31e-012
Methane	3.70e-018	5.20e-017
Ethane	1.66e-008	2.34e-007
Propane	8.26e-010	1.16e-008
Isobutane	2.03e-010	2.85e-009
n-Butane	3.34e-010	4.69e-009
Isopentane	3.64e-005	5.12e-004
n-Pentane	3.85e-006	5.41e-005
n-Hexane	3.14e-005	4.41e-004
Heptanes	3.14e-005	4.42e-004
Benzene	3.37e-004	4.73e-003
Toluene	1.79e-003	2.51e-002
Xylenes	1.34e-003	1.88e-002
C8+ Heavies	7.06e-003	9.92e-002
Total Components	100.00	1.41e+003

RICH GLYCOL STREAM

 Temperature: 75.00 deg. F
 Pressure: 314.70 psia
 Flow Rate: 2.55e+000 gpm
 NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.78e+001	1.40e+003
Water	1.87e+000	2.68e+001
Carbon Dioxide	8.39e-003	1.20e-001
Nitrogen	9.15e-004	1.31e-002
Methane	1.08e-001	1.55e+000
Ethane	3.45e-002	4.95e-001
Propane	1.99e-002	2.85e-001
Isobutane	6.62e-003	9.50e-002
n-Butane	1.32e-002	1.89e-001
Isopentane	7.14e-003	1.02e-001
n-Pentane	7.54e-004	1.08e-002
n-Hexane	6.15e-003	8.81e-002
Heptanes	6.16e-003	8.83e-002
Benzene	6.60e-003	9.46e-002
Toluene	2.21e-002	3.18e-001
Xylenes	1.02e-002	1.46e-001
C8+ Heavies	5.75e-002	8.24e-001
Total Components	100.00	1.43e+003

REGENERATOR OVERHEADS STREAM

 Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 5.75e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.07e+001	2.47e+001
Carbon Dioxide	1.80e-001	1.20e-001
Nitrogen	3.09e-002	1.31e-002
Methane	6.37e+000	1.55e+000
Ethane	1.09e+000	4.95e-001
Propane	4.27e-001	2.85e-001
Isobutane	1.08e-001	9.50e-002
n-Butane	2.15e-001	1.89e-001
Isopentane	9.33e-002	1.02e-001
n-Pentane	9.84e-003	1.08e-002
n-Hexane	6.72e-002	8.77e-002
Heptanes	5.79e-002	8.79e-002
Benzene	7.60e-002	8.99e-002
Toluene	2.10e-001	2.93e-001
Xylenes	7.90e-002	1.27e-001
C8+ Heavies	2.81e-001	7.25e-001
Total Components	100.00	2.90e+001

COMBUSTION DEVICE OFF GAS STREAM

Temperature: 1000.00 deg. F
Pressure: 14.70 psia
Flow Rate: 2.61e+000 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Methane	7.01e+001	7.73e-002
Ethane	1.20e+001	2.47e-002
Propane	4.71e+000	1.43e-002
Isobutane	1.19e+000	4.75e-003
n-Butane	2.37e+000	9.46e-003
Isopentane	1.03e+000	5.10e-003
n-Pentane	1.08e-001	5.38e-004
n-Hexane	7.40e-001	4.38e-003
Heptanes	6.38e-001	4.39e-003
Benzene	8.37e-001	4.49e-003
Toluene	2.31e+000	1.46e-002
Xylenes	8.71e-001	6.35e-003
C8+ Heavies	3.10e+000	3.63e-002
Total Components	100.00	2.07e-001

Gas Analytical Services

Good

Charleston, WV
844-445-4207

Customer	: 8920 - ECA Buckhannon	Date Sampled	: 03/15/2016
Station ID	: 602574	Date Analyzed	: 03/29/2016
Cylinder ID	: 0536	Effective Date	: 04/01/2016
Producer	:	Cyl Pressure	: 0
Lease	: Ellamore Comp Fuel	Temp	: 0
Area	: 920 - Buckhannon	Cylinder Type	: Spot
State	:	Sample By	:

<u>COMPONENT</u>	<u>MOL%</u>	<u>GPM@14.73(PSIA)</u>
Carbon-Dioxide	0.1517	0.000
Oxygen	0.0014	0.000
Nitrogen	0.4417	0.000
Methane	94.4547	0.000
Ethane	3.7735	1.011
Propane	0.7246	0.200
Iso-Butane	0.1090	0.036
N-Butane	0.1572	0.050
Neo-Pentane	0.0045	0.002
Iso-Pentane	0.0566	0.021
N-Pentane	0.0429	0.016
N-Hexane	0.0152	0.010
N-Heptane	0.0057	0.003
N-Octane	0.0015	0.001
N-Nonane	0.0003	0.000
Benzene	0.0005	0.000
Toluene	0.0009	0.000
M-Xylene/P-Xylene	0.0002	0.000
C6's	0.0313	0.013
C7's	0.0195	0.008
C9's	0.0015	0.001
C10's	0.0000	0.000
C11's	0.0001	0.000
C8's	0.0055	0.003
TOTAL	100.0000	1.375

Compressibility Factor (Z) @ 14.73 @ 60 Deg. F = 0.9977

C5+ GPM : 0.04700

Ideal Gravity: 0.5905

Real Gravity: 0.5916

C5+ Mole % : 0.1742

BTU @ (PSIA)	@14.65	@14.696	@14.73	@15.025
Ideal GPM	1.363	1.367	1.370	1.398
Ideal BTU Dry	1,052.69	1,055.99	1,058.43	1,079.63
Ideal BTU Sat	1,034.26	1,037.57	1,040.01	1,061.21
Real GPM	1.366	1.370	1.373	1.401
Real BTU Dry	1,055.07	1,058.39	1,060.84	1,082.14
Real BTU Sat	1,036.96	1,040.28	1,042.74	1,064.04

Comments:

Gas Analysis performed in accordance with GPA 2286

Sample Count : 23000001

CD