

FILE INDEX

Applicant : Blue Racer Midstream, LLC
Facility : Natrium

Plant ID No.: 051-00147
R13-2896D

Chronological Order - Add Index Pages As Necessary

Date	To	From	Subject	# of pages
4/17/15	WVDEP	Blue Racer	Permit Application Submission	
4/22/15	Blue Racer	Jennifer Rice	48-Hour Letter	
5/14/15	Blue Racer	Joe Kessler	Incompleteness Letter	
6/02/15	Joe Kessler	Blue Racer	Affidavit of Publication	
6/15/15	Blue Racer	Joe Kessler	Completeness Letter	
9/28/15	File	Joe Kessler	Blue Racer E-mails	
9/28/15	File	Joe Kessler	R13-2896D Draft Permit, Evaluation, Tracking Manifest	
9/28/15	File	Sandra Adkins	Public Notice Documents	

JRK
9/28/15

INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name BLUE RACER MIDSTREAM, LLC

Permitting Action Number R13-2896D Total Days 150 DAQ Days 91

Permitting Action:

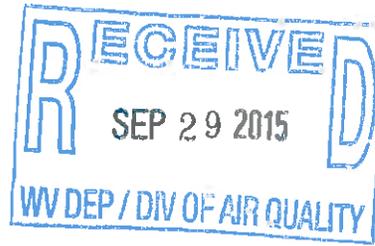
- | | | |
|---|------------------------------------|---|
| <input type="radio"/> Permit Determination | <input type="radio"/> Temporary | <input checked="" type="radio"/> Modification |
| <input type="radio"/> General Permit | <input type="radio"/> Relocation | <input type="radio"/> PSD (Rule 14) |
| <input type="radio"/> Administrative Update | <input type="radio"/> Construction | <input type="radio"/> NNSR (Rule 19) |

Documents Attached:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Engineering Evaluation/Memo | <input checked="" type="checkbox"/> Completed Database Sheet |
| <input checked="" type="checkbox"/> Draft Permit | <input type="checkbox"/> Withdrawal |
| <input checked="" type="checkbox"/> Notice | <input type="checkbox"/> Letter |
| <input type="checkbox"/> Denial | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Final Permit/General Permit Registration | _____ |

Date	From	To	Action Requested
9/14/15	Joe Kessler	Bev McKeone	NOTICE APPROVAL
9/17	Bev	Joe	See Comments - Addition - Costs Notice

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).



September 28, 2015

Via Federal Express Priority Overnight
Tracking No. 7746 1071 5261

Mr. Joseph Kessler
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street
Charleston, West Virginia 25304

Entire Document
NON-CONFIDENTIAL

**Subject: Application Page Update
Rule 14 Air Permit Application for the Ground Flare Project
Natrium Extraction and Fractionation Processing Plant (R13-2896D)
Proctor, Marshall County
Blue Racer Midstream, LLC**

Dear Mr. Kessler:

As previously discussed, Blue Racer Midstream, LLC (Blue Racer) is submitting the enclosed updated application pages to address changes to the application package. Specifically, the changes in these documents address: 1) the modification of the flare pilot information; 2) removal of the "emergency flare" from the permit, and; 3) revise emission calculations for the facility that are associated with these modifications.

BRM truly appreciates the WV DEP's assistance in this matter. If you have any questions or require additional information, please do not hesitate to contact Mr. Sean Wilson of BRM @ (214) 580-7340 or at SWilson@caimanenergy.com

Sincerely,
Blue Racer Midstream, LLC

Daniel Wentworth
Sr. Vice President, Engineering and Operations

I.D. No. 051-05142 Reg. 2896D
Company BlueRacer
Facility NATRIUM Region _____
Initials DW

Enclosure

INTRODUCTION

Blue Racer Midstream, LLC (BRM) is submitting this Rule 13 air permit modification application to the West Virginia Department of Environmental Protection (WV DEP) Air Permits Division (APD) to authorize the replacement of the plant flare with a ground flare and removal of the emergency flare (the Project) at the Natrium Extraction and Fractionation Processing Plant (Natrium Plant, or Plant) located in Proctor, Marshall County, West Virginia. The Plant emits carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter (PM), including PM with aerodynamic diameters of 10 and 2.5 microns or less (PM₁₀ and PM_{2.5}, respectively), sulfur dioxide (SO₂), volatile organic compounds (VOC), hazardous air pollutants (HAPs), and Greenhouse Gases (GHG).

Plant Permitting History

In an effort to facilitate the WV DEP's review of air permitting applicability to the Project and retrospectively to the Plant, the following paragraphs present a summary of the Plant's air permitting and ownership history.

Original Plant Construction under Dominion Natrium LLC Ownership

- August 2011: Original air permit application submittal
 - 400 MMscfd Natural Gas Processing Facility, including two 200 MMscfd cryogenic units and associated NGL fractionation
 - February 1, 2012: Anticipated Start of Construction (SOC)
 - December 1, 2012: Anticipated Start of Operation (SOO)
 - Site-wide Potential to Emit (PTE), excluding fugitives:
 - CO: 37.97 T/yr
 - NO_x: 23.94 T/yr
 - PM/PM₁₀/PM_{2.5}: 4.76 T/yr
 - SO₂: 0.37 T/yr
 - VOC: 6.03 T/yr
 - CO₂e: 85,062 T/yr
 - Synthetic minor source, due to federally enforceable operating limitations on the annual fuel firing rate of the Hot Oil Heater (Emissions Unit Number [EU#] S001).
- December 19, 2011: Permit R13-2896 issued
- May 15, 2013: Actual SOO (construction exceeded anticipated project timeline)
- Upon SOO, flare operational issues resulted in visible emissions in excess of those allowed under 40 Code of Federal Regulations (CFR) §60.18 (adopted by reference in WV regulation §45-16-4) and insufficient destruction efficiency.
- July 31, 2013: Consent Decree issued by WV DEP

- Installation of an emergency flare for upsets (EU# S021);
- Installation of a 38,788 bbl gasoline storage tank equipped with a natural gas blanket to reduce VOC emissions (EU# S023);
- Installation of four (4) pressurized butane bullet tanks;
- Increased utilization of the existing Plant Hot Oil Heater (EU# S001);
- Revised plant natural gas processing rate from 400 MMscfd to 460 MMscfd;
- Increased throughput of the existing Plant product storage tanks, which are pressurized to prevent emissions during normal operations;
- Update to site-wide PTE, excluding fugitives:
 - CO: 99.23 T/yr
 - NO_x: 72.55 T/yr
 - PM/PM₁₀/PM_{2.5}: 16.78 T/yr
 - SO₂: 1.63 T/yr
 - VOC: 10.20 T/yr
 - CO_{2e}: 288,861 T/yr
- Due to Supreme Court ruling, GHG emissions alone may not trigger Prevention of Significant Deterioration (PSD) permitting on sources with total criteria pollutant potential to emit less than the PSD major source threshold.
- November 6, 2014: Permit R13-2896C issued by WV DEP

Project Description

With this filing, Blue Racer Midstream LLC is requesting that the WV DEP authorize the replacement of the existing plant flare (EU# S004) with a ground flare (EU# S004A) and removal of the emergency flare (EU# S021).

Regulated Air Pollutant	Site Total PTE (T/yr)
Oxides of Nitrogen (NO _x):	72.91
Carbon Monoxide (CO):	97.62
Volatile Organic Compounds (VOC):	43.49
Particulate Matter (PM):	31.98
PM with an aerodynamic diameter of less than or equal to 10 microns (PM ₁₀)	20.83
PM with an aerodynamic diameter of less than or equal to 2.5 microns (PM _{2.5})	17.18
Sulfur Dioxide (SO ₂):	1.63
Greenhouse Gases (CO _{2e}):	289,167

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

12A.

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

Facility is located off of State Road 2 at 14787 Energy Road, Proctor, WV.

12.B. New site address (if applicable):

14787 Energy Road
Proctor, WV 26055

12C. Nearest city or town:

Proctor

12D. County:

Marshall

12.E. UTM Northing (KM): 4400.8

12F. UTM Easting (KM): 512.1

12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Replace existing plant flare with a ground flare and removal of emergency flare.

14A. Provide the date of anticipated installation or change: 6/1/2015

If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /

14B. Date of anticipated Start-Up if a permit is granted:

6/1/2015

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

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

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

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

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

Section II. Additional attachments and supporting documents.

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

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

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

- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

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

23. Provide a **Process Description** as **Attachment G**.

- Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

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

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

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

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

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

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

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

General Emission Unit, specify: **Fire Pump Engines (2), Ground Flare.**

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

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

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

Other Collectors, specify: **Electric Vapor Recovery Units (2)**

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

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

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

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

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

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?
 YES NO

➤ If YES, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "**Precautionary Notice – Claims of Confidentiality**" guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

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

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

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

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

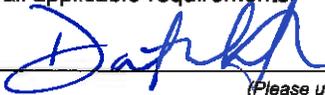
35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

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

Compliance Certification

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

SIGNATURE  DATE: 9/28/15
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: Daniel Wentworth		35C. Title: Sr. Vice President Engineering and Operations
35D. E-mail: daniel@caimanenergy.com	36E. Phone: 214-580-3700	36F. FAX: 214-580-3750
36A. Printed name of contact person (if different from above): Sean Wilson		36B. Title: Director, Environmental, Health, and Safety
36C. E-mail: SWilson@caimanenergy.com	36D. Phone: 214-580-7340	36E. FAX: 214-580-7360

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

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

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

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

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

D.3. 45 CSR 6: Control of Air Pollution from Combustion of Refuse

This rule establishes emission standards for PM and requirements for activities involving incineration of refuse which are not subject to, or are exempted from, regulation under a federal counterpart for specific combustion sources. This rule also prohibits (with limited exception) open burning and sets forth the registration, permitting, reporting, testing, emergency, natural disaster and exemption provisions for activities involving the combustion of refuse and land clearing debris. This rule applies to the Plant. BRM will continue to comply with the open burning provisions of this rule.

This rule limits the Flare's visible emissions to 20% opacity, except during periods aggregating to no more than eight (8) minutes in any sixty (60) minute period, during which opacity is limited to 40%. This rule also requires that the Flare be permitted, and that the Flare be tested upon agency request. BRM will operate the ground flare (EU#: S004A) in accordance with this rule.

D.4. 45 CSR 7: To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations

This rule establishes emission standards for PM and opacity from manufacturing processes. This rule does not apply to emissions regulated by 45 CSR 2, 3, or 5 or to source(s) that have a PTE less than one (1) lb/hr PM and an aggregate of less than one thousand (1,000) lb/yr for all such sources of particulate matter located at the stationary source. Therefore, this rule does not apply to the Plant's fuel burning units (EU#s: S001, S012, S013, S016, S017, S018, S019, S020, and S022) because they are regulated by 45 CSR 2. The remaining emissions sources at the Plant have negligible PM emission rates and/or are not manufacturing processes. Therefore, this rule does not apply.

D.5. 45 CSR 10: To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

This rule establishes weight-based emission standards for SO₂ from fuel burning units. Marshall County is listed as a Priority I region in Table 45-10A. The Plant's heaters are all type "b" units, as defined in the rule. For type "b" fuel burning units in a Priority I region, the SO₂ emission limit is the product of 3.1 and the total design heat inputs for such units in MMBtu/hr, with each stack not exceeding 25% of the total allowable emission rate for the site. All heaters at the Plant are fired on sweet natural gas, with an emission rate well below this limitation.

No other requirements of this rule apply to the Plant.

D.6. 45 CSR 13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation

This rule establishes the permitting requirements for minor sources. The Plant is currently permitted by Rule 13 Permit No. R13-2896C, in accordance with this rule. The Plant is not a major source of criteria pollutants, and the Project results in a minor modification, subject to the permitting requirements of this rule. Detailed emission rate calculations are included in Attachment N to this application.

D.7. 45 CSR 14: Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration of Air Quality

The Plant is a minor source and the Project will not increase emissions of criteria pollutants above the major source thresholds. Therefore, this rule is not applicable.

D.8. 45 CSR 16: Standards of Performance for New Stationary Sources

This rule incorporates by reference the NSPS codified in 40 CFR Part 60. The following sections address the NSPS applicable to the Plant, which include:

- NSPS Subpart A, §60.18 for Flares
- NSPS Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
- NSPS Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
- NSPS KKK – Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plant for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984 and on or Before August 23, 2011
- NSPS IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- NSPS OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution

D.8.1. NSPS A, §60.18

Because the ground flare (EU#: S004A) controls equipment subject to NSPS standards (e.g., pressure relief valves subject to NSPS OOOO), the ground flare is subject to the requirements of 40 CFR §60.18. BRM will design and operate the flare in accordance with 40 CFR §60.18, including specifications for minimum heating value of the waste gas and flame monitoring, as summarized in Attachment O.

Attachment I
Emission Units Table
(includes all emission units and air pollution control devices
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID ¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
S001	P001	Hot Oil Heater (216.7 MMBtu/hr)	2014	216.7 MMBtu/hr	Modification - 2014	None
S004A	P004A	Ground Flare	2015	N/A	New	Flare (C004A)
S004	P004	Main Flare	2013	N/A	Removal - 2015	Flare (C004)
S021	P021	Emergency Flare	2015	N/A	Removal - 2015	(C021)
S007	P004A	Slop Tank TK-906	2011	500 BBL	Existing	C005, C004A
S011	P005	Ethane Amine Regenerator	2011	29 MMscf/day	Modification - 2014	None
S014	P006	Ethane Amine Regenerator	2014	100 MMscf/day	New	None
S005	P001	Natural Gasoline Storage Tank	2011	17,000 BBL	Modification - 2014	C001
S023	P001	Natural Gasoline Storage Tank	2014	38,788 BBL	New	C001
S016	P016	Hot Oil Heater (61.6 MMBtu/hr)	2014	61.6 MMBtu/hr	New	None
S017	P017	Hot Oil Heater (61.6 MMBtu/hr)	2014	61.6 MMBtu/hr	New	None
S018	P018	Hot Oil Heater (61.6 MMBtu/hr)	2014	61.6 MMBtu/hr	New	None
S019	P019	Hot Oil Heater (61.6 MMBtu/hr)	2014	61.6 MMBtu/hr	New	None
S020	P020	Glycol Reboiler (3.0 MMBtu/hr)	2014	3.0 MMBtu/hr	New	None
ROADS (S010)	ROADS	Unpaved Roads	2011	N/A	Modification - 2014	None

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data															
Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration (ppmv or mg/m ⁴) ⁷
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
P001	Vertical Stack	S001	Hot Oil Heater	N/A	N/A	C	N/A	NO _x CO VOC PM SO ₂ CO _{2e} (1) HAPs	5.63 3.25 0.37 1.61 0.16 -- (2)	24.68 14.24 1.61 7.07 0.69 111,058 (2)	5.63 3.25 0.37 1.61 0.16 -- (2)	24.68 14.24 1.61 7.07 0.69 111,058 (2)	Gas Gas Gas Gas Gas Gas Gas	EE	N/A
P004A	Vertical	S004A	Ground Flare	N/A	N/A	C	N/A	NO _x CO VOC PM SO ₂ CO _{2e} (1) HAPs	1.28 2.56 2.31 0.07 0.001 -- (2)	1.03 2.06 0.18 0.06 0.004 890 (2)	1.28 2.56 2.31 0.07 0.001 -- (2)	1.03 2.06 0.18 0.06 0.004 890 (2)	Gas Gas Gas Gas Gas Gas Gas	EE	N/A
P004A	Vertical	S007	Slop Tank TK-906	N/A	N/A	N/A	N/A	--	--	--	--	--	Gas	N/A	N/A

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data

Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Temp. (°F)	Exit Gas		Emission Point Elevation (ft)			UTM Coordinates (km)	
			Volumetric Flow ¹ (acfm) at operating conditions	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting	
P001	10.75	670	81,551	N/A	655 ft	60 ft	440.82608	512.10631	
P004A	N/A	N/A	N/A	N/A	655 ft	20 ft	440.09092	511.97901	
P005		120	131		655 ft		440.08144	511.92532	
P023		120	131		655 ft		440.10716	511.83455	
P006		120	438		655 ft		440.10716	511.83455	
P016	4.0	670	23,182	102	655 ft	26 ft	440.09433	512.01931	
P017	4.0	670	23,182	102	655 ft	26 ft	440.09242	512.02482	
P018	4.0	670	23,182	102	655 ft	26 ft	440.09414	512.01261	
P019	4.0	670	23,182	102	655 ft	26 ft	440.09225	512.01773	
P020	1.0	800	1,273	27	655 ft	20 ft	440.82608	512.10631	
ROADS	N/A	N/A	Not Applicable				440.09919	511.86586	
FUG AREA 2	N/A	N/A	Not Applicable				440.10907	511.91575	
P002	~0.5	~950	~1,300	N/A	655 ft	N/A	440.82608	512.10631	
P003	~0.5	~950	~1,300	N/A	655 ft	N/A	440.82608	512.10631	
P022	~0.5	~950	~1,300	N/A	655 ft	N/A	440.82608	512.10631	
P012	2.5	550	8,500	30	655 ft	20	440.11979	511.97605	
P013	4.0	225	6,068	10	655 ft	20	440.11971	511.96864	

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

16 pilots at 85 scf/hr each of natural gas, and 117 scf/hr purge gas.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

See Attachment M design summary.

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air: %

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

16 pilots at 1.399 MMBtu/hr (1360 scf/hr for all 16 pilots and 1,029 Btu/scf) and 117 scf/hr purge gas.

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

N/A

(g) Proposed maximum design heat input: 22,500 × 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day	24 (flare pilot)	Days/Week	7 (flare pilot)	Weeks/Year	52 (flare pilot)
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Attachment M
Air Pollution Control Device Sheet
 (FLARE SYSTEM)

Control Device ID No. (must match Emission Units Table): C004A

Equipment Information

1. Manufacturer: Callidus Model No. CAL-MP staged, multipoint flare system	2. Method: <input type="checkbox"/> Elevated flare <input checked="" type="checkbox"/> Ground flare <input type="checkbox"/> Other Describe
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. Method of system used: <input type="checkbox"/> Steam-assisted <input type="checkbox"/> Air-assisted <input type="checkbox"/> Pressure-assisted <input checked="" type="checkbox"/> Non-assisted	
5. Maximum capacity of flare: <div style="text-align: right;">scf/min</div> <div style="text-align: right;">19,800,000 scf/hr</div>	6. Dimensions of stack: Diameter 1.67 ft. Height 20 ft.
7. Estimated combustion efficiency: (Waste gas destruction efficiency) Estimated: 98 % Minimum guaranteed: 98 %	8. Fuel used in burners: <input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Fuel Oil, Number <input type="checkbox"/> Other, Specify:
9. Number of burners: 229 Rating: 22,500,000,000 BTU/hr	11. Describe method of controlling flame: Pressure Staging
10. Will preheat be used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
12. Flare height: 20 ft.	14. Natural gas flow rate to flare pilot flame per pilot light: <div style="text-align: right;">85 scf/hr</div>
13. Flare tip inside diameter: 0.25 (burner riser) ft	
15. Number of pilot lights: sixteen (16) Total 1,399,000 BTU/hr	16. Will automatic re-ignition be used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
17. If automatic re-ignition will be used, describe the method: An auto flame front ignition is used for re-ignition. A thermocouple controller is used to indicate a loss of flame and a signal is sent to open the air/gas mixture at the panel. The panel then begins a series of re-ignitions using the flame front ignition and the necessary pilots.	
18. Is pilot flame equipped with a monitor? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, what type? <input checked="" type="checkbox"/> Thermocouple <input type="checkbox"/> Infra-Red <input type="checkbox"/> Ultra Violet <input type="checkbox"/> Camera with monitoring control room <input type="checkbox"/> Other, Describe:	
19. Hours of unit operation per year: Pilots: 8,760 hours Flare: As Needed	

Steam Injection

20. Will steam injection be used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		21. Steam pressure Minimum Expected: Design Maximum: _____ PSIG
22. Total Steam flow rate: _____ LB/hr	23. Temperature: _____ °F	
24. Velocity _____ ft/sec	25. Number of jet streams _____	
26. Diameter of steam jets: _____ in	27. Design basis for steam injected: _____ LB steam/LB hydrocarbon	
28. How will steam flow be controlled if steam injection is used?		

Characteristics of the Waste Gas Stream to be Burned

29.	Name	Quantity Grains of H ₂ S/100 ft ³	Quantity (LB/hr, ft ³ /hr, etc)	Source of Material
	See Attached			
30. Estimate total combustible to flare: _____ see attached _____ LB/hr or ACF/hr (Maximum mass flow rate of waste gas) _____ scfm				
31. Estimated total flow rate to flare including materials to be burned, carrier gases, auxiliary fuel, etc.: See attached _____ LB/hr or ACF/hr				
32. Give composition of carrier gases: See attached				
33. Temperature of emission stream: _____ °F See attached		34. Identify and describe all auxiliary fuels to be burned. see attached		
Heating value of emission stream: _____ BTU/ft ³		BTU/scf		
Mean molecular weight of emission stream: MW = _____ lb/lb-mole		BTU/scf		
35. Temperature of flare gas: _____ °F see attached		36. Flare gas flow rate: _____ scf/min		
37. Flare gas heat content: _____ BTU/ft ³ see attached		38. Flare gas exit velocity: _____ scf/min see attached		
39. Maximum rate during emergency for one major piece of equipment or process unit: _____ scf/min see attached				
40. Maximum rate during emergency for one major piece of equipment or process unit: _____ BTU/min see attached				
41. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):				
42. Describe the collection material disposal system:				
43. Have you included Flare Control Device in the Emissions Points Data Summary Sheet? Yes				

44. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

Proposed continuous monitoring of the flame presence with a thermocouple. Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.

RECORDKEEPING:

Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.

REPORTING:

Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.

TESTING:

Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.

MONITORING:

Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING:

Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

45. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

N/A

46. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

VOC control = 98%

47. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

PRESSURE RELIEF VALVES TO FLARE POTENTIAL TO EMIT
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

Emission Point ID	Flare	P004				
Component	Component LHV (Btu/lb)	Uncontrolled Emissions From Area 2 Pressure Relief Valve		Flare DRE (%)	Potential to Emit ^c	
		Equipment Leaks ^a			Hourly (lb/hr)	Annual (T/yr)
		Hourly (lb/hr)	Annual (T/yr)			
Methane	21,502	0.0785	0.3439	99%	0.0008	0.0034
Ethane	20,416	0.3063	1.3417	99%	0.0031	0.0134
Propane	19,929	0.2038	0.8928	98%	0.0041	0.0179
i-Butane	19,614	0.0246	0.1079	98%	0.0005	0.0022
n-Butane	19,665	0.1170	0.5125	98%	0.0023	0.0103
i-Pentane	19,451	0.0568	0.2486	98%	0.0011	0.0050
n-Pentane	19,499	0.0657	0.2879	98%	0.0013	0.0058
n-Hexane	19,391	0.0072	0.0316	98%	0.0001	0.0006
Other Hexanes	19,147	0.0311	0.1364	98%	0.0006	0.0027
Benzene	18,000	0.0015	0.0064	98%	0.0000	0.0001
Heptane	19,163	0.0039	0.0171	98%	0.0001	0.0003
Octane	19,104	0.0048	0.0212	98%	0.0001	0.0004
Toluene	18,501	0.0015	0.0065	98%	0.00003	0.0001
Ethylbenzene	17,780	0.0001	0.0004	98%	0.000002	0.00001
Xylene	18,410	0.0004	0.0019	98%	0.00001	0.00004
TOTAL:	20,081	0.90	3.96		0.01	0.06
TOTAL VOC:		0.52	2.27		0.01	0.05
TOTAL HAPs:		0.01	0.05		0.0002	0.001

Component	Component LHV (Btu/lb)	Uncontrolled Emissions From Plant Relief Valve Equipment		Flare DRE (%)	Potential to Emit ^c	
		Leaks ^b			Hourly (lb/hr)	Annual (T/yr)
		Hourly (lb/hr)	Annual (T/yr)			
Methane	21,502	0.6802	2.9795	99%	0.0068	0.0298
Ethane	20,416	1.9560	8.5671	99%	0.0196	0.0857
Propane	19,929	0.2247	0.9844	98%	0.0045	0.0197
i-Butane	19,614	0.1736	0.7602	98%	0.0035	0.0152
n-Butane	19,665	0.0831	0.3639	98%	0.0017	0.0073
i-Pentane	19,451	0.0259	0.1136	98%	0.0005	0.0023
n-Pentane	19,499	0.0303	0.1328	98%	0.0006	0.0027
n-Hexane	19,391	0.0039	0.0172	98%	0.0001	0.0003
Other Hexanes	19,147	0.0170	0.0744	98%	0.0003	0.0015
Benzene	18,000	0.0008	0.0035	98%	0.0000	0.0001
Ethyl Mercaptan	20,416	0.0019	0.0085	98%	0.0000	0.0002
Heptane	19,163	0.0021	0.0093	98%	0.0000	0.0002
Octane	19,104	0.0026	0.0115	98%	0.0001	0.0002
Toluene	18,501	0.0008	0.0035	98%	0.0000	0.0001
Ethylbenzene	17,780	0.00005	0.0002	98%	0.0000	0.0000
Xylene	18,410	0.0002	0.0010	98%	0.0000	0.0000
TOTAL:	20,522	3.20	14.03		0.04	0.17
TOTAL VOC:		0.57	2.48		0.01	0.05
TOTAL HAPs:		0.01	0.03		0.0001	0.001

^a Please refer to the calculation sheet "Fug Area 2 Pressure Relief Valve Equipment Leaks to Flare."

^b Please refer to the calculation sheet "Plant Pressure Relief Valve Equipment Leaks to Flare."

^c An example calculation for Potential to Emit Ethane follows:

$$\text{Ethane PTE (lb/hr)} = (\text{Uncontrolled PRV Equipment Leaks, (lb/hr)}) * (1 - \text{Flare DRE, (wt\%)})$$

$$\text{Ethane PTE (lb/hr)} = [(0.3063 \text{ lb/hr})] * (1 - 99\% \text{ wt\%})$$

$$\text{Ethane PTE (lb/hr)} = \boxed{0.0031}$$

CALCULATION OF GREENHOUSE GAS EMISSIONS FROM FLARE WASTE GAS COMBUSTION
AIR PERMIT APPLICATION
SODIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

CO₂ Combustion Emissions

Compound	Number of Carbon Atoms	Molecular Weight lb/lbmol	Pressure Relief Vents (Area 2) ^a		Pressure Relief Vents (Plant) ^a		Maintenance and Blowdowns		Total Emissions		Total CO ₂ Emissions	
			Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	CO ₂ Hourly (lb/hr)	CO ₂ Annual (T/yr)
Methane	1	16.043	0.0785	0.3439	0.6802	2.9795	260.3405	13.3676	261.0993	16.6911	708.9376	45.3196
Ethane	2	30.07	0.3063	1.3417	1.9579	8.5756	274.7789	4.1295	277.0431	14.0469	802.6603	40.6972
Propane	3	44.097	0.2038	0.8928	0.2247	0.9844	60.8592	1.2764	61.2878	3.1536	179.7898	9.2512
i-Butane	4	58.123	0.0246	0.1079	0.1736	0.7602	9.9553	0.2088	10.1535	1.0769	30.1305	3.1956
n-Butane	4	58.123	0.1170	0.5125	0.0831	0.3639	24.3563	0.5108	24.5564	1.3872	72.8711	4.1166
i-Pentane	5	72.15	0.0568	0.2486	0.0259	0.1136	6.8754	0.1442	6.9581	0.5064	20.7923	1.5132
n-Pentane	5	72.15	0.0657	0.2879	0.0303	0.1328	7.6338	0.1601	7.7298	0.5808	23.0984	1.7355
n-Hexane	6	86.172	0.0384	0.1681	0.0209	0.0916	2.3859	0.0500	2.4452	0.3097	7.3413	0.9299
Heptane	7	100.198	0.0039	0.0171	0.0021	0.0093	0.0000	0.0000	0.0060	0.0264	0.0181	0.0795
Benzene	6	78.00	0.0015	0.0064	0.0008	0.0035	0.0000	0.0000	0.0023	0.0099	0.0075	0.0328
Toluene	7	92.13	0.0015	0.0065	0.0008	0.0035	0.0000	0.0000	0.0023	0.0101	0.0075	0.0330
Ethylbenzene	8	106.165	0.0001	0.0004	0.0000	0.0002	0.0000	0.0000	0.0001	0.0006	0.0004	0.0019
Xylene	8	106.165	0.0004	0.0019	0.0002	0.0010	0.0000	0.0000	0.0007	0.0029	0.0022	0.0095
Octane	8	114.224	0.0048	0.0212	0.0026	0.0115	0.0000	0.0000	0.0075	0.0327	0.0225	0.0987
Total CO₂ Emissions:											1,845.6794	107.0140

Sample calculation CO₂ combustion (using methane):

$$\text{CO}_2 \text{ Hourly} = (\text{Total Waste Gas Flow, lb/hr}) * (0.99 \text{ destruction efficiency}) * (\text{No. of C, lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (\text{MW, lb CH}_4/\text{lbmol CH}_4)$$

$$= (261.10 \text{ lb/hr}) * (0.99) * (1 \text{ lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (16.04 \text{ lb CH}_4/\text{lbmol CH}_4)$$

$$= 708.9376 \text{ lb/hr}$$

$$\text{CO}_2 \text{ Annual} = (\text{Total Waste Gas Flow, T/yr}) * (0.99 \text{ destruction efficiency}) * (\text{No. of C, lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (\text{MW, lb CH}_4/\text{lbmol CH}_4)$$

$$= (16.69 \text{ T/yr}) * (0.99) * (1 \text{ lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (16.04 \text{ lb CH}_4/\text{lbmol CH}_4)$$

$$= 45.3196 \text{ T/yr}$$

$$\text{N}_2\text{O} = \text{Fuel} * \text{HHV} * 0.0001 \text{ (Eq. W-40, §98.233(-)(6))}$$

Where:

N₂O = Annual emissions from combustion in kilograms

Fuel = volume combusted, scf

HHV = High heat value of fuel, MMBtu/scf

N₂O Combustion Emissions

Waste Gas Flow (scf/yr)	Pressure Relief Vents (Area 2) ^a		Pressure Relief Vents (Plant) ^a		Maintenance and Blowdowns				
	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted			
81,424.10	1,951.73	0.00002	394,127.73	1,136.03	0.00005	775,247.40	1,245.24	0.0001	
							N₂O Emissions (T/yr)		

Sample Calculation for Tank and Loading Emissions:

$$\text{N}_2\text{O} = (0.0001 \text{ kg N}_2\text{O/MMBtu}) * (\text{Waste Gas Flow, scf/yr}) * (\text{Heating Value, Btu/scf}) / (10^6 \text{ Btu/MMBtu}) / (0.4536 \text{ kg/lb}) / (2000 \text{ lb/T})$$

$$= (0.0001 \text{ kg N}_2\text{O/MMBtu}) * (81,424.10 \text{ scf/yr}) * (1,951.73 \text{ Btu/scf}) / (10^6 \text{ Btu/MMBtu}) / (0.4536 \text{ kg/lb}) / (2000 \text{ lb/T})$$

$$= 0.00002 \text{ T/yr}$$

Emission Summary:

CO ₂ (T/yr)	Pressure Relief Vents (Area 2) ^a		Pressure Relief Vents (Plant) ^a		Maintenance and Blowdowns		Total Emissions		Combustion CO ₂ (T/yr)	Combustion N ₂ O (T/yr)	CO ₂ e ^b (T/yr)
	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted			
0.00	0.003	0.00	0.03	0.04	0.13	0.04	0.17	107.01	0.0002	111.28	

^a Pressure relief vents from Area 2 and Plant were taken from Pressure Relief Valves To Flare Potential To Emit worksheet.

^b Total GHG emissions from flare waste gas combustion are calculated as follows:

$$(0.04 \text{ T/yr Uncombusted CO}_2) + (107.01 \text{ T/yr Combustion CO}_2) + ((0.17 \text{ T/yr Methane}) * 25) + ((0.0002 \text{ T/yr N}_2\text{O}) * 298) = 111.28 \text{ T/yr CO}_2\text{e}$$

Notice of Application

Notice is given that Blue Racer Midstream, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Rule 13 Air Permit for a Modification to the Natrium Natural Gas Extraction and Processing Plant located on 14787 Energy Road, near Proctor, in Marshall County, West Virginia. The latitude and longitude coordinates are: 39° 45' 34.9" N; 80° 51' 42.2" W.

Blue Racer Midstream, LLC estimates the modification will result in the following emissions of Regulated Air Pollutant discharges to the atmosphere of:

Regulated Air Pollutant	Emissions (T/yr)
Oxides of Nitrogen (NO _x):	-0.73
Carbon Monoxide (CO):	-1.61
Volatile Organic Compounds (VOC):	0.73
Particulate Matter (PM):	0.00
PM with an aerodynamic diameter of less than or equal to 10 microns (PM ₁₀)	0.00
PM with an aerodynamic diameter of less than or equal to 2.5 microns (PM _{2.5})	0.00
Sulfur Dioxide (SO ₂):	0.00
Greenhouse Gases (CO ₂ e):	-113

The ground flare operation is planned to begin on or about the 1st day of June, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the (Day) day of (Month), (Year).

Richard Moncrief
President and COO
5949 Sherry Lane, Suite 1300
Dallas, Texas 75225

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On April 17, 2015, Blue Racer Midstream, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to modify the Natrium Extraction and Fractionation Plant located at 14787 Energy Road, Proctor, Marshall County, WV at latitude 39.75996 and longitude -80.86101. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-2896D.

The following potential change in emissions will be authorized by this permit action: Carbon Monoxide, -1.08 tons per year (TPY); Oxides of Nitrogen, 0.38 TPY, Volatile Organic Compounds, -0.58 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on **XXXXXX**. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Joe Kessler, PE
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1219
FAX: 304/926-0478

Entire Document
NON-CONFIDENTIAL

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx

Kessler, Joseph R

From: Adkins, Sandra K
Sent: Monday, September 28, 2015 1:47 PM
To: wentworth.paul@epa.gov; bradley.megan@epa.gov; swilson@caimanenergy.com
Cc: Durham, William F; McKeone, Beverly D; McCumbers, Carrie; Hammonds, Stephanie E; Rice, Jennifer L; Taylor, Danielle R; Kessler, Joseph R; SeEVERS, Sharon M
Subject: WV Draft Permit R13-2896D for Blue Racer Midstream LLC; Natrium Extraction and Fractionation
Attachments: 2896D.doc; 2896D.doc; notice.pdf

Please find attached the Draft Permit R13-2896D, Engineering Evaluation, and Public Notice for Blue Racer Midstream, LLC's Natrium Extraction and Fractionation Plant located in Marshall County.

The notice will be published in the *Moundsville Daily Echo* on Wednesday, September 30, 2015, and the thirty day public comment period will end on Friday, October 30, 2015.

Should you have any questions or comments, please contact the permit writer, Joe Kessler, at 304 926-0499 x1219.

Kessler, Joseph R

From: Adkins, Sandra K
Sent: Monday, September 28, 2015 1:46 PM
To: Kessler, Joseph R
Subject: FW: Publication of Class I Legal Ad for the WV Division of Air Quality

From: Charles Walton [<mailto:mdsvecho@gmail.com>]
Sent: Monday, September 28, 2015 1:39 PM
To: Adkins, Sandra K <Sandra.K.Adkins@wv.gov>
Subject: Re: Publication of Class I Legal Ad for the WV Division of Air Quality

received

On Mon, Sep 28, 2015 at 12:08 PM, Adkins, Sandra K <Sandra.K.Adkins@wv.gov> wrote:

Please publish the information below as a Class I legal advertisement (one time only) in the Wednesday September 30, 2015, issue of the *Moundsville Daily Echo*. Please let me know that this has been received and will be published as requested. Thank you.

Send the invoice for payment and affidavit of publication to:

Sandra Adkins

WV Department of Environmental Protection

DIVISION OF AIR QUALITY

601- 57th Street

Charleston, WV 25304

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On April 17, 2015, Blue Racer Midstream, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to modify the Sodium Extraction and Fractionation Plant located

at 14787 Energy Road, Proctor, Marshall County, WV at latitude 39.75996 and longitude -80.86101. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-2896D.

The following potential change in emissions will be authorized by this permit action: Carbon Monoxide, -1.08 tons per year (TPY); Oxides of Nitrogen, 0.38 TPY, Volatile Organic Compounds, -0.58 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Friday, October 30, 2015. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Joe Kessler, PE

WV Department of Environmental Protection

Division of Air Quality

601 57th Street, SE

Charleston, WV 25304

Telephone: 304/926-0499, ext. 1219

FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx

Kessler, Joseph R

From: Adkins, Sandra K
Sent: Monday, September 28, 2015 1:45 PM
To: Wheeler, Cathy L
Cc: Kessler, Joseph R
Subject: DAQ Public Notice

Please see below the Public Notice for Draft Permit R13-2896D for Blue Racer Midstream, LLC's Natrium Extraction and Fractionation Plant located in Marshall County.

The notice will be published in the *Moundsville Daily Echo* on Wednesday, September 30, 2015, and the thirty day public comment period will end on Friday, October 30, 2015.

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On April 17, 2015, Blue Racer Midstream, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to modify the Natrium Extraction and Fractionation Plant located at 14787 Energy Road, Proctor, Marshall County, WV at latitude 39.75996 and longitude -80.86101. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-2896D.

The following potential change in emissions will be authorized by this permit action: Carbon Monoxide, -1.08 tons per year (TPY); Oxides of Nitrogen, 0.38 TPY, Volatile Organic Compounds, -0.58 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Friday, October 30, 2015. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Joe Kessler, PE
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1219
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx

Permit to Modify



Entire Document
NON-CONFIDENTIAL

R13- 2896D

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

Blue Racer Mistream, LLC
Natrium Extraction and Fractionation Processing Plant (NPP)
051-00142

DRAFT

William F. Durham
Director

Issued: DRAFT

This permit will supercede and replace Permit R13-2896C issued on November 6, 2014.

Facility Location: Proctor, Marshall County, West Virginia
Mailing Address: 5949 Sherry Lane, Suite 1300, Dallas, TX 75225
Facility Description: Natural Gas Extraction/Fractionation Facility
SIC/NAICS Codes: 1321/211112
UTM Coordinates: 512.1 km Easting • 4400.8 km Northing • Zone 17
Latitude/Longitude: 39.75969/-80.86172
Permit Type: Modification
Description of Change: Pursuant to the requirements of Consent Order CO-R13-E-2015-3, this permit addresses the replacement of the existing elevated flare with a ground flare system.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

This permit does not affect 45CSR30 applicability; the source is a nonmajor source subject to 45CSR30.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
S001	P001	Hot Oil Heater	2012	216.7 MMBTU/hr	None
S016	P016	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S017	P017	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S018	P018	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S019	P019	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S002	P002	Fire Pump #1	2012	700 HP	None
S003	P003	Fire Pump #2	2012	700 HP	None
S004 ⁽¹⁾	P004	John Zink Company, KMI Model 12-26 Multipoint Tip Elevated Flare	2013	19,800,000 scf/hr	n/a
S004A ⁽¹⁾	P004A	Callidus CAL-MP Staged, Multi-Point Ground Flare System	2015	19,800,000 scf/hr	n/a
S005	P004	Gasoline Storage Tank	2013	17,000 bbl (714,000 gal)	Natural Gas Blanket ⁽¹⁾
S023	P004	Gasoline Storage Tank	2014	38,788 bbl (1,629,096 gal)	Natural Gas Blanket ⁽¹⁾
S006	P001	Glycol Dehydration System	2012, TBD	460 MMcfd	None
S007	Flare (P004)	Slop Oil Tank (TK-906)	2013	500 bbl	Emergency Relief to VRU to Flare
S008	Flare (Emergency only)	Product Loading – Closed Loop	2012	35,000 gpm (Truck, Rail and Barge)	Vapor Return to Tank (S005)
S011	P005	Ethane Amine Regenerator	2012	29 mmscfd	None
S014	P006	Ethane Amine Regenerator	2014	100 mmscfd unit	None
S012	P012	Regenerative Gas Heater	2013	9.7 MMBTU/hr	None
S022	P022	Regenerative Gas Heater	2014	9.7 MMBTU/hr	None
S013	P013	Cryogenic Hot Medium Oil (HMO) Heater	2013	26.3 MMBTU/hr	None
S020	P020	Glycol Reboiler	2014	3.0 MMBTU/hr	None
US-800	Flare (Emergency only)	Spherical Propane Storage Tank	2012	51,000 bbl (2,142,000 gal)	Pressure Tank
US-801	Flare (Emergency only)	Spherical Isobutane Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
US-804	Flare (Emergency only)	Spherical Normal Butane Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank
US-805	Flare (Emergency only)	Spherical Natural Gas Liquid Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank
n/a	Flare (Emergency only)	Four (4) Pressurized Butane Bullet Tanks	2014	90,000 gal	Pressure Tank
TK-907	TK-907	Produced Water Tank	2012	1,500 bbl (63,000 gal)	None
TK-950	TK-950	Firewater Tank	2012	51,430 bbl (2,160,060 gal)	None
TK-605	TK-605	TEG Storage Tank	2012	1,000 gal	None
TK-2605	TK-2605	TEG Storage Tank	2012	1,000 gal	None
TK-119A	TK-119A	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-119B	TK-119B	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-452	TK-452	Spent Caustic Tank	2012	500 bbl (21,000 gal)	None
TK-453	TK-453	Caustic Tank	2012	500 bbl (21,000 gal)	None
UT-909	UT-909	Open Drain Sump (Oil/Water)	2012	2,800 gal	None
TK-2119A	TK-2119A	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-2119B	TK-2119B	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
UT-2520	UT-2520	Amine Sump	2012	2,800 gal	None
TK-2524	TK-2524	Amine Storage Tank	2012	100 bbl (4,200 gal)	None
TK-2522	TK-2522	Treated Water Storage Tank	2012	100 bbl (4,200 gal)	None
UT-607	UT-607	Glycol Sump (TEG/Water)	2013	1,400 gal	Vapor Return to Fuel Header
UT-2909	UT-2909	Open Drain Sump (Oil/Water)	2012	2,800 gal	None
TK-D1	TK-D1	Diesel Fuel Storage Tank	2012	700 gal	None
TK-D2	TK-D2	Diesel Fuel Storage Tank	2012	700 gal	None

- (1) Pursuant to Consent Order CO-R13-E-2015-3, S004A is to be installed to replace S004 by November 30, 2015.
- (2) Tank uses a natural gas blanket to prevent emissions of natural gasoline. Working/breathing losses of natural gas blanket are collected and sent to Hot Oil Heater as a supplemental fuel.

1.1. Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
Maintenance, Blowdowns, Pressure Relief Valves	Volatile Organic Compounds	Flare (C004)	98.0 %
	Total HAPs		98.0 %
Non-Routine Emergency Releases Only	Volatile Organic Compounds	Flare (C004A)	98.0 %
	Total HAPs		98.0 %

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5 μm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10μm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	Pph	Pounds per Hour
DAQ	Division of Air Quality	Ppm	Parts per Million
DEP	Department of Environmental Protection	Ppm_v or ppmv	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	Psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2896C. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2896 through R13-2896D, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; [45CSR§§13-5.11 and 10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must 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 the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** 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.
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements *[Reserved]*

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such 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. Such tests shall be conducted in accordance

with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in 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, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language;
 2. The result of the test for each permit or rule condition; and,
 3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a

computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State Enforceable Only.*]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit 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.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

If to the US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.

4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.1.5. **Maximum Throughput Limitation.** The total maximum combined wet natural gas throughput through the gas processing plant shall not exceed 400 mmscf/day. To demonstrate compliance, the permittee shall maintain records of the amount of natural gas processed in the gas processing plant.

5.0. Source-Specific Requirements (Hot Oil Heater, S001)

5.1. Limitations and Standards

5.1.1. The MDHI of the Hot Oil Heater designated as S001 shall not exceed 216.7 MMBTU/hr and, for each Hot Oil Heater designated as S016-S019, shall not exceed 61.58 MMBTU/hr. All Hot Oil Heaters (S001, S016-S019) shall be equipped with Low-NO_x burners.

5.1.2. Maximum emissions from the Hot Oil Heaters shall not exceed the following:

a. The maximum emissions from S001 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S001	Nitrogen Oxides	5.63	24.68
	Carbon Monoxide	3.25	14.24
	VOCs	0.37	1.61
	Particulate Matter-10	1.60	7.07
	Hexane	0.38	1.67

b. The maximum emissions from each heater S016-S019 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S016-S019	Nitrogen Oxides	1.48	6.47
	Carbon Monoxide	3.63	15.91
	VOCs	0.33	1.46
	Particulate Matter-10	0.46	2.01
	Hexane	0.11	0.47

5.1.3. The quantity of natural gas that shall be consumed in the 216.7 MMBTU/hr Hot Oil Heater (S001) shall not exceed 210,531 standard cubic feet per hour and 1,213 x 10⁶ standard cubic feet per year. The quantity of natural gas that shall be consumed in each 61.58 MMBTU/hr Hot Oil Heater (S016-S019) shall not exceed 60,373 standard cubic feet per hour and 529 x 10⁶ standard cubic feet per year.

5.1.4. 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.

[45CSR§2-3.1.]

5.1.5. The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

[40CFR§60.40b(a)]

- 5.1.6. Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO₂ emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO₂ emissions limit in paragraph (k)(1) of this section.
[40CFR§60.42b(k)(2)]
- 5.1.7. The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO₂ standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).
[40CFR§60.45b(j)]

5.2. Monitoring Requirements

- 5.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 5.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

5.3. Testing Requirements

- 5.3.1. Compliance with the visible emission requirements of section 5.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 5.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]
- 5.3.2. Within 60 days after achieving the maximum rate at which the Hot Oil Heaters (S016-S019) will be operated, but not later than 180 days after initial startup, the permittee shall conduct, or have conducted, a performance test on one of units to determine compliance with the CO and NO_x emission limits listed under 5.1.2(b). The test shall be conducted using an appropriate test method and according to the procedures given under 3.3 of this permit.

5.4. Recordkeeping Requirements

- 5.4.1. To demonstrate continuous compliance with sections 5.1.1-5.1.3, the permittee shall maintain a monthly record of the amount of natural gas consumed in S001 and S0016-S019.
- 5.4.2. Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
[40CFR§60.48(c)(g)(1)]
- 5.4.3. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
[40CFR§60.48(c)(g)(2)]
- 5.4.4. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂

standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
[40CFR§60.48(c)(g)(3)]

- 5.4.5. The permittee shall maintain records of all monitoring data required by Section 5.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.
- 5.4.6. The Hot Oil Heaters S016-S019 shall meet all applicable recordkeeping requirement given under 40 CFR 60, Subpart Dc.

5.5. Reporting Requirements

- 5.5.1. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:
1. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.
 2. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i).
 3. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.
 4. Notification that an emerging technology will be used for controlling emissions of SO₂. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

[40CFR§60.49b(a)]

- 5.5.2. The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:
1. The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or
 2. The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan

to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

- i. The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;
- ii. The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;
- iii. The ratio of different fuels in the mixture; and
- iv. The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

[40CFR§60.49b(r)]

- 5.5.3. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

6.0. Source-Specific Requirements (Cryo HMO Heater, S013)

6.1. Limitations and Standards

- 6.1.1. Maximum Design Heat Input. The maximum design heat input for the Cryo HMO Heater (S013) shall not exceed 26.3 MMBTU/hr.
- 6.1.2. Maximum emissions from the 26.3 MMBTU/hr Cryo HMO Heater (S013) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	2.56	11.19
Carbon Monoxide	2.15	9.40

- 6.1.3. To demonstrate compliance with Section 6.1.2, the hourly quantity of natural gas that shall be consumed in the 26.3 MMBTU/hr Cryo HMO Heater (S013) shall not exceed 25,551 standard cubic feet per hour and 223.8×10^6 standard cubic feet per year.
- 6.1.4. 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.
[45CSR§2-3.1.]
- 6.1.5. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.48c and submitted to the addresses listed in Section 3.5.3.

6.2. Monitoring Requirements

- 6.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 6.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

6.3. Testing Requirements

- 6.3.1. Compliance with the visible emission requirements of section 6.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 6.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

6.4. Recordkeeping Requirements

- 6.4.1. To demonstrate compliance with sections 6.1.1 and 6.1.2, the permittee shall maintain a monthly record of the amount of natural gas consumed and the hours of operation of the 26.3 MMBTU/hr Cryo HMO Heater (S013). Compliance with the maximum throughput limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.

- 6.4.2. Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
[40CFR§60.48(c)(g)(1)]
- 6.4.3. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
[40CFR§60.48 (c)(g)(2)]
- 6.4.4. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
[40CFR§60.48(c)(g)(3)]
- 6.4.5. The permittee shall maintain records of all monitoring data required by Section 6.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

6.5. Reporting Requirements

- 6.5.1. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:
1. The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
 2. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.
 3. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
 4. Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.
[40CFR§60.48c(a)]
- 6.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following

information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

7.0. Source-Specific Requirements (Regen Gas Heaters, S012, S022)

7.1. Limitations and Standards

- 7.1.1. The MDHI of each Regen Gas Heater (S012, S022) shall not exceed 9.7 MMBTU/hr.
- 7.1.2. Maximum emissions from each 9.7 MMBTU/hr Regen Gas Heater (S012, S022) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.95	4.17
Carbon Monoxide	0.80	3.50

- 7.1.3. To demonstrate compliance with Section 7.1.2, the quantity of natural gas that shall be consumed in each 9.7 MMBTU/hr Regen Gas Heater (S012, S022) shall not exceed 9,424 cubic feet per hour and 82.55×10^6 cubic feet per year.
- 7.1.4. 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.
[45CSR§2-3.1.]

7.2. Monitoring Requirements

- 7.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 7.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

7.3. Testing Requirements

- 7.3.1. Compliance with the visible emission requirements of section 7.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 7.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

7.4. Recordkeeping Requirements

- 7.4.1. To demonstrate compliance with sections 7.1.1, 7.1.2, 7.1.3, the permittee shall maintain records of the amount of natural gas consumed in each 9.7 MMBTU/hr Regen Gas Heater (S012, S022).
- 7.4.2. The permittee shall maintain records of all monitoring data required by Section 7.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

7.5. Reporting Requirements

- 7.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

8.0. Source-Specific Requirements (Fire Pumps, S002, S003)

8.1. Limitations and Standards

- 8.1.1. The quantity of diesel fuel that shall be consumed in each of the 700 hp diesel fired fire pump engines, Caterpillar C18 (S002, S003) shall not exceed 35.9 gallons per hour and 3,950 gallons per year.
- 8.1.2. Maximum emissions from each of the 700 hp diesel fired fire pumps, Caterpillar C18 (S002, S003) shall not exceed the following limits:

Emission Unit ID The new Reg	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S002	Nitrogen Oxides	5.31	0.27
S003	Carbon Monoxide	2.18	0.11
	Volatile Organic Compounds	0.08	0.01

- 8.1.3. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for each of the 700 hp diesel fired fire pump engines, Caterpillar C18 (S002, S003) shall not exceed 100 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.
- 8.1.4. **Emission Standards**
 Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants. [40CFR§60.4205c]
- 8.1.5. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 and §60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [40CFR§60.4206]
- 8.1.6. **Fuel Requirements**
 Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [40CFR§60.4207b]
- 8.1.7. **Fuel Requirements**
 Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator. [40CFR§60.4207c]
- 8.1.8. **Fuel Requirements**
 Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section. [40CFR§60.4207e]
- 8.1.9. In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section. [40CFR§60.4208g]

- 8.1.10. If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211. [40CFR§60.4209]
- 8.1.11. If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine. [40CFR§60.4209a]
- 8.1.12. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40CFR§60.4209b]
- 8.1.13. If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. [40CFR§60.4211a]
- 8.1.14. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications. [40CFR§60.4211c]
- 8.1.15. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited. [40CFR§60.4211e]

8.2. Testing Requirements

8.2.1. Stack Testing

At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Secretary thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or other tests the Secretary may specify shall be conducted to determine compliance. For cause, the Secretary may request the permittee to install such stack gas monitoring devices as the Secretary deems necessary to determine continuing compliance. The data from such devices shall be readily available for review on-site or such other reasonable location that the Secretary may specify. At the request of the Secretary, such data shall be made available for inspection or copying and the Secretary may require periodic submission of excess emission reports (45CSR13).

- 8.2.1.a. All periodic tests to determine mass emission limits from or air pollutant concentrations in 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, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary. [WV Code § 22-5-4(a)(15)]

8.2.2. Notification of Compliance Testing

For any compliance test to be conducted by the permittee as set forth in this section, a test protocol shall be submitted to the Secretary at least thirty (30) calendar days prior to the scheduled date of the test. Such compliance test protocol shall be subject to approval by the Secretary. The permittee shall notify the Secretary at least fifteen (15) calendar days in advance of actual compliance test dates and times during which the test (or tests) will be conducted.

8.2.3. Alternative Test Methods

The Secretary may require a different test method or approve an alternative method in light of any technology advancements that may occur and may conduct such other tests as may be deemed necessary to evaluate air pollution emissions.

8.2.4. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section. [40CFR§60.4212]

8.2.5. The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F. [40CFR§60.4212a]

8.2.6. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039. [40CFR§60.4212b]

8.2.7. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE Requirement for each pollutant - $(1.25) \times (\text{STD})$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate. [40CFR§60.4212c]

8.2.8. Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load. [40CFR§60.4213a]

8.2.9. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). [40CFR§60.4213b]

8.2.10. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour. [40CFR§60.4213c]

8.2.11. To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section. [40CFR§60.4213d]

- (1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,
 C_o = concentration of NO_x or PM at the control device outlet, and
 R = percent reduction of NO_x or PM emissions.

- (2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

Where:

$$C_{adj} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad (\text{Eq. 3})$$

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .
 C_d = Measured concentration of NO_x or PM, uncorrected.
5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.
 $\% \text{O}_2$ = Measured O_2 concentration, dry basis, percent.

- (3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(I) through (iii) of this section.

- (i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 4})$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2 , percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{Btu}$).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{Btu}$).

- (ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{\text{CO}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

XCO₂ = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂ - 15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the NO_x and PM gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O₂.

C_d = Measured concentration of NO_x or PM, uncorrected.

%CO₂ = Measured CO₂ concentration, dry basis, percent.

8.2.12. To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 7 of this section: [40CFR§60.4213e]

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_x concentration in ppm.

1.912x10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

8.2.13. To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

8.3. Recordkeeping and Reporting Requirements

8.3.1. Records, Operation and Compliance

- a. For the purpose of determining compliance with Section 8.1.1, the permittee shall maintain a monthly record of quantity of diesel fuel burned.
- b. For the purpose of determining compliance with Section 8.1.3, the permittee shall maintain a monthly record of hours of operation.

8.3.2. Monitoring Information

The permittee shall keep the following records of monitoring information:

- a. The date, place as defined in this permit and time of sampling measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

8.3.3. **Equipment Maintenance Records.** The permittee shall maintain maintenance records relating to failure and/or repair of fire pump equipment. In the event of equipment or system failure, these records shall document the permittee's effort to maintain proper and effective operation of such equipment and/or systems.

8.3.4. **Compliance Testing**

The permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Section 8.0.

8.3.6. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [40CFR§60.4214b]

8.3.7. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40CFR§60.4214c]

9.0. Source-Specific Requirements (40CFR63 Subpart ZZZZ Requirements, Fire Pumps, S002, S003)

9.1. Limitations and Standards

9.1.1. The permittee must comply with the applicable operating limitations in this section no later than October 19, 2013.

[40 C.F.R. § 63.6595(a)]

9.1.2. *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The permittee meets the criteria of paragraph (c)(1), which is for a new or reconstructed stationary RICE located at an area source. The permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII listed in Section 8.0 of this permit.

10.0. Source-Specific Hazardous Air Pollutant Requirements (Natural Gas Dehydration, S006)

10.1. Limitations and Standards

- 10.1.1. **Maximum Throughput Limitation.** The aggregate maximum wet natural gas throughput to the glycol dehydration unit/still column(s) shall not exceed 460 mmscfd. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 10.1.2. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 CFR 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used.
- 10.1.3. All natural gas glycol dehydration activities (S006) shall be designed and operated in accordance with the following:
- a. The vapors/overheads from the still column shall be routed through a closed vent system to the hot oil heater (S001) at all times when there is a potential that vapors (emissions) can be generated from the still column.
 - b. The vapors/overheads from the still column shall be introduced into the flame zone of the hot oil heater (S001).
- 10.1.4. The permittee is exempt from the requirements of 40CFR§63.760(b)(2) if the criteria below is met, except that the records of the determination of these criteria must be maintained as required in 40CFR§63.774(d)(1).
- a. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year (1 ton/yr), as determined by the procedures specified in §63.772(b)(2) of this subpart.
[40CFR§63.764(e)]
- 10.1.5. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.
[40CFR§63.760(c)]

10.2. Monitoring Requirements

- 10.2.1. The permittee shall monitor the throughput of wet natural gas fed to the dehydration system(s) on a monthly basis for glycol dehydration (S006).
- 10.2.2. In order to demonstrate compliance with the area source status, claimed within section 10.1, as well as the benzene exemption in section 10.1.4, the following parameters shall be measured at least once quarterly, with the exception of natural gas flowrate annual daily average, natural gas flowrate maximum design capacity, and wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below.
- a. Natural Gas Flowrate
 - i. Operating hours per quarter
 - ii. Quarterly throughput (MMscf/quarter)
 - iii. Annual daily average (MMscf/day), and

- iv. Maximum design capacity (MMscf/day)
- b. Absorber temperature and pressure
- c. Lean glycol circulation rate
- d. Glycol pump type and maximum design capacity (gpm)
- e. Flash tank temperature and pressure, if applicable
- f. Stripping Gas flow rate, if applicable
- g. Wet gas composition (upstream of the absorber – dehydration column) sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc™ Technical Reference User Manual and Handbook V4
- h. Wet gas water content (lbs H₂O/MMscf)
- i. Dry gas water content (lbs H₂O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H₂O / MMscf
- b. Wet gas water content can be assumed to be saturated
- c. Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI
- d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal TEG / lb H₂O removed.

Note: If you are measuring and using actual wet or dry gas water content, then you should also measure the glycol recirculation rate rather than using the default TEG recirculation ratio.
[45CSR§13-5.11, §63.772(b)(2)(i)]

10.3. Recordkeeping Requirements

- 10.3.1. 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 analysis as specified in the GRI-GLYCalc™ V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date. The initial compliance test must be conducted within 180 days of permit issuance or within 180 days of startup of the glycol dehydration unit, whichever is later.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, the permittee may opt to produce a weighted average based on throughput between multiple sampling events, which can be used to define a more representative average annual gas composition profile.

[45CSR§13-5.11]

- 10.3.2. The following testing and compliance provisions of Part 63 Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities are applicable to the facility:

§ 63.772 Test methods, compliance procedures, and compliance demonstrations.

- (b) Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.

(2) The determination of actual average benzene emissions or BTEX emissions from a glycol dehydration unit shall be made using the procedures of paragraph (b)(2)(i) of this requirement. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1).

[§63.772(b)(2)(i)]

10.3.3. The permittee shall maintain a record of the wet natural gas throughput through the glycol dehydration units/still column (S006) to demonstrate compliance with section 10.1.1 of this permit.

10.3.4. For the purpose of documenting compliance with the emission' limitations, HAP major source thresholds, as well as the benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GRI-GLYCalc™ emission estimates.

[45CSR§13-5.11]

11.0. Source-Specific Requirements (Vapor Recovery Unit System (C005), Natural Gasoline Storage Tanks (S005, S023))

11.1. Limitations and Standards

- 11.1.1. Each Natural Gasoline Storage Tank (S005, S023) shall continually maintain a blanket of natural gas in the vapor space of the tank to mitigate any loss of natural gasoline vapors from working/breathing losses.
- 11.1.2. Any working or breathing losses that do occur from each Natural Gasoline Storage Tank (S005, S023) shall be collected by the vapor recovery unit system (C005) whereby the vapors are returned to the plant fuel gas header.
- 11.1.3. The vapor recovery units must be installed and operating upon permit issuance. The system will employ a vapor return which shall be designed to achieve a minimum guaranteed capture efficiency of 100% for each storage tank (S005, S023) followed by the vapor recovery unit required in in this Section.
- 11.1.4. Each Natural Gasoline Storage Tank (S005, S023) shall be designed and operated in accordance with the information file in permit applications R13-2896, R13-2896B, and R13-2896C.

11.2. Monitoring Requirements

- 11.2.1. To demonstrate compliance with section 11.1.3, the permittee shall monitor the vapor recovery units in accordance with the plans and specifications and manufacturer's recommendations.

11.3. Recordkeeping Requirements

- 11.3.1. **Record of Maintenance of Vapor Recovery Unit.** The permittee shall maintain accurate records of the vapor recovery unit equipment inspection and/or preventative maintenance procedures.
- 11.3.2. **Record of Malfunctions of Vapor Recovery Unit.** The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery unit during which excess emissions occur. For each such case, the following information shall be recorded:
 - a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.
For each such case associated with an equipment malfunction, the additional information shall also be recorded:
 - e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 11.3.3. Upon request by the Director, the permittee shall report deviations within a requested time from of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

12.0. Source-Specific Requirements (40CFR60 Subpart Kb, Natural Gasoline Storage Tanks, S005, S023)

12.1. Applicability and Designation of Affected Facility

- 12.1.1. Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. [§60.110b(a)]
- 12.1.2. This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa. [§60.110b(b)]
- 12.1.3. This subpart does not apply to the following: Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. [§60.110b(d)(2)]

12.2. Standard for Volatile Organic Compounds (VOC)

12.2.1. A closed vent system and control device meeting the following specifications:

- (i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).
- (ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions. [§60.112b(a)(3)(i)(ii)]

12.3. Testing and Procedures

- 12.3.1. The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.
 - (a) *Reserved;*
 - (b) *Reserved;*
 - (c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.
 - (1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.
 - (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under

this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

[40CFR§60.113b]

12.4. Reporting and Recordkeeping requirements

12.4.1. The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment. **[§60.115b]**

12.4.2. After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2). **[§60.115b (c)]**

12.4.3. The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

- (2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies. **[\$60.113b (c)]**

12.5. Monitoring of Operations

- 12.5.1. The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source. **[\$60.116b(a)]**
- 12.5.2. The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **[\$60.116b(b)]**
- 12.5.3. Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. **[\$60.116b(c)]**
- 12.5.4. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. **[\$60.116b(e)]**
 - (1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. **[\$60.116b(e)(1)]**
 - (2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
 - (i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
 - (ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. **[\$60.116b(e)(2)]**
 - (3) For other liquids, the vapor pressure:
 - (i) May be obtained from standard reference texts, or
 - (ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or
 - (iii) Measured by an appropriate method approved by the Administrator; or
 - (iv) Calculated by an appropriate method approved by the Administrator. **[\$60.116b(e)(3)]**
- 12.5.5. The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

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- (1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.
 - (2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
 - (i) ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or
 - (ii) ASTM D323-82 or 94 (incorporated by reference—see § 60.17); or
 - (iii) As measured by an appropriate method as approved by the Administrator.**[§60.116b(f)]**
- 12.5.6. The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section. **[§60.116b(g)]**

13.0. Source-Specific Requirements (Main Flares, S004 and S004A)

13.1. Limitations and Standards

13.1.1. The permittee shall install a non-assisted Callidus CAL-MP staged, multi-point flare system (with a maximum aggregate pilot light heat input of 1.399 MMBTU/hr) to replace the existing John Zink Company, KMI Model 12-26 Multipoint Tip pressure-assisted flare (with a maximum aggregate pilot light heat input of 0.201 MMBTU/hr) for control of potential emissions from maintenance events, equipment blowdowns, and pressure relief valves (in addition to use during non-routine emergency events and malfunctions). The requirements in this section apply to the existing flare until such time as the new flare replaces it. Unless otherwise specified, the following references to the "Main Flare" in this section apply to the flare in operation at that time.

13.1.2. a. Maximum aggregate combustion emissions from operation of the existing Main Flare shall not exceed the following during routine maintenance events, equipment blowdowns, and from pressure relief valves:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides ⁽¹⁾	0.65	0.58
Carbon Monoxide ⁽¹⁾	3.51	3.07

(1) Includes combustion emissions from pilot lights, sweep gas combustion, and combustion of waste gases.

b. Maximum aggregate combustion emissions from operation of the new Main Flare shall not exceed the following during routine maintenance events, equipment blowdowns, and from pressure relief valves:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides ⁽¹⁾	1.28	1.03
Carbon Monoxide ⁽¹⁾	2.56	2.06

(1) Includes combustion emissions from pilot lights, purge gas combustion, and combustion of waste gases.

c. Based on the minimum destruction and removal efficiency (DRE) of 98.0% as given under 13.1.7., maximum emissions of VOCs (generated during routine maintenance events, equipment blowdowns, and from pressure relief valves) emitted at the Main Flare (as uncombusted pass-through emissions) shall not exceed 2.26 lbs/hour and 0.16 tons/yr.

13.1.3 The total heat input of waste gases sent to the Main Flare during routine maintenance events, equipment blowdowns, and pressure relief valves shall not exceed 1,664 MMBTU per rolling twelve month period. When operating, the aggregate quantity of natural gas that shall be consumed as "sweep gas" in the existing Main Flare shall not exceed 11.39×10^6 cubic feet per rolling twelve month period. When operating, the aggregate quantity of natural gas that shall be consumed as "purge gas" in the existing Main Flare shall not exceed 1.02×10^6 cubic feet per rolling twelve month period.

13.1.4. The Main Flare is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

i. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater. [45CSR6 §4.1]

- ii. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. [45CSR6 §4.3]
 - iii. The provisions of paragraph (ii) 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 startup. [45CSR6 §4.4]
 - iv. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. [45CSR6 §4.5]
 - v. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. [45CSR6 §4.6]
 - vi. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such 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. [45CSR6 §7.1]
 - vii. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. [45CSR6 §7.2]
 - viii. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. [45CSR6 §8.2]
- 13.1.5. A pilot flame must be present at all times of operation of the Main Flare. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
 - 13.1.6. The Main Flare shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.
 - 13.1.7. The Main Flare shall be operated and designed in accordance with the information filed in permit application R13-2896C and R13-2896D to achieve a destruction efficiency of 98.0%.
 - 13.1.8. The inlet gas flow rate of the Main Flare must be equal to or less than the maximum specified by the manufacturer.
 - 13.1.9. The permittee will comply with the requirements of Section 2.12 of this permit during emergency operation of the Main Flare.

- 13.1.10 The permittee shall use a video camera to continuously record the existing Main Flare (S004) exhaust until such time that the existing Main Flare (S004) is replaced by the new ground flare system (S004A). The permittee shall use a video camera to continuously record the new ground flare system for a minimum of ninety (90) days. If at the end of this ninety (90) day period the new ground flare operates in continuous compliance, then the permittee may cease video camera recording. The video camera recording shall be maintained for a minimum period of one (1) week and be available for review by the DAQ upon request.

13.2. Monitoring Requirements

- 13.2.1. In order to demonstrate compliance with the requirements of 13.1.2, 13.1.3 and 13.1.4.i, the permittee shall monitor the aggregate throughput of sweep gas, purge gas and waste gases sent to the Main Flare on a monthly basis and develop a reasonably accurate means of determining the total heat input of waste gases sent to the Main Flare.
- 13.2.2. To demonstrate compliance with the flame requirements of 13.1.5 and 13.1.6, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

13.3. Testing Requirements

- 13.3.1. In order to demonstrate compliance with the Main Flare opacity requirements of 13.1.4.ii, the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test monthly. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course. If the flare fails the visible emissions test, the permittee must follow manufacturer's repair instructions, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan, to return the unit to compliant operation. All repairs and maintenance activities for the flare must be recorded in a maintenance and repair log and must be available for inspection. Following return to operation from maintenance or repair activity, each device must pass an EPA Method 22, 40 CFR part 60, appendix A, visual observation.
- 13.3.2. An initial operational assurance test by the Main Flare vendor shall be conducted to ensure flame stability and smokeless operation of the new flare (S004A).

13.4. Recordkeeping Requirements

- 13.4.1. For the purpose of demonstrating compliance with section 13.1.5 and 13.2.2, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
- 13.4.2. For the purpose of demonstrating compliance with section 13.1.3, 13.1.7 and 13.3.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations and other related information requested by the Director. The permittee shall maintain a record of the initial operational assurance test.
- 13.4.3. For the purpose of demonstrating compliance with the requirements set forth in sections 13.1.4.vi and 13.1.4.vii, the permittee shall maintain records of testing conducted in accordance with 13.3.2.
- 13.4.4. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of section 13.2 and testing requirements of section 13.3.

- 13.4.5. For the purpose of demonstrating compliance with section 13.1.4.ii, the permittee shall maintain records of the visible emission opacity tests conducted per Section 13.3.1.

13.5. Reporting Requirements

- 13.5.1. If permittee is required by the Director to demonstrate compliance with section 13.1.4.vi and 13.1.4.vii, then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least 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.
- 13.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR 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 in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
- 13.5.3. Any deviation(s) from the flare design and operation criteria in Section 13.1.7 and permit application R13-2896D, shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but no later than ten (10) calendar days of discovery of such deviation.
- 13.5.4. The permittee shall report to the Director, the time, cause of event, estimate of emissions and corrective actions taken when the Main Flare was used for an emergency at the facility.

14.0. Source-Specific Hazardous Air Pollutant Requirements (Ethane Amine Units, S011, S014)

14.1. Limitations and Standards

- 10.1.1. **Maximum Throughput Limitation.** The aggregate maximum gas throughput to both Ethane Amine Units shall not exceed 129 mmscfd. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 14.1.2. Each Ethane Amine Unit (S011, S014) shall be designed and operated in accordance with the following:
 - a. Carbon dioxide will be removed from the ethane product in an amine contacting system.
 - b. The total ethane product shall be contacted with an amine solution in the Amine Contactor where the carbon dioxide in the ethane product is removed to less than 500 ppmw.
 - c. The rich amine from the Contactor is regenerated in the Amine Regenerator where heat input is used to drive the carbon dioxide and water overhead and vented to the atmosphere.
 - d. The lean amine from the bottom of the Regenerator is recycled back to the Amine Contactor.
- 14.1.3. Maximum aggregate VOC emissions from both Ethane Amine Units (S011, S014) shall not exceed 0.16 pounds per hour and 0.72 tons per year.

14.2. Monitoring Requirements

- 14.2.1. The permittee shall monitor the aggregate throughput of sour ethane fed to both Ethane Amine Units on a monthly basis.

14.3. Recordkeeping Requirements

- 14.3.1. The permittee shall maintain a record of the monthly gas throughput to the Amine System (S011) to demonstrate compliance with section 14.1.1 of this permit.

15.0. Source-Specific Requirements (Liquids Loading, S008)

15.1. Limitations and Standards

15.1.1. **Maximum Throughput Limitation.** The maximum liquids throughput to the Liquids Loading area (S008) at the Fractionating Processing Plant shall not exceed the following:

Tank Name	Capacity (gal)	Truck Loading (gpm)	Rail Loading (gpm)	Barge Loading (gpm)
Propane (US-800)	2,142,000	3,600	4,000	3,000
Isobutane (US-801)	865,200	3,600	4,000	0
Butane (US-804)	865,200	3,600	4,000	0
Natural Gas Liquids (NGL) (US-805)	865,200	3,600	0	0
Gasoline (TK-802)	714,000	600	2,000	3,000

15.1.2. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.

15.1.3. The Liquids Loading area (S008) at the Fractionating Processing Plant shall be operated in accordance with the plans and specifications filed in Permit Application R13-2896. The system will employ a vapor balance (closed system) to route all vapors back to the tanks.

15.2. Recordkeeping Requirements

15.2.1. To demonstrate compliance with section 15.1.1 the permittee shall maintain a monthly record of the amount of liquids processed in the Liquids Loading area (S008) at the Fractionating Processing Plant.

16.0. Source-Specific Requirements (40 CFR 60 Subpart KKK Requirements: Fractionation Train 1 and Cryogenic Train 2)

16.1. Limitations and Standards

16.1.1. Applicability and Designation of an Affected Facility.

- (a) (1) The provisions of this subpart apply to affected facilities in onshore natural gas processing plants.
 - (2) A compressor in VOC service or in wet gas service is an affected facility.
 - (3) The group of all equipment except compressors (defined in §60.631) within a process unit is an affected facility.
- (b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011, is subject to the requirements of this subpart.
- (c) Addition or replacement of equipment (defined in §60.631) for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.
- (d) Facilities covered by subpart VV or subpart GGG of 40 CFR part 60 are excluded from this subpart.
- (e) A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart.

[40 C.F.R. § 60.630]

16.1.2. Standards.

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup.
- (b) An owner or operator may elect to comply with the requirements of §§60.483-1 and 60.483-2.
- (c) An owner or operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.634 of this subpart.
- (d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §60.485 except as provided in §60.633(f) of this subpart.
- (e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§60.486 and 60.487 except as provided in §§60.633, 60.635, and 60.636 of this subpart.
- (f) An owner or operator shall use the following provision instead of §60.485(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of

equipment, procedures that conform to the methods described in ASTM E169-63, 77, or 93, E168-67, 77, or 92, or E260-73, 91, or 96 (incorporated by reference as specified in §60.17) shall be used.

[40 C.F.R. § 60.632]

16.1.3. Exceptions.

- (a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VV.
- (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485(b) except as provided in §60.632(c), paragraph (b)(4) of this section, and §60.482-4 (a) through (c) of subpart VV.
- (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- (3) (i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.
- (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (4) (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by nonplant personnel may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4(b)(1) of subpart VV.
- (ii) No pressure relief device described in paragraph (b)(4)(i) of this section shall be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2(a)(1), 60.482-7(a), and paragraph (b)(1) of this section.
- (f) *Reserved.*
- (g) Flares used to comply with this subpart shall comply with the requirements of §60.18.
- (h) An owner or operator may use the following provisions instead of §60.485(e):
- (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).
- (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).

[40 C.F.R. § 60.633]

16.1.4. Alternative Means of Emission Limitation.

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section shall be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where he concludes that other criteria are appropriate:
 - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
 - (2) If the applicant is an owner or operator of an affected facility, he must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

[40 C.F.R. § 60.634]

16.2. Notification, Recordkeeping and Reporting Requirements

16.2.1. NPP Recordkeeping Requirements.

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.486.
- (b) The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of §60.633(b)(1) of this subpart.
 - (1) When each leak is detected as specified in §60.633(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
 - (2) When each leak is detected as specified in §60.633(b)(2), the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - (i) The instrument and operator identification numbers and the equipment identification number.
 - (ii) The date the leak was detected and the dates of each attempt to repair the leak.
 - (iii) Repair methods applied in each attempt to repair the leak.
 - (iv) "Above 10,000 ppm" if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 10,000 ppm or greater.
 - (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
 - (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 - (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - (ix) The date of successful repair of the leak.
 - (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4(a). The designation of equipment subject to the provisions of §60.482-4(a) shall be signed by the owner or operator.
- (c) An owner or operator shall comply with the following requirement in addition to the requirement of §60.486(j): Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in §60.633(f) shall be recorded in a log that is kept in a readily accessible location.
- [40 C.F.R. § 60.635]**

16.2.2. NPP Reporting Requirements.

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487.
- (b) An owner or operator shall include the following information in the initial semiannual report in addition to the information required in §60.487(b) (1)-(4): Number of pressure relief devices subject to the requirements of §60.633(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4(a) and those pressure relief devices complying with §60.482-4(c).
- (c) An owner or operator shall include the following information in all semiannual reports in addition to the information required in §60.487(c)(2) (i) through (vi):
 - (1) Number of pressure relief devices for which leaks were detected as required in §60.633(b)(2) and
 - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3).

[40 C.F.R. § 60.636]

17.0. Source-Specific Requirements (40 CFR 60 Subpart OOOO Requirements, Fractionation Train 2 and Cryogenic Train 1)

17.1. Limitations and Standards

17.1.1. The permittee must be in compliance with the standards of this subpart no later than October 15, 2012 or upon startup, whichever is later.
[40 C.F.R. § 60.5370(a)]

17.1.2. The permittee is exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.
[40 C.F.R. § 60.5370(c)]

17.1.3. Natrium I Demethanizer Equipment Leak Standards.

This section applies to the group of all equipment, except compressors, within a process unit.

(a) You must comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401.

(b) You may elect to comply with the requirements of §§60.483-1a and 60.483-2a, as an alternative.

(c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of §60.5402 of this subpart.

(d) You must comply with the provisions of §60.485a of this part except as provided in paragraph (f) of this section.

(e) You must comply with the provisions of §§60.486a and 60.487a of this part except as provided in §§60.5401, 60.5421, and 60.5422 of this part.

(f) You must use the following provision instead of §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in §60.17) must be used.

[40 C.F.R. § 60.5400]

17.1.4. Exceptions to the Natrium I Demethanizer Equipment Leak Standards.

(a) You may comply with the following exceptions to the provisions of §60.5400(a) and (b).

(b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485a(b) except as provided in §60.5400(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa.

- (2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- (3) (i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.
 - (ii) A first attempt at repair must be made no later than 5 calendar days after each leak is detected.
- (4) (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4a(b)(1) of subpart VVa.
 - (ii) No pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5a.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2a(a)(1) and 60.482-7a(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.
- (f) An owner or operator may use the following provisions instead of §60.485a(e):
 - (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
 - (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
- (g) An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

[40 C.F.R. § 60.5401]

17.1.5. Alternative Emission Limitations for Equipment Leaks at Natrium I Demethanizer.

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where the Administrator concludes that other criteria are appropriate:
 - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
 - (2) If the applicant is an owner or operator of an affected facility, the applicant must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

[40 C.F.R. § 60.5402]

17.2. Initial Compliance Demonstration

17.2.1. You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (f) of this section. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.

- (f). For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400.

[40CFR§60.5410, Natrium I Demethanizer Unit]

17.3. Continuous Compliance Demonstration

17.3.1. For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400.

17.3.2. Affirmative defense for violations of emission standards during malfunction. In response to an action to enforce the standards set forth in §§ 60.5375, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in § 60.5420(a), and must prove by a preponderance of evidence that:

- (i) The violation:

- (A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and
 - (B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and
 - (C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and
 - (D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
- (ii) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and
 - (iii) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and
 - (iv) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and
 - (vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and
 - (vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and
 - (viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and
 - (ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(2) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (h)(1) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[40CFR§60.5415]

17.4. Notification, Recordkeeping and Reporting Requirements

- 17.4.1. (b) **Reporting requirements.** You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) or (8) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of

the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- (7) (i) Within 60 days after the date of completing each performance test (see §60.8 of this part) as required by this subpart, except testing conducted by the manufacturer as specified in §60.5413(d), you must submit the results of the performance tests required by this subpart to the EPA as follows. You must use the latest version of the EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/tn/chief/ert/index.html>) existing at the time of the performance test to generate a submission package file, which documents the performance test. You must then submit the file generated by the ERT through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed by logging in to the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Only data collected using test methods supported by the ERT as listed on the ERT Web site are subject to this requirement for submitting reports electronically. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.
- (ii) All reports, except as specified in paragraph (b)(8) of this section, required by this subpart not subject to the requirements in paragraph (a)(2)(i) of this section must be sent to the Administrator at the appropriate address listed in §60.4 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).

[40CFR§60.5420]

17.4.2. Natrium I Demethanizer Unit Additional Recordkeeping Requirements.

- (a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of §60.486a.
- (b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of §60.5401(b)(1) of this subpart.
- (1) When each leak is detected as specified in §60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
- (2) When each leak is detected as specified in §60.5401(b)(2), the following information must be recorded in a log and shall be kept for 2 years in a readily accessible location:
- (i) The instrument and operator identification numbers and the equipment identification number.
- (ii) The date the leak was detected and the dates of each attempt to repair the leak.

- (iii) Repair methods applied in each attempt to repair the leak.
- (iv) “Above 500 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 ppm or greater.
- (v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
- (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
- (ix) The date of successful repair of the leak.
- (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4a(a). The designation of equipment subject to the provisions of §60.482-4a(a) must be signed by the owner or operator.

[40CFR§60.5421, Natrium I Demethanizer Unit]

17.4.3. Natrium I Demethanizer Unit Additional Reporting Requirements.

- (a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).
- (b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in §60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of §60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4a(a) and those pressure relief devices complying with §60.482-4a(c).
- (c) An owner or operator must include the following information in all semiannual reports in addition to the information required in §60.487a(c)(2)(i) through (vi):
 - (1) Number of pressure relief devices for which leaks were detected as required in §60.5401(b)(2); and
 - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.5401(b)(3).

[40CFR§60.5422, Natrium I Demethanizer Unit]

18.0. Source-Specific Requirements (28LAER LDAR Requirements)

18.1. Limitations and Standards

- 17.1.1. In accordance with information given in permit application R13-2896C and R13-2896D, the permittee shall implement the TCEQ 28LAER leak detection and repair (LDAR) program for Fugitive Area 2.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

- ¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
 - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
 - d. The designated representative delegated with such authority and approved in advance by the Director.



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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2896D
Plant ID No.:	051-00142
Applicant:	Blue Racer Midstream, LLC (Blue Racer)
Facility Name:	Natrium Extraction and Fractionation Plant
Location:	Near Proctor, Marshall County
NAISC/SIC Code:	211112/1321
Application Type:	Modification
Received Date:	April 17, 2015
Engineer Assigned:	Joe R. Kessler
Fee Amount:	\$2,000
Date Received:	April 22, 2015
Complete Date:	June 15, 2015
Due Date:	September 12, 2015
Applicant Ad Date:	May 11, 2015
Newspaper:	<i>Moundsville Daily Echo</i>
UTM's:	Easting: 512.1 km Northing: 4,400.8 km Zone: 17
Latitude/Longitude:	39.75996/-80.86101
Description:	Pursuant to the requirements of Consent Order CO-R13-E-2015-3, this permit application addresses the replacement of the existing elevated flare with a ground flare system.

Entire Document
NON-CONFIDENTIAL

On December 19, 2011 Dominion Natrium, LLC (Dominion) was issued Permit Number R13-2896 for the construction of the 400 mmscf-natural gas/day Natrium Extraction and Fractionation Plant. The facility began operation on May 15, 2013. Since that time, the facility has been the subject of the following permitting and compliance/enforcement actions:

- On June 10, 2013, permit application R13-2896A was submitted for the installation of two (2) heaters and a Vapor Recovery Unit (VRU). However, this application was withdrawn on July 23, 2013 due to its submission by Blue Racer Natrium, LLC, who had not previously transferred the permit into their name;
- On July 31, 2013, Dominion agreed to a Consent Order (CO-R13-E-2013-12) concerning (primarily) the operation of a flare. As part of the Orders for Compliance, Dominion was required to submit a permit application to “correct all deficiencies and violations with Permit R13-2896;”

- On September 24, 2013, Permit Number R13-2896 was transferred to “Blue Racer Natrium, LLC;”
- On December 26, 2013, Permit Number R13-2896B was issued to Blue Racer Natrium, LLC to replace the existing flare and make other changes pursuant to requirements of CO-R13-E-2013-12. Additionally, and unrelated to the Consent Order, the permit authorized installation of two (2) process heaters; and
- On February 21, 2014 the permit was transferred to “Blue Racer Midstream, LLC.” Formed in December 2012, Blue Racer Midstream is a joint venture between Caiman Energy II, LLC and Dominion;
- On February 26, 2014 Blue Racer Midstream, LLC submitted permit application R14-0031 to relax the Greenhouse Gases (GHGs) synthetic minor limits that were part of R13-2896. This required Blue Racer to undergo Prevention of Significant Deterioration (PSD) review under 45CSR14 for the requested changes. However, on June 23, 2014, in *Utility Air Regulatory Group v. Environmental Protection Agency*, the Supreme Court (SCOTUS) ruled that GHGs alone could no longer define a source as a "major stationary source" or a modification as a "major modification" for the purposes of PSD review. Therefore, consistent with EPA guidance and with the concurrence of the DAQ, on August 7, 2014, Blue Racer withdrew permit application R14-0031 and resubmitted a request for the changes under permit application R13-2896C as a minor modification; and
- On November 6, 2014, Permit Number R13-2896C was issued to Blue Racer for the removal of the annual fuel usage limit on the 216.7 mmBtu/hr Hot Oil Heater (S001) and addition of the following: four (4) new 61.6 mmBtu/hr heaters, a second fractionation train consisting of two (2) de-ethanizer towers, an ethane amine treating unit, a depropanizer, and a debutanizer, and increasing various facility storage capacities. This modification increased the capacity of the plant to 460 million standard cubic feet per day (mmscfd); and
- On January 16, 2015, Blue Racer agreed to a Consent Order (CO-R13-E-2015-3) to replace the existing elevated flare with a ground flare system to correct the on-going visible emissions problems with the existing flare. As part of the Orders for Compliance, Blue Racer was required to “submit a technically and administratively complete permit application (Rule 13 and/or Rule 14) for the construction, installation, and operation of a ground flare system within ninety (90) days of the effective date of this Order.” This Consent Order allowed Blue Racer to begin construction of the new ground flare prior to issuance of a pre-construction permit.

DESCRIPTION OF PROCESS/MODIFICATIONS

Existing Facility

The Natrium Extraction and Fractionation Processing Plant is an existing 460 mmscfd natural gas processing plant with natural gas liquids (NGL) processing capability located approximately four (4) miles northwest of Proctor, Marshall County, WV. The facility has the

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capability to both process large amounts of raw natural gas (by separating out the liquids, drying it, and removing impurities) and to fractionate NGLs into usable components. NGLs are generally defined to be the lighter liquid components entrained in the gas stream as opposed to “condensate” which is the heavier (and with a higher boiling point) organic compounds that are easily separated at the well-head and usually sent to a refinery. NGLs - both after separation from gas pipelined to the Natrium facility, as well as NGLs sent to the site via pipeline, truck, railcar, or barge - are separated (or “fractionated”) into their constituent organic compounds. The compounds ethane, propane, butane, i-butane, and natural gasoline are produced by the fractionation process.

Proposed Modifications

Blue Racer is proposing to make the following substantive modifications at the Natrium facility:

- Pursuant to the requirements of Consent Order CO-R13-E-2015-3, replacement of the existing elevated John Zink Company, KMI Model 12-26 Multipoint Tip pressure-assisted flare (S004) with a non-assisted Callidus CAL-MP staged, multi-point ground flare system (S004A). There are no proposed changes to the emissions sources connected to the flare for control or the volume of gases sent to the flare for control during non-emergency operations;
- Recalculation of VOC pass-through emissions at the existing and new flare at a destruction and removal efficiency (DRE) of 98.0% as opposed to 99.5% that was used previously; and
- Removal of emergency secondary flare (S021) from the permit.

Flaring Operations Process Description

As noted above, on January 16, 2015, Blue Racer agreed to a Consent Order (CO-R13-E-2015-3) to replace the existing elevated flare with a ground flare system to correct the on-going visible emissions problems with the existing flare. As part of the Orders for Compliance, Blue Racer was required to “submit a technically and administratively complete permit application (Rule 13 and/or Rule 14) for the construction, installation, and operation of a ground flare system within ninety (90) days of the effective date of this Order.” This Consent Order, however, allowed Blue Racer to begin construction of the new ground flare prior to issuance of a pre-construction permit. Further, the Consent Order required that the new ground flare system shall be installed by November 30, 2015.

However, as it is possible that the modified permit may be issued prior to the decommissioning of the existing flare, the draft permit shall include requirements for both flares. Additionally, due to the C/E concerns, the Consent Order will not be replaced in the event of the issuance of R13-2896D.

Therefore, the modified permit will consist of two Main Flares (with the exception of a shakedown period, only one will operate at any one time): (1) the existing 376.5 foot, 19,800,000 scf/hr John Zink Company, KMI Model 12-26 Multipoint Tip pressure-assisted elevated flare (S004)

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and (2) the new non-assisted 19,800,000 scf/hr Callidus CAL-MP staged, multi-point ground flare system (S004A). As with the existing flare, the new flare shall be used to both control continuous emissions of organic material as well as non-routine emergency events. These non-emergency VOC sources are defined as emissions from maintenance events, equipment blowdowns, and pressure relief valves. Both the existing flare and the new flare shall have a minimum permitted DRE of 98.0% (lowered from 99.5% used previously). The new flare will utilize sixteen (16) natural gas-fired pilot lights for a total pilot light MDHI of 1.399 mmBtu/hr.

SITE INSPECTION

On September 17, 2014, the writer conducted an announced site inspection of the Natrium Extraction and Fractionation Plant. The primary contact at the facility was Mr. Sean Wilson, Director EHS for Caimen Energy. Observations from the inspection include:

- No significant odors were detected in walking through the plant;
- Site preparation and foundation work for the new fractionation train (permitted under R13-2896C) was observed taking place. All site activities underway appeared to be within the limitations allowed pursuant to Section 5 of 45CSR13;
- The existing flare was observed combusting sweep gas. There was no visible opacity from the flare; and
- A water truck was observed on-site wetting down the gravel near the construction site to mitigate any excessive dust generated by vehicle traffic.

AIR EMISSIONS AND CALCULATION METHODOLOGIES

Blue Racer, in Attachment N of the permit application, provided a post-modification facility-wide potential-to-emit (PTE) for the Natrium facility and calculations for all equipment and processes at the facility. The following section will detail the air emissions and emissions calculation methodologies used by Blue Racer to calculate the potential-to-emit *of new or modified emission units only*.

New Main Flare

Three sources of emissions are generated at the new Main Flare (not including the uncombusted pass-through emissions from waste gases sent to the flare that remain unchanged as a result of this modification other than being recalculated using a DRE of 98%): (1) the products of combustion of the pilot lights, (2) the products of combustion of the purge gas, and (3) the products of combustion of the waste gases. Pass-through (uncombusted) emissions of waste gases sent to the flare for destruction are also emitted at the flare but are attributed to the PTE of the source of the waste gases. The following will discuss the combustion exhaust emissions generated at the flare.

Products of Combustion of Pilot Light

The emissions of pollutants associated with combustion of natural gas in the flare's pilot light were based on emission factors (NO_x, CO) as given in Texas Commission on Environmental Quality's (TCEQ) "Flares and Vapor Oxidizers" Report (RG-109: pp. 19) and as given in AP-42 (AP-42 is a database of emission factors maintained by USEPA), Section 1.4 (particulate matter, SO₂, and VOCs). The TCEQ emission factors are generally accepted for estimating products of combustion from flares at oil and gas processing facilities when combusting high BTU gas streams. Hourly emissions were based on the maximum design heat input (MDHI) of the pilot light (0.77 mmBtu/hr) and annual emissions were based on 8,760 hours of operation. A natural gas heat content of 1,029 Btu/scf was used in the calculations.

Products of Combustion of Sweep Gases

The emissions of pollutants associated with combustion of the purge gas (natural gas) is based on emission factors (NO_x, CO) as given in TCEQ's "Flares and Vapor Oxidizers" Report (RG-109: pp. 19) and as given in AP-42, Section 1.4 (particulate matter, SO₂, and VOCs). Hourly emissions were based on the maximum hourly purge gas usage of 117 scf/hr and annual emissions were based on 8,760 hours of operation. A natural gas heat content of 1,029 Btu/scf was used in the calculations.

Products of Combustion of Waste Gases

The emissions of pollutants associated with combustion of the waste gases (process gases from maintenance events, equipment blowdowns, and pressure relief valves) is based on emission factors (NO_x, CO) as given in TCEQ's "Flares and Vapor Oxidizers" Report (RG-109: pp. 19) and as given in AP-42, Section 1.4 (particulate matter, SO₂, and VOCs). Maximum hourly and annual emissions are based on plant experience and engineering estimates of the maximum short-term and long term amount of gases (and associated heat contents) sent to the flare for destruction.

Emissions Summary

The post-modification short-term (hourly) potential-to-emit (PTE) of the Natrium Extraction and Fractionation Plant is given in the following table:

Table 1: Facility-Wide Hourly (lb/hr) Criteria Pollutant PTE Summary.

Source	Emission Point	CO	NO _x	PM _{2.5}	PM ₁₀	PM	SO ₂	VOCs	HAPs
Hot Oil Heater	P001	3.25	5.63	1.61	1.61	1.61	0.16	0.37	0.40
Hot Oil Heater	P016	3.63	1.48	0.46	0.46	0.46	0.04	0.33	0.11
Hot Oil Heater	P017	3.63	1.48	0.46	0.46	0.46	0.04	0.33	0.11
Hot Oil Heater	P018	3.63	1.48	0.46	0.46	0.46	0.04	0.33	0.11

Hot Oil Heater	P019	3.63	1.48	0.46	0.46	0.46	0.04	0.33	0.11
Glycol Reboiler	P020	0.25	0.29	0.02	0.02	0.02	~0.00	0.02	0.01
Regen Gas Heater	P022	0.80	0.95	0.07	0.07	0.07	0.01	0.05	0.02
Regen Gas Heater	P012	0.80	0.95	0.07	0.07	0.07	0.01	0.05	0.02
Cryo HMO Heater	P013	2.15	2.56	0.19	0.19	0.19	0.02	0.14	0.05
Fire Pump #1	P002	2.18	5.31	0.30	0.30	0.30	0.01	0.08	0.01
Fire Pump #2	P003	2.18	5.31	0.30	0.30	0.30	0.01	0.08	0.01
Fug Area 1 Leaks ⁽¹⁾	n/a	0.00	0.00	0.00	0.00	0.00	0.00	6.58	0.32
Fug Area 2 Leaks ⁽¹⁾	n/a	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.02
Main Flare ⁽²⁾	P004	2.56	1.28	0.07	0.07	0.07	~0.00	0.05	~0.00
Waste Gases ⁽³⁾	P004	0.00	0.00	0.00	0.00	0.00	0.00	2.26	0.00
Amine Regen Vent	P005	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
Amine Regen Vent	P006	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Unpaved Roads	n/a	0.00	0.00	0.17	1.66	6.22	0.00	0.00	0.00
Facility-Wide Totals →		28.69	28.20	4.64	6.13	10.69	0.38	12.35	1.30

- (1) Does not include plant relief valves that are sent to the flare for control.
(2) Products of combustion only.
(3) Pass-through (uncombusted) emissions from waste gases sent to flare for control only.

The post-modification long-term (annual) PTE of the Natrium Extraction and Fractionation Plant is given in the following table:

Table 2: Facility-Wide Annual (tons/yr) Criteria Pollutant/GHG PTE Summary.

Source	Emission Point	CO	NO _x	PM _{2.5}	PM ₁₀	PM	SO ₂	VOCs	HAPs ⁽⁴⁾
Hot Oil Heater	P001	14.24	24.68	7.07	7.07	7.07	0.69	1.61	1.75
Hot Oil Heater	P016	15.91	6.47	2.01	2.01	2.01	0.20	1.46	0.50
Hot Oil Heater	P017	15.91	6.47	2.01	2.01	2.01	0.20	1.46	0.50
Hot Oil Heater	P018	15.91	6.47	2.01	2.01	2.01	0.20	1.46	0.50
Hot Oil Heater	P019	15.91	6.47	2.01	2.01	2.01	0.20	1.46	0.50
Glycol Reboiler	P020	1.08	1.29	0.10	0.10	0.10	0.01	0.07	0.02
Regen Gas Heater	P022	3.50	4.17	0.32	0.32	0.32	0.03	0.23	0.08
Regen Gas Heater	P012	3.50	4.17	0.32	0.32	0.32	0.03	0.23	0.08
Cryo HMO Heater	P013	9.40	11.19	0.85	0.85	0.85	0.07	0.62	0.22

Fire Pump #1	P002	0.11	0.27	0.02	0.02	0.02	<0.01	<0.01	<0.01
Fire Pump #2	P003	0.11	0.27	0.02	0.02	0.02	<0.01	<0.01	<0.01
Fug Area 1 Leaks ⁽¹⁾	n/a	0.00	0.00	0.00	0.00	0.00	0.00	28.80	1.40
Fug Area 2 Leaks ⁽¹⁾	n/a	0.00	0.00	0.00	0.00	0.00	0.00	5.22	0.08
Main Flare ⁽²⁾	P004	2.06	1.03	0.06	0.06	0.06	~0.00	0.01	~0.00
Waste Gases ⁽³⁾	P004	0.00	0.00	0.00	0.00	0.00	0.00	0.14	~0.00
Amine Regen Vent	P005	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
Amine Regen Vent	P006	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00
Unpaved Roads	n/a	0.00	0.00	0.41	4.05	15.20	0.00	0.00	0.00
Facility-Wide Totals →		97.64	72.95	17.21	20.85	32.00	1.65	43.51	5.65

- (1) Does not include plant relief valves that are sent to the flare for control.
- (2) Products of combustion only.
- (3) Pass-through (uncombusted) emissions from waste gases sent to flare for control only.
- (4) As the PTE of all individual HAPs are less than 10 TPY and the PTE of total HAPs is less than 25 TPY, the Natrium Extraction and Fractionation Plant is defined as a minor (area) source of HAPs for purposes of 40 CFR 61, 40CFR63, and Title V.

The change in annual facility-wide PTE as a result of the modifications evaluated herein is given in the following table:

Table 3: Change In Facility-Wide Annual PTE

Pollutant	R13-2896C ⁽¹⁾	R13-2896D	Change
	tons/year	tons/year	tons/year
CO	98.72	97.64	-1.08
NO _x	72.57	72.95	0.38
PM _{2.5}	17.21	17.21	0.00
PM ₁₀	20.85	20.85	0.00
PM	32.00	32.00	0.00
SO ₂	1.65	1.65	0.00
VOCs	44.09	43.51	-0.58
HAPs	5.65	5.65	0.00

- (1) Emissions taken from R13-2896C Fact Sheet (as corrected).

REGULATORY APPLICABILITY

The Blue Racer Natrium Extraction and Fractionation Plant is subject to a variety of substantive state and federal air quality rules and regulations. These include the following state rules: 45CSR2, 45CSR6, 45CSR10, 45CSR13, 45CSR14, and 45CSR30. Substantive Federal regulations that apply to the facility include: 40 CFR 60 - Subpart Db, Subpart Dc, and Subpart Kb, Subpart KKK, Subpart IIII, and Subpart OOOO; and 40 CFR 63, Subpart HH, Subpart ZZZZ, Subpart DDDDD, and Subpart JJJJJJ. Each applicable rule, and Blue Racer's proposed compliance thereto, will be discussed in detail below *with respect only to those emission units added or modified as part of this permitting action*. Additionally, those rules that have questionable applicability but have been determined to not apply will also be discussed.

45CSR6: To Prevent and Control Particulate Air Pollution from Combustion of Refuse

The proposed new Main Flare meets the definition of an "incinerator" under 45CSR6 and is, therefore, subject to the requirements therein.

Emission Standards for Incinerators - Section 4.1

Section 4.1 limits PM emissions from incinerators to a value determined by the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is as indicated in Table I below:

Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions

<u>Incinerator Capacity</u>	<u>Factor F</u>
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

Based on the maximum capacity of the proposed new Main Flare of 19,800,000 scf/hr, and using the density of methane (0.0422 lb/scf) as a reasonable surrogate, the capacity of the Main Flare in lbs/hr would be approximately 835,560 lbs/hour (418 tons/hr). Using this value in the above equation produces a PM emission limit of 1,134 lb/hr. When operating correctly, there is expected to be only trace amounts of particulate matter from the flare. The writer is aware that smoking events at the existing Main Flare (indicative of particulate matter emissions) have been the cause of violations issued to Blue Racer by the DAQ's Compliance and Enforcement (C/E) Section and is the result of the proposed installation of the new flare. However, when operating correctly - as the C/E actions are designed to enforce - there should be no to only trace amounts of particulate matter from the proposed new Main Flare.

To be conservative, using the calculation methodology as described above, Blue Racer estimated a particulate matter emission rate from the flare of 0.06 lbs/hr during non-emergency operation. This is but an insignificant trace of the 45CSR6 limit.

Opacity Limits for Incinerators - Section 4.3, 4.4

Pursuant to Section 4.3, and subject to the exemptions under 4.4, the proposed new Main Flare has a 20% limit on opacity during operation. Proper design and operation of the flare should prevent any significant opacity from the flares. The writer is aware that the existing Main Flare has experienced opacity problems from the flare and been issued violations for this reason. The DAQ C/E Section has ordered the construction of the proposed new Main Flare to correct this problem.

45CSR13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed changes at Blue Racer's Natrium Extraction and Fractionation Plant do not have the potential to increase the PTE in excess of six (6) lbs/hour and ten (10) TPY of a regulated pollutant. However, Blue Racer was required to submit a "a technically and administratively complete permit application (Rule 13 and/or Rule 14) for the construction, installation, and operation of a ground flare system" under Consent Order CO-R13-E-2015-3. Blue Racer chose to comply with this requirement by submitting a permit application for a modification (as opposed to a Class II Administrative Update).

Therefore, as required under §45-13-8.3 ("Notice Level A"), Blue Racer placed a Class I legal advertisement in a "newspaper of *general circulation* in the area where the source is . . . located." The ad ran on May 11, 2015 in *Moundsville Daily Echo* and the affidavit of publication for this legal advertisement was submitted on June 2, 2015.

45CSR14: Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration - (NON APPLICABILITY)

The Natrium Extraction and Fractionation Plant is located in Marshall County, WV. Marshall County is classified as "in attainment" with all National Ambient Air Quality Standards (NAAQS) except for, in certain tax districts, SO₂. The Franklin Tax District, where the Natrium facility is located, is classified as "non-attainment" for SO₂. Therefore, applicability to major New Source Review (NSR) for all pollutants except for SO₂ is determined under 45CSR14.

Previously, as the facility was determined to include a "listed source" under §45-14-2.43 ("Fossil Fuel Boilers (or combinations thereof) Totaling More than 250 Million Btu/hour Heat Input"), the facility-wide per-pollutant major source applicability threshold for all criteria pollutants was believed to be 100 TPY. However, after further review of major NSR guidance, it has been determined that a "nested source" - in this case the fossil-fuel fired boilers - must inclusively have a PTE in excess of 100 TPY of a PSD pollutant to trigger major source status for that nested source only. The location of a nested source does not, as previously determined, reset the major source threshold for the entire facility at 100 TPY. The PTE threshold (including, however, the PTE contributed from the nested source) remains at the non-listed threshold of 250 TPY. As shown in Table 2 above, the PTE of the all the heaters at the facility (which are defined as "Fossil Fuel Boilers" do not have an aggregate PTE over 100 TPY of any PSD pollutant and the facility-wide

PTE (including the heaters/boilers) does not have an aggregate PTE over 250 TPY of any PSD pollutant. Therefore, neither the entire facility or the nested source is defined as a "major stationary source" under 45CSR14 and PSD does not apply to the modifications reviewed herein.

45CSR19: Requirements fo Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants - (NON APPLICABILITY)

Pursuant to §45-19-3.1, 45CSR19 "applies to all major stationary sources and major modifications to major stationary sources proposing to construct anywhere in an area which is designated non-attainment." As noted above, the Natrium Extraction and Fractionation Plant is located in Marshall County, WV which is classified as in attainment with all NAAQS with the exception of SO₂ in the areas defined as the Clay, Washington, and Franklin (where the source is located) Tax Districts. Pursuant to §45-14-2.35, the individual major source applicability threshold for the specific non-attainment pollutant is 100 TPY. As given above in Table 2, the facility-wide post-modification SO₂ PTE of the Natrium Extraction and Fractionation Plant is less than 100 TPY. Therefore, the facility is not defined as a "major stationary source" under 45CSR19.

45CSR30: Requirements for Operating Permits

45CSR30 provides for the establishment of a comprehensive air quality permitting system consistent with the requirements of Title V of the Clean Air Act. The modified Natrium Extraction and Fractionation Plant does not meet the definition of a "major source under §112 of the Clean Air Act" as outlined under §45-30-2.26 and clarified (fugitive policy) under 45CSR30b. The post-modification facility-wide PTE (see Table 2 above) of any regulated pollutant does not exceed 100 TPY. Additionally, the facility-wide PTE does not exceed 10 TPY of any individual HAP or 25 TPY of aggregate HAPs.

However, as there are emissions sources at the facility subject to requirements promulgated under §111 or §112(r) of the Clean Air Act (specifically 40 CFR 60, Subparts Db, Dc, and Kb) that do not have a specific exemption from Title V permitting, the facility is considered a non-major "area" source subject to Title V. Sources in this classification are not required to get a Title V permit.

TOXICITY ANALYSIS OF NON-CRITERIA REGULATED POLLUTANTS

This section provides an analysis for those regulated pollutants that have a potential to be emitted from the Natrium Extraction and Fractionation Plant and that are not classified as "criteria pollutants." Criteria pollutants are defined as Carbon Monoxide (CO), Lead (Pb), Oxides of Nitrogen (NO_x), Ozone, Particulate Matter (PM), Particulate Matter less than 10 microns (PM₁₀), Particulate Matter less than 2.5 microns (PM_{2.5}), and Sulfur Dioxide (SO₂). These pollutants have National Ambient Air Quality Standards (NAAQS) set for each that are designed to protect the public health and welfare. Other pollutants of concern, although designated as non-criteria and without national concentration standards, are regulated through various federal and state programs

designed to limit their emissions and public exposure. These programs include federal source-specific Hazardous Air Pollutants (HAPs) limits promulgated under 40 CFR 61 (NESHAPS) and 40 CFR 63 (MACT). Any potential applicability to these programs were discussed above under REGULATORY APPLICABILITY.

No new, or increases in existing, non-criteria regulated pollutants will be emitted as a result of the modification evaluated herein.

AIR QUALITY IMPACT ANALYSIS

The estimated maximum emissions of the modified facility are less than applicability thresholds that would define the proposed facility as “major” under 45CSR14 and, therefore, no air quality impacts modeling analysis was required pursuant to that rule. Additionally, an air quality impacts modeling analysis pursuant to 45CSR13, Section 7 was deemed not necessary.

MONITORING, COMPLIANCE DEMONSTRATIONS, REPORTING, AND RECORDING OF OPERATIONS

The following changes to substantive monitoring, compliance demonstration, and record-keeping requirements shall be required relevant to the emission units/sources modified at the Natrium Extraction and Fractionation Plant:

- Pursuant to the requirements of Consent Order CO-R13-E-2015-3, Blue Racer shall be required to use a video camera to continuously record the existing Main Flare (S004) exhaust until such time that the existing Main Flare (S004) is replaced by the new ground flare system (S004A). Blue Racer shall be required to use a video camera to continuously record the new ground flare system for a minimum of ninety (90) days. If at the end of this ninety (90) day period the new ground flare operates in continuous compliance, then Blue Racer may cease video camera recording. The video camera recording shall be maintained for a minimum period of one (1) week and be available for review by the DAQ upon request.

PERFORMANCE TESTING OF OPERATIONS

There was no changes to, or additions of, performance testing as a result of this permitting action.

CHANGES TO PERMIT R13-2896B

The substantive changes made to Permit R13-2896C are:

- The new Main Flare has been added to the Emission Units Table 1.0 and to the Control Devices Table 1.1;

R13-2896D
Blue Racer Midstream, LLC
Natrium Extraction and Fractionation Plant

- The minimum control efficiency of both the proposed new and existing Main Flare has been lowered from 99.5% to 98.0%;
- The pass-through emissions of VOCs at the Main Flare has been removed from the emission limit table under 13.1.2(a) and placed under 13.1.2(c);
- The combustion exhaust emission limits of the proposed new flare were added under 13.1.2(b);
- Requirement 13.1.3. was revised to include natural gas combustion limits for the proposed new flare; and
- Pursuant to the requirements of Consent Order CO-R13-E-2015-3, a requirement to video operation of the existing Main Flare was added.

RECOMMENDATION TO DIRECTOR

The information provided in permit application R13-2896D indicates that compliance with all applicable federal and state air quality regulations will be achieved. Therefore, I recommend to the Director the issuance of a Permit Number R13-2896D to Blue Racer Midstream, LLC for the modifications discussed herein at the Natrium Extraction and Fractionation Plant located near Proctor, Marshall County, WV.

Joe Kessler, PE
Engineer

Date

R13-2896D
Blue Racer Midstream, LLC
Natrium Extraction and Fractionation Plant

- The minimum control efficiency of both the proposed new and existing Main Flare has been lowered from 99.5% to 98.0%;
- The pass-through emissions of VOCs at the Main Flare has been removed from the emission limit table under 13.1.2(a) and placed under 13.1.2(c);
- The combustion exhaust emission limits of the proposed new flare were added under 13.1.2(b);
- Requirement 13.1.3. was revised to include natural gas combustion limits for the proposed new flare; and
- Pursuant to the requirements of Consent Order CO-R13-E-2015-3, a requirement to video operation of the existing Main Flare was added.

RECOMMENDATION TO DIRECTOR

The information provided in permit application R13-2896D indicates that compliance with all applicable federal and state air quality regulations will be achieved. Therefore, I recommend to the Director the issuance of a Permit Number R13-2896D to Blue Racer Midstream, LLC for the modifications discussed herein at the Natrium Extraction and Fractionation Plant located near Proctor, Marshall County, WV.



Joe Kessler, PE
Engineer

9-14-15

Date

Kessler, Joseph R

From: Sean Wilson <SWilson@caimanenergy.com>
Sent: Monday, September 28, 2015 11:25 AM
To: Kessler, Joseph R
Subject: Re: Natrium Flare Replacement Revision Pages

Yes sir. Should have noted. That will leave here today and should be to you tomorrow.

Sean Wilson
469.571.4785

Sent from my iPhone

On Sep 28, 2015, at 10:24 AM, Kessler, Joseph R <Joseph.R.Kessler@wv.gov> wrote:

Great, can you FedEx that to me signed with cover letter signed by RO?

Thanks

Joe

Entire Document
NON-CONFIDENTIAL

From: Sean Wilson [<mailto:SWilson@caimanenergy.com>]
Sent: Monday, September 28, 2015 9:55 AM
To: Kessler, Joseph R
Subject: FW: Natrium Flare Replacement Revision Pages
Importance: High

Joe-

Attached should be the pages that we discussed to address the changes in the flare pilots, reduce the control efficiency to 98% and remove the "emergency flare". If you need anything else or have any questions, please let me know.

Thanks,
Sean

Sean Wilson
Blue Racer Midstream, LLC

ID. No. 051-00142 Reg. 2896D
Company Blue Racer
Facility NATRIUM
Initials SW

Kessler, Joseph R

From: Sean Wilson <SWilson@caimanenergy.com>
Sent: Friday, September 11, 2015 3:44 PM
To: Kessler, Joseph R
Subject: Natrium Flare Replacement Project - Revised pages
Attachments: Revision Pages Flare Replacement 9-11-2015.pdf

Joe – per our earlier conversation, attached are the revision pages for the ground flare permit amendment (R13-2896D) that revise the flare control efficiency to 98%. If you need any further information, please let me know.

Thank you and hope you have a great weekend,
Sean

Kessler, Joseph R

From: Sean Wilson <SWilson@caimanenergy.com>
Sent: Tuesday, May 26, 2015 11:44 AM
To: Kessler, Joseph R
Subject: RE: 2896D
Attachments: 2015-05-11 BRM Natrium Air Permit Public Notice.pdf

Joe – just received this in the mail today. Forwarding original to your attention.

Thanks,
Sean

From: Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]
Sent: Thursday, May 14, 2015 1:04 PM
To: Sean Wilson
Subject: 2896D

Sean, FYI, I had to send an incomplete letter today for Natrium – just for the affidavit.

Thanks

Joe Kessler, PE
Engineer
West Virginia Division of Air Quality
601-57th St., SE
Charleston, WV 25304
Phone: (304) 926-0499 x1219
Fax: (304) 926-0478
Joseph.r.kessler@wv.gov

Kessler, Joseph R

From: Sean Wilson <SWilson@caimanenergy.com>
Sent: Thursday, May 14, 2015 2:05 PM
To: Kessler, Joseph R
Subject: RE: 2896D

Thanks Joe. Moundsville Echo informed me that they ran the ad this past Monday, 5/11 – so as soon as I get the original / affidavit from them I will forward to you. Thanks again very much.

Sean

From: Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]
Sent: Thursday, May 14, 2015 1:04 PM
To: Sean Wilson
Subject: 2896D

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Kessler, Joseph R

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Sent: Friday, September 11, 2015 3:44 PM
To: Kessler, Joseph R
Subject: Natrium Flare Replacement Project - Revised pages
Attachments: Revision Pages Flare Replacement 9-11-2015.pdf

Joe – per our earlier conversation, attached are the revision pages for the ground flare permit amendment (R13-2896D) that revise the flare control efficiency to 98%. If you need any further information, please let me know.

Thank you and hope you have a great weekend,
Sean

- Installation of an emergency flare for upsets (EU# S021);
- Installation of a 38,788 bbl gasoline storage tank equipped with a natural gas blanket to reduce VOC emissions (EU# S023);
- Installation of four (4) pressurized butane bullet tanks;
- Increased utilization of the existing Plant Hot Oil Heater (EU# S001);
- Revised plant natural gas processing rate from 400 MMscfd to 460 MMscfd;
- Increased throughput of the existing Plant product storage tanks, which are pressurized to prevent emissions during normal operations;
- Update to site-wide PTE, excluding fugitives:
 - CO: 99.23 T/yr
 - NO_x: 72.55 T/yr
 - PM/PM₁₀/PM_{2.5}: 16.78 T/yr
 - SO₂: 1.63 T/yr
 - VOC: 10.20 T/yr
 - CO₂e: 288,861 T/yr
- Due to Supreme Court ruling, GHG emissions alone may not trigger Prevention of Significant Deterioration (PSD) permitting on sources with total criteria pollutant potential to emit less than the PSD major source threshold.
- November 6, 2014: Permit R13-2896C issued by WV DEP

Project Description

With this filing, Blue Racer Midstream LLC is requesting that the WV DEP authorize the replacement of the existing plant flare (EU# S004) with a ground flare (EU# S004A).

Regulated Air Pollutant	Site Total PTE (T/yr)
Oxides of Nitrogen (NO _x):	72.63
Carbon Monoxide (CO):	97.45
Volatile Organic Compounds (VOC):	43.70
Particulate Matter (PM):	31.97
PM with an aerodynamic diameter of less than or equal to 10 microns (PM ₁₀)	20.81
PM with an aerodynamic diameter of less than or equal to 2.5 microns (PM _{2.5})	17.17
Sulfur Dioxide (SO ₂):	1.63
Greenhouse Gases (CO ₂ e):	288,945

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
P001	Vertical Stack	S001	Hot Oil Heater	N/A	N/A	C	N/A	NO _x	5.63	24.68	5.63	24.68	Gas	EE	N/A
								CO	3.25	14.24	3.25	14.24	Gas		
								VOC	0.37	1.61	0.37	1.61	Gas		
								PM	1.61	7.07	1.61	7.07	Gas		
								SO ₂	0.16	0.69	0.16	0.69	Gas		
								CO _{2e} (1)	--	111,058	--	111,058	Gas		
								HAPs	(2)	(2)	(2)	(2)	Gas		
P004A	Vertical	S004A	Ground Flare	N/A	N/A	C	N/A	NO _x	1.19	0.65	1.19	0.65	Gas	EE	N/A
								CO	2.39	1.30	2.39	1.30	Gas		
								VOC	2.31	0.17	2.31	0.17	Gas		
								PM	0.06	0.03	0.06	0.03	Gas		
								SO ₂	--	--	--	--	Gas		
								CO _{2e} (1)	--	565	--	565	Gas		
								HAPs	(2)	(2)	(2)	(2)	Gas		
P021	Vertical	S021	Emergency Flare	N/A	N/A	C	N/A	NO _x	0.03	0.11	0.03	0.11	Gas	EE	N/A
								CO	0.14	0.60	0.14	0.60	Gas		
								VOC	0.05	0.23	0.05	0.23	Gas		
								PM	0.001	0.01	0.001	0.01	Gas		
								SO ₂	--	--	--	--	Gas		
								CO _{2e} (1)	--	103	--	103	Gas		
								HAPs	(2)	(2)	(2)	(2)	Gas		
P004A	Vertical	S007	Slop Tank TK-906	N/A	N/A	N/A	N/A	--	--	--	--	Gas	N/A	N/A	
								(2)	(2)	(2)	(2)	Gas			

Attachment M
Air Pollution Control Device Sheet
(FLARE SYSTEM)

Control Device ID No. (must match Emission Units Table): C021

Equipment Information

<p>1. Manufacturer: John Zinc Company</p> <p>Model No. KMI Model 12-26 Multipoint Tip</p>	<p>2. Method: <input checked="" type="checkbox"/> Elevated flare <input type="checkbox"/> Ground flare <input type="checkbox"/> Other Describe</p>
<p>3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.</p>	
<p>4. Method of system used: <input type="checkbox"/> Steam-assisted <input type="checkbox"/> Air-assisted <input checked="" type="checkbox"/> Pressure-assisted <input type="checkbox"/> Non-assisted</p>	
<p>5. Maximum capacity of flare:</p> <p align="right">scf/min 19,800,000 scf/hr</p>	<p>6. Dimensions of stack: Diameter 4.5 (outer support stack) ft. Height 376.5 ft.</p>
<p>7. Estimated combustion efficiency: (Waste gas destruction efficiency)</p> <p>Estimated: 98 % Minimum guaranteed: 98 %</p>	<p>8. Fuel used in burners: <input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Fuel Oil, Number <input type="checkbox"/> Other, Specify:</p>
<p>9. Number of burners: 1 Rating: 22,500,000,000 BTU/hr</p>	<p>11. Describe method of controlling flame: Pressure Staging</p>
<p>10. Will preheat be used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>12. Flare height: 12.5 ft. (The tip is 10' - 0" and the spool piece is 2' - 6")</p>	<p>14. Natural gas flow rate to flare pilot flame per pilot light: scf/min 65 scf/hr</p>
<p>13. Flare tip inside diameter: 2.5 (inner gas riser) ft</p>	
<p>15. Number of pilot lights: three (3) Total 200,655 BTU/hr</p>	<p>16. Will automatic re-ignition be used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>17. If automatic re-ignition will be used, describe the method: An auto flame front ignition is used for re-ignition. A thermocouple controller is used to indicate a loss of flame and a signal is sent to open the air/gas mixture at the panel. The panel then begins a series of re-ignitions using the flame front ignition and the necessary pilots.</p>	
<p>18. Is pilot flame equipped with a monitor? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, what type? <input checked="" type="checkbox"/> Thermocouple <input type="checkbox"/> Infra-Red <input type="checkbox"/> Ultra Violet <input type="checkbox"/> Camera with monitoring control room <input type="checkbox"/> Other, Describe:</p>	
<p>19. Hours of unit operation per year: Pilots: 8,760 hours Flare: As Needed</p>	

<p>44. Proposed Monitoring, Recordkeeping, Reporting, and Testing Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.</p>	
<p>MONITORING: Proposed continuous monitoring of the flame presence with a thermocouple. Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>	<p>RECORDKEEPING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>
<p>REPORTING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>	<p>TESTING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>
<p>MONITORING:</p>	<p>Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.</p>
<p>RECORDKEEPING:</p>	<p>Please describe the proposed recordkeeping that will accompany the monitoring.</p>
<p>REPORTING:</p>	<p>Please describe any proposed emissions testing for this process equipment on air pollution control device.</p>
<p>TESTING:</p>	<p>Please describe any proposed emissions testing for this process equipment on air pollution control device.</p>
<p>45. Manufacturer's Guaranteed Capture Efficiency for each air pollutant. N/A</p>	
<p>46. Manufacturer's Guaranteed Control Efficiency for each air pollutant. VOC control = 98%</p>	
<p>47. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.</p>	

Attachment M
Air Pollution Control Device Sheet
(FLARE SYSTEM)

Control Device ID No. (must match Emission Units Table): C004A

Equipment Information

<p>1. Manufacturer: Callidus</p> <p>Model No. CAL-MP staged, multipoint flare system</p>	<p>2. Method: <input type="checkbox"/> Elevated flare <input checked="" type="checkbox"/> Ground flare <input type="checkbox"/> Other Describe</p>
<p>3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.</p>	
<p>4. Method of system used: <input type="checkbox"/> Steam-assisted <input type="checkbox"/> Air-assisted <input type="checkbox"/> Pressure-assisted <input checked="" type="checkbox"/> Non-assisted</p>	
<p>5. Maximum capacity of flare:</p> <p align="right">scf/min 19,800,000 scf/hr</p>	<p>6. Dimensions of stack:</p> <p>Diameter 1 ft. Height 7 ft.</p>
<p>7. Estimated combustion efficiency: (Waste gas destruction efficiency)</p> <p>Estimated: 98 % Minimum guaranteed: 98 %</p>	<p>8. Fuel used in burners: <input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Fuel Oil, Number <input type="checkbox"/> Other, Specify:</p>
<p>9. Number of burners: 229 Rating: 22,500,000,000 BTU/hr</p>	<p>11. Describe method of controlling flame: Pressure Staging</p>
<p>10. Will preheat be used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>12. Flare height: 7 ft.</p>	<p>14. Natural gas flow rate to flare pilot flame per pilot light: scf/min 83 scf/hr</p>
<p>13. Flare tip inside diameter: 0.25 (burner riser) ft</p>	
<p>15. Number of pilot lights: nine (9) Total 765,000 BTU/hr</p>	<p>16. Will automatic re-ignition be used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>17. If automatic re-ignition will be used, describe the method: An auto flame front ignition is used for re-ignition. A thermocouple controller is used to indicate a loss of flame and a signal is sent to open the air/gas mixture at the panel. The panel then begins a series of re-ignitions using the flame front ignition and the necessary pilots.</p>	
<p>18. Is pilot flame equipped with a monitor? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, what type? <input checked="" type="checkbox"/> Thermocouple <input type="checkbox"/> Infra-Red <input type="checkbox"/> Ultra Violet <input type="checkbox"/> Camera with monitoring control room <input type="checkbox"/> Other, Describe:</p>	
<p>19. Hours of unit operation per year: Pilots: 8,760 hours Flare: As Needed</p>	

<p>44. Proposed Monitoring, Recordkeeping, Reporting, and Testing Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.</p>	
<p>MONITORING: Proposed continuous monitoring of the flame presence with a thermocouple. Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>	<p>RECORDKEEPING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>
<p>REPORTING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>	<p>TESTING: Refer to Attachment O-1 for a description of all monitoring, testing, recordkeeping, and reporting requirements.</p>
<p>MONITORING:</p>	<p>Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.</p>
<p>RECORDKEEPING:</p>	<p>Please describe the proposed recordkeeping that will accompany the monitoring.</p>
<p>REPORTING:</p>	<p>Please describe any proposed emissions testing for this process equipment on air pollution control device.</p>
<p>TESTING:</p>	<p>Please describe any proposed emissions testing for this process equipment on air pollution control device.</p>
<p>45. Manufacturer's Guaranteed Capture Efficiency for each air pollutant. N/A</p>	
<p>46. Manufacturer's Guaranteed Control Efficiency for each air pollutant. VOC control = 98%</p>	
<p>47. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.</p>	

**TABLE N-1
SUMMARY OF SITE-WIDE AIR POLLUTANT EMISSION RATES
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC**

Emission Unit ID	Control Device ID	Emission Point ID	Description	Potential to Emit																	
				NO _x Annual (lb/yr)	CO Annual (lb/yr)	VOC Annual (lb/yr)	PM Annual (lb/yr)	PM ₁₀ Annual (lb/yr)	PM _{2.5} Annual (lb/yr)	SO ₂ Annual (lb/yr)	CO ₂ Annual (lb/yr)	CH ₄ Annual (lb/yr)	CO ₂ e Annual (lb/yr)								
PROJECT-AFFECTED SOURCE																					
S004A	N/A	P004A	Ground Flare	1.19	2.39	1.30	2.31	0.17	0.06	0.03	0.06	0.03	0.001	0.002	--	--	--	565			
EXISTING/UNMODIFIED SOURCES																					
S001	N/A	P001	Hot Oil Heater (216.7 MMBtu/hr)	5.63	24.68	3.25	14.24	0.37	1.61	7.07	1.61	7.07	0.16	0.69	--	--	--	111,058			
S016	N/A	P016	Hot Oil Heater (61.6 MMBtu/hr)	1.48	6.47	3.63	15.91	0.33	1.45	0.46	2.01	0.46	2.01	0.04	0.20	--	--	31,560			
S017	N/A	P017	Hot Oil Heater (61.6 MMBtu/hr)	1.48	6.47	3.63	15.91	0.33	1.45	0.46	2.01	0.46	2.01	0.04	0.20	--	--	31,560			
S018	N/A	P018	Hot Oil Heater (61.6 MMBtu/hr)	1.48	6.47	3.63	15.91	0.33	1.45	0.46	2.01	0.46	2.01	0.04	0.20	--	--	31,560			
S019	N/A	P019	Hot Oil Heater (61.6 MMBtu/hr)	1.48	6.47	3.63	15.91	0.33	1.45	0.46	2.01	0.46	2.01	0.04	0.20	--	--	31,560			
S020	N/A	P020	Glycol Reboiler (3.0 MMBtu/hr)	0.29	1.29	0.25	1.08	0.02	0.10	0.02	0.10	0.02	0.01	0.02	0.01	--	--	1,537			
S022	N/A	P022	Regen Gas Heater (9.7 MMBtu/hr)	0.95	4.17	0.80	3.50	0.05	0.23	0.07	0.32	0.07	0.32	0.01	0.03	--	--	4,971			
S021	N/A	P021	Emergency Flare	0.03	0.11	0.14	0.60	0.05	0.23	0.001	0.01	0.001	0.01	3.8E-05	0.002	--	--	103			
S007	N/A	P004A	Slop Tank TK-906, with Natural Gas Blanket and VRU to Flare (insignificant intermittent source)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
S011, S014	N/A	P005, P006	Ethane Amine Regenerators	--	--	--	0.16	0.71	--	--	--	--	--	--	5,820	25,692	0.28	1.25	5,827	25,523	
S005	C001	P001	Natural Gasoline Storage Tank TK-802, with Natural Gas Blanket and VRU to Hot Oil Heater (insignificant intermittent source)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
S023	C001	P001	Natural Gasoline Storage Tank TK-803, with Natural Gas Blanket and VRU to Hot Oil Heater (insignificant intermittent source)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
S008	N/A	P008	Propane, i-Butane, Butanes, and Natural Gasoline Loading (Truck, Railcar, and Barge)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ROADS																					
FUG AREA 2	N/A	ROADS	Unpaved Roads	--	--	--	15.20	--	--	4.05	--	--	--	--	--	--	--	--	--	--	
FUG AREA 2	N/A	FUG AREA 2	Fugitives	--	--	--	1.19	5.22	--	--	--	--	0.41	--	--	--	--	--	--	31	
S012	N/A	P012	Regen Gas Heater (9.7 MMBtu/hr)	0.94	4.13	0.79	3.47	0.05	0.23	0.07	0.31	0.07	0.31	0.01	0.02	--	--	0.56	1.21	--	31
S013	N/A	P013	Cryo HMO Heater (26.3 MMBtu/hr)	2.56	11.19	2.15	9.40	0.14	0.62	0.19	0.85	0.19	0.85	0.02	0.07	--	--	--	--	--	4,971
S002	N/A	P002	Fire Pump #1 (700 hp)	5.31	0.27	2.18	0.11	0.08	0.004	0.30	0.02	0.30	0.02	0.01	0.01	--	--	--	--	--	13,478
S003	N/A	P003	Fire Pump #2 (700 hp)	5.31	0.27	2.18	0.11	0.08	0.004	0.30	0.02	0.30	0.02	0.01	0.01	--	--	--	--	--	41
FUG AREA 1	N/A	FUG AREA 1	Fugitives	--	--	--	--	28.80	--	--	--	--	--	--	--	--	--	0.05	--	--	387
Total (PTE excluding fugitives)^a:				28.13	72.63	28.65	97.45	4.64	9.69	4.48	16.76	4.48	16.76	0.38	1.63	5820.03	25491.74	0.28	1.25	5,827	288,577
Site Total (PTE including fugitives)^b:				28.13	72.63	28.65	97.45	5.83	43.70	4.48	20.81	4.48	17.17	0.38	1.63	5810.03	25497.35	0.28	1.75	5,827	288,945
PSD Major Source Threshold (excludes fugitives):				250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	17.95	5,827	100,000

^a Fugitive emissions are excluded for the purpose of determining major source status under 40 CFR §52.21.

^b Unmodified GHG pollutant totals were revised to account for the updated Global Warming Potential for methane and nitrous oxides effective January 1, 2014.

GROUND FLARE POTENTIAL TO EMIT
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

Emission Unit ID	S004A	
Process Streams to Flare		
Annual Emissions (for tpy)		
<i>Pilot Emissions - Continuous</i>		
Pilot Fuel consumption	743.44	scf/hr
Pilot heat input rating	0.765	MMBtu/hr
Fuel gas HHV	1,029	Btu/ft ³
Annual operating hours	8,760	hr/yr
<i>Purge Gas - Continuous</i>		
Purge Gas consumption	117	scf/hr
Purge Gas Input rating	0.120	MMBtu/hr
Purge gas HHV	1,029	Btu/ft ³
Annual operating hours	8,760	hr/yr
<i>Total (Maintenance and Blowdowns)</i>		
Total annual heat input to flare	929	MMBtu/yr
Total annual gas volume to flare	1	MMscf/yr
Total annual VOC to flare	2	ton VOC/yr
Total annual CH ₄ to flare	13	ton CH ₄ /yr
Total annual HAP to flare	0	ton HAP/yr
<i>Total (Pressure Relief Valve Leaks)</i>		
Total annual heat input to flare	735	MMBtu/yr
Total hourly heat input to flare	0.08	MMBtu/hr
Total hourly consumption to flare	81.5	scf/hr
Total annual gas volume to flare	0.6	MMscf/yr
Total Hourly VOC to flare	1.1	lb/hr VOC
Total annual VOC to flare	5	ton VOC/yr
Total annual CH ₄ to flare	3	ton CH ₄ /yr
Total annual HAP to flare	0.1	ton HAP/yr
Maximum Short-Term Emissions		
Max short-term VOC to flare (Case 13)	112	lb/hr
Max short-term CH ₄ to flare (Case 12)	260	lb/hr
Max short-term HAP to flare	0	lb/hr
Max short-term heat input (Case 11)	8	MMBtu/hr
Total consumption to flare	7472.2	scf/hr
Flare control efficiency	98.0%	

Pollutant	CAS	REF	Emission Factor	Units	Potential Emissions	
					lb/hr	tons/yr
NOx						
<i>Criteria Pollutants</i>						
NOx	N/A	1	0.138	lb/MMBtu	0.11	0.46
CO	630-08-0	1	0.2755	lb/MMBtu	0.21	0.92
VOC	N/A	3	5.5	lb/MMscf	0.004	0.02
PM-10	N/A	3	7.6	lb/MMscf	0.01	0.02
PM-2.5	N/A	3	7.6	lb/MMscf	0.01	0.02
SO ₂	7446-09-5	2	4.0	ppm	0.001	0.002
<i>Greenhouse Gases</i>						
Carbon dioxide	124-38-9	4	53.02	kg/MMBtu	89.42	391.66
Methane	74-82-8	5	1.0E-03	kg/MMBtu	0.002	0.01
Nitrous oxide	10024-97-2	5	1.0E-04	kg/MMBtu	0.0002	0.001
CO ₂ e	N/A	6	—	—	69.51	392.06
PM-10						
<i>Criteria Pollutants</i>						
NOx	N/A	1	0.138	lb/MMBtu	0.02	0.07
CO	630-08-0	1	0.2755	lb/MMBtu	0.03	0.15
VOC	N/A	3	5.5	lb/MMscf	0.001	0.003
PM-10	N/A	3	7.6	lb/MMscf	0.001	0.004
PM-2.5	N/A	3	7.6	lb/MMscf	0.001	0.004
SO ₂	7446-09-5	2	4.0	ppm	0.0001	0.0003
<i>Greenhouse Gases</i>						
Carbon dioxide	124-38-9	4	53.02	kg/MMBtu	14.07	61.64
Methane	74-82-8	5	1.0E-03	kg/MMBtu	0.0003	0.001
Nitrous oxide	10024-97-2	5	1.0E-04	kg/MMBtu	0.00003	0.0001
CO ₂ e	N/A	6	—	—	14.09	61.70
PM-2.5						
<i>Criteria Pollutants</i>						
NO _x	N/A	1	0.138	lb/MMBtu	1.07	0.21
CO	630-08-0	1	0.2755	lb/MMBtu	2.14	0.23
VOC - combustion	N/A	3	5.5	lb/MMscf	0.04	0.004
VOC - controlled process stream	N/A	—	1.13	lb/hr	2.26	0.14
PM-10	N/A	3	7.6	lb/MMscf	0.06	0.01
PM-2.5	N/A	3	7.6	lb/MMscf	0.06	0.01
HAP - controlled process stream	N/A	—	0	lb/hr	0.00	0.00
TOTAL						
<i>Criteria Pollutants</i>						
NOx	N/A	—	—	—	1.19	0.65
CO	630-08-0	—	—	—	2.39	1.30
VOC	N/A	—	—	—	2.31	0.17
PM-10	N/A	—	—	—	0.06	0.03
PM-2.5	N/A	—	—	—	0.06	0.03
SO ₂	7446-09-5	—	—	—	0.001	0.003

- Notes:
1. CO and NO_x are based upon TNRCC Guidance Document for Flares (dated 10/80) for non-assisted high-BTU flares.
 2. SO₂ is estimated using a mass balance approach and the actual sulfur content of the gas.
 3. AP-42 Table 14-2
 4. 40 CFR 98 Table C-1
 5. 40 CFR 98 Table C-2
 6. 40 CFR 93 Table A-1

Waste gas GHG combustion emissions calculated in accordance with 40 CFR 98 Subpart W.

PRESSURE RELIEF VALVES TO FLARE POTENTIAL TO EMIT
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

Emission Point ID	Flare	P004				
Component	Component LHV (Btu/lb)	Uncontrolled Emissions From Area 2 Pressure Relief Valve Equipment Leaks ^a		Flare DRE (%)	Potential to Emit ^f	
		Hourly (lb/hr)	Annual (T/yr)		Hourly (lb/hr)	Annual (T/yr)
		Methane	21,502		0.0785	0.3439
Ethane	20,416	0.3063	1.3417	99%	0.0031	0.0134
Propane	19,929	0.2038	0.8928	98%	0.0041	0.0179
i-Butane	19,614	0.0246	0.1079	98%	0.0005	0.0022
n-Butane	19,665	0.1170	0.5125	98%	0.0023	0.0103
i-Pentane	19,451	0.0568	0.2486	98%	0.0011	0.0050
n-Pentane	19,499	0.0657	0.2879	98%	0.0013	0.0058
n-Hexane	19,391	0.0072	0.0316	98%	0.0001	0.0006
Other Hexanes	19,147	0.0311	0.1364	98%	0.0006	0.0027
Benzene	18,000	0.0015	0.0064	98%	0.0000	0.0001
Heptane	19,163	0.0039	0.0171	98%	0.0001	0.0003
Octane	19,104	0.0048	0.0212	98%	0.0001	0.0004
Toluene	18,501	0.0015	0.0065	98%	0.00003	0.0001
Ethylbenzene	17,780	0.0001	0.0004	98%	0.000002	0.00001
Xylene	18,410	0.0004	0.0019	98%	0.00001	0.00004
TOTAL:	20,081	0.90	3.96		0.01	0.06
TOTAL VOC:		0.52	2.27		0.01	0.05
TOTAL HAPs:		0.01	0.05		0.0002	0.001

Component	Component LHV (Btu/lb)	Uncontrolled Emissions From Plant Relief Valve Equipment Leaks ^b		Flare DRE (%)	Potential to Emit ^f	
		Hourly (lb/hr)	Annual (T/yr)		Hourly (lb/hr)	Annual (T/yr)
		Methane	21,502		0.6802	2.9795
Ethane	20,416	1.9560	8.5671	99%	0.0196	0.0857
Propane	19,929	0.2247	0.9844	98%	0.0045	0.0197
i-Butane	19,614	0.1736	0.7602	98%	0.0035	0.0152
n-Butane	19,665	0.0831	0.3639	98%	0.0017	0.0073
i-Pentane	19,451	0.0259	0.1136	98%	0.0005	0.0023
n-Pentane	19,499	0.0303	0.1328	98%	0.0006	0.0027
n-Hexane	19,391	0.0039	0.0172	98%	0.0001	0.0003
Other Hexanes	19,147	0.0170	0.0744	98%	0.0003	0.0015
Benzene	18,000	0.0008	0.0035	98%	0.0000	0.0001
Ethyl Mercaptan	20,416	0.0019	0.0085	98%	0.0000	0.0002
Heptane	19,163	0.0021	0.0093	98%	0.0000	0.0002
Octane	19,104	0.0026	0.0115	98%	0.0001	0.0002
Toluene	18,501	0.0008	0.0035	98%	0.0000	0.0001
Ethylbenzene	17,780	0.00005	0.0002	98%	0.0000	0.0000
Xylene	18,410	0.0002	0.0010	98%	0.0000	0.0000
TOTAL:	20,522	3.20	14.03		0.04	0.17
TOTAL VOC:		0.57	2.48		0.01	0.05
TOTAL HAPs:		0.01	0.03		0.0001	0.001

^a Please refer to the calculation sheet "Fug Area 2 Pressure Relief Valve Equipment Leaks to Flare."

^b Please refer to the calculation sheet "Plant Pressure Relief Valve Equipment Leaks to Flare."

^c An example calculation for Potential to Emit Ethane follows:

$$\text{Ethane PTE (lb/hr)} = (\text{Uncontrolled PRV Equipment Leaks, lb/hr}) * (1 - \text{Flare DRE, wt\%})$$

$$\text{Ethane PTE (lb/hr)} = [(0.3063 \text{ lb/hr})] * (1 - 99\% \text{ wt\%})$$

$$\text{Ethane PTE (lb/hr)} = \boxed{0.0031}$$

EMERGENCY FLARE POTENTIAL TO EMIT
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

Emission Unit ID **S021**

Process Streams to Flare

Annual Emissions (for tpy)

Pilot Emissions- Continual

Pilot fuel consumption	195	scf/hr
Pilot heat input rating	0.201	MMBtu/hr
Fuel gas HHV	1,029	Btu/ft ³
Annual operating hours	8,760	hr/yr

Flare control efficiency **98.0%**

Pollutant	CAS	REF	Emission Factor	Units	Potential Emissions	
					lb/hr	tons/yr
Pilot						
Criteria Pollutants						
NOx	N/A	1	0.025	lb/hr	0.03	0.11
CO	630-08-0	1	0.1366	lb/hr	0.14	0.60
VOC	N/A	1	0.0516	lb/hr	0.05	0.23
PM-10	N/A	2	7.6	lb/MMcf	0.001	0.01
PM-2.5	N/A	2	7.6	lb/MMcf	0.001	0.01
SO2	7446-09-5	1	3.78E-05	lb/hr	0.00004	0.0002
Greenhouse Gases						
Carbon dioxide	124-38-9	4	53.02	kg/MMBtu	23.45	102.73
Methane	74-82-8	5	1.0E-03	kg/MMBtu	0.0004	0.002
Nitrous oxide	10024-97-2	5	1.0E-04	kg/MMBtu	0.00004	0.0002
CO _{2e}	N/A	6	---	---	23.48	102.84
TOTAL						
Criteria Pollutants						
NOx	N/A	---	---	---	0.03	0.11
CO	630-08-0	---	---	---	0.14	0.60
VOC	N/A	---	---	---	0.05	0.23
PM-10	N/A	---	---	---	0.001	0.01
PM-2.5	N/A	---	---	---	0.001	0.01
SO2	7446-09-5	---	---	---	0.00004	0.0002

Notes:

1. Vendor
2. AP-42 Table 1.4-2
3. AP-42 Tables 13.5-1 and -2
4. 40 CFR 98 Table C-1
5. 40 CFR 98 Table C-2
6. 40 CFR 98 Table A-1

CALCULATION OF GREENHOUSE GAS EMISSIONS FROM FLARE WASTE GAS COMBUSTION
AIR PERMIT APPLICATION
NATRIUM EXTRACTION AND FRACTIONATION PROCESSING PLANT
BLUE RACER MIDSTREAM, LLC

CO₂ Combustion Emissions

Compound	Number of Carbon Atoms	Molecular Weight lb/lbmol	Pressure Relief Vents (Area 2) ^a		Pressure Relief Vents (Plant) ^a		Maintenance and Blowdowns		Total Emissions		Total CO ₂ Emissions	
			Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	Hourly (lb/hr)	Annual (T/yr)	CO ₂ Hourly (lb/hr)	CO ₂ Annual (T/yr)
Methane	1	16.043	0.0785	0.3439	0.6802	2.9795	260.3405	13.3676	261.0993	16.6911	708.9376	45.3196
Ethane	2	30.07	0.3063	1.3417	1.9579	8.5756	274.7789	4.1295	277.0431	14.0469	802.6603	40.6972
Propane	3	44.097	0.2038	0.8928	0.2247	0.9844	60.8592	1.2764	61.2878	3.1536	179.7898	9.2512
i-Butane	4	58.123	0.0246	0.1079	0.1736	0.7602	9.9553	0.2088	10.1535	1.0769	30.1305	3.1956
n-Butane	4	58.123	0.1170	0.5125	0.0831	0.3639	24.3563	0.5108	24.5564	1.3872	72.8711	4.1166
i-Pentane	5	72.15	0.0568	0.2486	0.0259	0.1136	6.8754	0.1442	6.9581	0.5064	20.7923	1.5132
n-Pentane	5	72.15	0.0657	0.2879	0.0303	0.1328	7.6338	0.1601	7.7298	0.5808	23.0984	1.7355
n-Hexane	6	86.172	0.0384	0.1681	0.0209	0.0916	2.3859	0.0500	2.4452	0.3097	7.3413	0.9299
Heptane	7	100.198	0.0039	0.0171	0.0021	0.0093	0.0000	0.0000	0.0060	0.0264	0.0181	0.0795
Benzene	6	78.00	0.0015	0.0064	0.0008	0.0035	0.0000	0.0000	0.0023	0.0099	0.0075	0.0328
Toluene	7	92.13	0.0015	0.0065	0.0008	0.0035	0.0000	0.0000	0.0023	0.0101	0.0075	0.0330
Ethylbenzene	8	106.165	0.0001	0.0004	0.0000	0.0002	0.0000	0.0000	0.0001	0.0006	0.0004	0.0019
Xylene	8	106.165	0.0004	0.0019	0.0002	0.0010	0.0000	0.0000	0.0007	0.0029	0.0022	0.0095
Octane	8	114.224	0.0048	0.0212	0.0026	0.0115	0.0000	0.0000	0.0075	0.0327	0.0225	0.0987
Total CO₂ Emissions:											1,845.6794	107.0140

Sample calculation CO₂ combustion (using methane):

$$\text{CO}_2 \text{ Hourly} = (\text{Total Waste Gas Flow, lb/hr}) * (0.99 \text{ destruction efficiency}) * (\text{No. of C, lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (\text{MW, lb CH}_4/\text{lbmol CH}_4)$$

$$= (261.10 \text{ lb/hr}) * (0.99) * (1 \text{ lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (16.04 \text{ lb CH}_4/\text{lbmol CH}_4)$$

$$= 708.9376 \text{ lb/hr}$$

$$\text{CO}_2 \text{ Annual} = (\text{Total Waste Gas Flow, T/yr}) * (0.99 \text{ destruction efficiency}) * (\text{No. of C, lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (\text{MW, lb CH}_4/\text{lbmol CH}_4)$$

$$= (16.69 \text{ T/yr}) * (0.99) * (1 \text{ lbmol C/lbmol CH}_4) * (44 \text{ lb CO}_2/\text{lbmol C}) / (16.04 \text{ lb CH}_4/\text{lbmol CH}_4)$$

$$= 45.3196 \text{ T/yr}$$

$$\text{N}_2\text{O} = \text{Fuel} * \text{HHV} * 0.0001 \text{ (Eq. W-40, §98.233(z)(6))}$$

Where:

N₂O = Annual emissions from combustion in kilograms

Fuel = volume combusted, scf

HHV = High heat value of fuel, MMBtu/scf

N₂O Combustion Emissions

	Pressure Relief Vents (Area 2) ^a	Pressure Relief Vents (Plant) ^a	Maintenance and Blowdowns
Waste Gas Flow (scf/yr)	81,424.10	394,127.73	775,247.40
Heating Value (Btu/scf)	1,951.73	1,136.03	1245.24
N ₂ O Emissions (T/yr)	0.00002	0.00005	0.0001

Sample Calculation for Tank and Loading Emissions:

$$\text{N}_2\text{O} = (0.0001 \text{ kg N}_2\text{O/MMBtu}) * (\text{Waste Gas Flow, scf/yr}) * (\text{Heating Value, Btu/scf}) / (10^6 \text{ Btu/MMBtu}) / (0.4536 \text{ kg/lb}) / (2000 \text{ lb/T})$$

$$= (0.0001 \text{ kg N}_2\text{O/MMBtu}) * (81,424.10 \text{ scf/yr}) * (1,951.73 \text{ Btu/scf}) / (10^6 \text{ Btu/MMBtu}) / (0.4536 \text{ kg/lb}) / (2000 \text{ lb/T})$$

$$= 0.00002 \text{ T/yr}$$

Emission Summary:

	Pressure Relief Vents (Area 2) ^a		Pressure Relief Vents (Plant) ^a		Maintenance and Blowdowns		Total Emissions		Combustion CO ₂ (T/yr)	Combustion N ₂ O (T/yr)	Combustion CO ₂ ^b (T/yr)
	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted	Uncombusted			
	CO ₂ (T/yr)	CH ₄ (T/yr)	CO ₂ (T/yr)	CH ₄ (T/yr)	CO ₂ (T/yr)	CH ₄ (T/yr)	CO ₂ (T/yr)	CH ₄ (T/yr)			
	0.00	0.003	0.00	0.03	0.04	0.13	0.04	0.17	107.01	0.0002	111.28

^a Pressure relief vents from Area 2 and Plant were taken from Pressure Relief Valves To Flare Potential To Emit worksheet.

^b Total GHG emissions from flare waste gas combustion are calculated as follows:

$$(0.04 \text{ T/yr Uncombusted CO}_2) + (107.01 \text{ T/yr Combustion CO}_2) + ((0.17 \text{ T/yr Methane}) * 25) + ((0.0002 \text{ T/yr N}_2\text{O}) * 298) = 111.28 \text{ T/yr CO}_2\text{e}$$

Notice of Application

Notice is given that Blue Racer Midstream, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Rule 13 Air Permit for a Modification to the Natrium Natural Gas Extraction and Processing Plant located on 14787 Energy Road, near Proctor, in Marshall County, West Virginia. The latitude and longitude coordinates are: 39° 45' 34.9" N; 80° 51' 42.2" W.

Blue Racer Midstream, LLC estimates the modification will result in the following emissions of Regulated Air Pollutant discharges to the atmosphere of:

Regulated Air Pollutant	Emissions (T/yr)
Oxides of Nitrogen (NO _x):	0.08
Carbon Monoxide (CO):	-1.78
Volatile Organic Compounds (VOC):	-0.52
Particulate Matter (PM):	-0.01
PM with an aerodynamic diameter of less than or equal to 10 microns (PM ₁₀)	-0.02
PM with an aerodynamic diameter of less than or equal to 2.5 microns (PM _{2.5})	-0.01
Sulfur Dioxide (SO ₂):	0.00
Greenhouse Gases (CO ₂ e):	-335

The ground flare operation is planned to begin on or about the 1st day of June, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the (Day) day of (Month), (Year).

Richard Moncrief
President and COO
5949 Sherry Lane, Suite 1300
Dallas, Texas 75225

Kessler, Joseph R

From: Sean Wilson <SWilson@caimanenergy.com>
Sent: Monday, September 14, 2015 10:54 AM
To: Kessler, Joseph R
Subject: RE: Natrium Flare Replacement Project - Revised pages

Absolutely – apologies for the oversight. Working on it and will get to you ASAP.

From: Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]
Sent: Monday, September 14, 2015 9:24 AM
To: Sean Wilson
Subject: RE: Natrium Flare Replacement Project - Revised pages

Hey, could you pull out the Emergency Flare, too? And then send me a hard copy of just the new pages (signed by Dan) and then a new updated e-copy for the website?

Thanks

Joe

From: Sean Wilson [<mailto:SWilson@caimanenergy.com>]
Sent: Friday, September 11, 2015 3:44 PM
To: Kessler, Joseph R
Subject: Natrium Flare Replacement Project - Revised pages

Joe – per our earlier conversation, attached are the revision pages for the ground flare permit amendment (R13-2896D) that revise the flare control efficiency to 98%. If you need any further information, please let me know.

Thank you and hope you have a great weekend,
Sean



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

June 15, 2015

Mr. Daniel Wentworth, Sr. Vice President and Operations
Blue Racer Midstream, LLC
5949 Sherry Lane, Suite 1300
Dallas, TX 75225

Entire Document
NON-CONFIDENTIAL

RE: **Application Completeness**
Blue Racer Midstream, LLC
Natrium Plant
Permit No. R13-2896D
Plant ID No. 051-00142

Dear Mr. Wentworth:

Your application for a modification to the Natrium Extraction and Fractionation Plant was received by the Division of Air Quality (DAQ) on April 17, 2015 and assigned to the writer for review. Pursuant to §45-13-5.9, after an initial review of the permit application (and with the submission of the required affidavit of publication on June 2, 2015), the application has, of the date of this letter, been deemed complete. Therefore, the 90-day statutory review period commenced on that date.

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Sincerely,

Joe Kessler, PE
Engineer

Kessler, Joseph R

From: Adkins, Sandra K
Sent: Wednesday, April 22, 2015 3:31 PM
To: Kessler, Joseph R
Subject: Blue Racer Natrium LLC (NPP Facility)/Permit Application Fee

This is the receipt for payment received from:

Apex Titan Inc, check number 26054, dated April 16, 2015, \$2,000.00
Blue Racer Natrium LLC NPP Facility R13-2896D id no 051-00142

OASIS Deposit No CR 1500117426 April 22, 2015

UC Defaulted Accounts Search Results

Sorry, no records matching your criteria were found.

FEIN: 46-152010
Business name:
Doing business
as/Trading as:

Please use your browsers back button to try again.

Workforce WV	Unemployment Compensation	Offices of the Insurance Commissioner
------------------------------	---	---

UC Defaulted Accounts Search Results

Sorry, no records matching your criteria were found.

FEIN:

Business name: BLUE RACER MIDSTREAM, LLC

Doing business

as/Trading as:

Please use your browsers back button to try again.

WorkforceWV	Unemployment Compensation	Offices of the Insurance Commissioner
-----------------------------	---	---



(304) 845-2660
 P.O. BOX 369
 MOUNDSVILLE
 WEST VIRGINIA
 26041



ID. No. DS1-00142 Reg. 23969
 Company Blue Racer
 Facility Naturun Region
 Initials pm

AFFIDAVIT OF PUBLICATION

STATE OF WEST VIRGINIA,
 COUNTY OF MARSHALL, to wit

I, Melanie S. Murdock being first duly sworn upon my oath, do depose and say:

- that I am Legal Advertising Manager of the MOUNDSVILLE DAILY ECHO, a Republican newspaper;
- that I have been duly authorized to execute this affidavit;
- that such newspaper has been published for over 119 years, is regularly published afternoons daily except Saturdays and Sundays, for at least fifty weeks during the calendar year, in the municipality of Moundsville, Marshall County, West Virginia.
- that such newspaper is a newspaper of "general circulation" as defined in Art. 3, Chap. 59 of the Code of West Virginia 1931 as amended, within Moundsville and Marshall County;
- that such newspaper averages in length four or more pages, exclusive of any cover, per issue;
- that such newspaper is circulated to the general public at a definite price or consideration;
- that such newspaper is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices;
- and that the annexed notice described as follows:

Legal Advertisement

PARTY(ies)

Air Quality Permit Notice / Energy Road

NATURE (and agency if heard before one)

CERTIF-BILL TO

Blue Racer Midstream
 Sean Wilson
 5949 Sherry Lane, Suite 1300
 Sterling Plaza
 Dallas, TX 75225

WAS PUBLISHED IN-SAID NEWSPAPER AS FOLLOWS

Times	Dates
1	May 11, 2015
BY WORDS 328	PUBLICATION CHARGES \$37.72

(signed) Melanie S. Murdock

NOTARIZATION

Taken, sworn and subscribed before me this 12th day of May 2015

Amy McElmurry Notary Public

**LEGAL ADVERTISEMENT
 NOTICE OF APPLICATION**

Notice is given that Blue Racer Midstream, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Rule 13 Air Permit for a Modification to the Natrium Natural gas Extraction and Processing Plant located on 14787 Energy Road, near Proctor, in Marshall County, West Virginia. The latitude and longitude coordinates are: 39° 45' 34.9" N; 80° 51' 42.2" W.

Blue Racer Midstream, LLC estimates the modification will result in the following emissions of Regulated Air Pollutant discharges to the atmosphere of:

- Regulated Air Pollutant--Emissions (T/yr)
- Oxides of Nitrogen (NOx): 0.08
- Carbon Monoxide (CO): -1.78
- Volatile Organic Compounds (VOC): -0.62
- Particulate Matter (PM): -0.01
- PM with an aerodynamic diameter of less than or equal to 10 microns (PM10): -0.02
- PM with an aerodynamic diameter of less than or equal to 2.5 microns (PM 2.5): -0.01

Sulfur Dioxide (SO2): 0.00
 Greenhouse Gasses (CO2e): -335

The ground flare operation is planned to begin on or about the 1st day of June, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this 11th day of May, 2015.

Richard Moncrief
 President and COO
 5949 Sherry Lane, Suite 1300
 Dallas, TX 75225

PUBLISH: May 11, 2015.



Entire Document
NON-CONFIDENTIAL



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

May 14, 2015

Mr. Daniel Wentworth, Sr. Vice President and Operations
Blue Racer Midstream, LLC
5949 Sherry Lane, Suite 1300
Dallas, TX 75225

Entire Document
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RE: **Application Incompleteness**
Blue Racer Midstream, LLC
Natrium Plant
Permit No. R13-2896D
Plant ID No. 051-00142

Dear Mr. Wentworth:

Your application for a modification permit was received by the Division of Air Quality (DAQ) on April 17, 2015 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following item needs to be addressed prior to the application being deemed complete:

1. As required in the 48-hour letter sent by this office (via e-mail) on April 22, 2015, the original affidavit of publication from the required Class I Legal Advertisement has not been submitted.

Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Sincerely,

Joe Kessler, PE
Engineer

Kessler, Joseph R

From: Rice, Jennifer L
Sent: Wednesday, April 22, 2015 10:07 AM
To: daniel@caimanenergy.com; swilson@caimanenergy.com
Cc: Kessler, Joseph R; McKeone, Beverly D
Subject: WV DAQ Permit Application Status for Blue Racer Midstream LLC

**RE: Application Status
Blue Racer Midstream LLC
Natrium Extraction and Fractionation Processing Plant
Plant ID No. 051-00142
Application No. R13-2896D**

Entire Document
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Mr. Wentworth,

Your application for a modification permit for the Natrium Extraction and Fractionation Processing Plant was received by this Division on April 17, 2015, and was assigned to Joe Kessler. The following item was not included in the initial application submittal:

Original affidavit for Class I legal advertisement not submitted.

This item is necessary for the assigned permit writer to continue the 30-day completeness review.

Within 30 days, you should receive a letter from Joe Kessler stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Joe Kessler, at 304-926-0499, extension 1219.

Jennifer Rice
WV Dept. of Environmental Protection
Division of Air Quality
304-926-0499 x1227