

John
G60-C069 Copy
051-00141



Williams Ohio Valley Midstream LLC
Park Place Corporate Center 2
2000 Commerce Drive
Pittsburgh, PA 15275
(412) 787-7300
(412) 787-6002 fax

DEC 22 2014

December 10, 2014

Beverly McKeone
New Source Review Program Manager
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

**Subject: Application for Emergency Generator General Permit G60-C
Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
Marshall County, West Virginia**

Dear Ms. McKeone:

Williams Ohio Valley Midstream LLC (Williams OVM) is submitting an application for registration for General Permit G60-C authorization to construct and operate a 49.2 bhp emergency generator at the existing Moundsville Fractionation Plant; located at 200 Caiman Road, approximately 2.0 miles West-Southwest of Moundsville in Marshall County, West Virginia.

Williams OVM recently submitted an Application for Title V Operating Permit (45CSR30) for the Moundsville Fractionation Plant (Application No. R30-05100141-2015). The 45CSR30 permit application did not include the proposed emergency generator and it is requested this new emission source is included in the Title V Operating Permit.

If you have any questions concerning this submittal or need additional information, please contact me at (412) 787-4259 or Danell.Zawaski@williams.com.

Sincerely,

R. Danell Zawaski, P.E.
Environmental Specialist

Enclosures:

Application for General Permit G60-C
Attachments A through O
Supplement 01
Check for Application Fee

**REGISTRATION APPLICATION FOR
EMERGENCY GENERATOR
CLASS II GENERAL PERMIT G60-C**

For the:

**Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
Marshall County, West Virginia**

Submitted to:



**WEST VIRGINIA
DIVISION OF AIR QUALITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Submitted by:



**Williams Ohio Valley Midstream LLC
Park Place Corporate Center 2
2000 Commerce Drive
Pittsburgh, PA 15275**

Prepared by:



**EcoLogic Environmental Consultants, LLC
864 Windsor Court
Santa Barbara, CA 93111**

December 2014

**REGISTRATION APPLICATION FOR
EMERGENCY GENERATOR
CLASS II GENERAL PERMIT G60-C**

**Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
Marshall County, West Virginia**

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**EMERGENCY GENERATOR
CLASS II GENERAL PERMIT G60-C
REGISTRATION APPLICATION FORMS**

- **Section I: General Information**
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 - **Section IV: Attachments and Supporting Documents**
-



WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 Phone: (304) 926-0475 www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION
 CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE
 A STATIONARY SOURCE OF AIR POLLUTANTS

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- | | |
|---|--|
| <input type="checkbox"/> G10-D – Coal Preparation and Handling | <input type="checkbox"/> G40-C – Nonmetallic Minerals Processing |
| <input type="checkbox"/> G20-B – Hot Mix Asphalt | <input type="checkbox"/> G50-B – Concrete Batch |
| <input type="checkbox"/> G30-D – Natural Gas Compressor Stations | <input checked="" type="checkbox"/> G60-C – Class II Emergency Generator |
| <input type="checkbox"/> G33-A – Spark Ignition Internal Combustion Engines | <input type="checkbox"/> G65-C – Class I Emergency Generator |
| <input type="checkbox"/> G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> G70-A – Class II Oil and Natural Gas Production Facility |

SECTION I. GENERAL INFORMATION

| | |
|--|---|
| 1. Name of applicant (as registered with the WV Secretary of State's Office): Williams Ohio Valley Midstream LLC | 2. Federal Employer ID No. (FEIN): 27 - 0856707 |
| 3. Applicant's mailing address: Park Place Corporate Center 2 2000 Commerce Drive Pittsburgh, PA 15275 | 4. Applicant's physical address: Same |
| 5. If applicant is a subsidiary corporation, please provide the name of parent corporation: The Williams Companies, Inc. (EIN: 73-0569878) | |
| 6. WV BUSINESS REGISTRATION. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <ul style="list-style-type: none"> - IF YES, provide a copy of the Certificate of Incorporation/ Organization / Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. - IF NO, provide a copy of the Certificate of Authority / Authority of LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A. | |

SECTION II. FACILITY INFORMATION

| | |
|--|---|
| 7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Natural Gas Liquids Fractionation Plant | 8a. Standard Industrial Classification (SIC) code: 1321 - Natural gas liquids |
| | 8b. North American Industry Classification System (NAICS) code: 211112 -Natural gas liquid extraction |
| 9. DAQ Plant ID No. (for existing facilities only): 051 - 00141 | 10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): R13-2892C (05/28/13) |

A: PRIMARY OPERATING SITE INFORMATION

| | | |
|---|--|--|
| 11A. Facility name of primary operating site: Williams Ohio Valley Midstream LLC Moundsville Fractionation Plant | 12A. Address of primary operating site: 200 Caiman Drive Moundsville, WV 26041 | |
| 13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - IF YES, please explain: Applicant owns the property. - IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE. | | |
| 14A. -- For Modifications or Administrative Updates 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 F. From Moundsville, take State WV-2/Lafayette Ave South, then West, approximately 2 miles. Site is on the right, at the site of the former Olin Facility in Round Bottom. | | |
| 15A. Nearest city or town: Moundsville | 16A. County: Marshall | 17A. UTM Coordinates: Northing (KM): 4,418.11 Easting (KM): 517.35 Zone: 17 S |
| 18A. Briefly describe the proposed new operation or change (s) to the facility: One (1) 49.2 bhp (36.7 kW) Kohler 25REZG Emergency Generator (EmGen) | | 19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: 39.91290° Longitude: -80.79704° |

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

| | | |
|---|--|--|
| 11B. Facility name of primary operating site: na | 12B. Address of primary operating site: na | |
| 13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO - IF YES, please explain: na - IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE. | | |
| 14B. -- For Modifications or Administrative Updates 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 F. na | | |
| 15B. Nearest city or town: na | 16B. County: na | 17B. UTM Coordinates: na |
| 18B. Briefly describe the proposed new operation or change (s) to the facility: na | | 19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): na° |

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

| | | |
|---|--|--|
| 11C. Facility name of primary operating site: na | 12C. Address of primary operating site: na | |
| 13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO - IF YES, please explain: na - IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE. | | |
| 14C. -- For Modifications or Administrative Updates 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 F. na | | |
| 15C. Nearest city or town: na | 16C. County: na | 17C. UTM Coordinates: na |
| 18C. Briefly describe the proposed new operation or change (s) to the facility: na | | 19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): na° |

| | |
|--|---|
| 20. Provide the date of anticipated installation or change: 02/15/15 If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: na | 21. Date of anticipated Start-up if registration is granted: 02/15/15 |
| 22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8,760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation). 100 hr/yr for Testing and Maintenance, Unlimited for Emergency Use (Presume < 500 hr/yr Total) (As Per NSPS JJJJ – Emergency Generator Engines) | |

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

| |
|--|
| 23. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13). |
| 24. Include a Table of Contents as the first page of your application package. |
| All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone. |
| 25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ATTACHMENT A : CURRENT BUSINESS CERTIFICATE <input checked="" type="checkbox"/> ATTACHMENT B: PROCESS DESCRIPTION <input type="checkbox"/> ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS (NOT APPLICABLE) <input checked="" type="checkbox"/> ATTACHMENT D: PROCESS FLOW DIAGRAM <input checked="" type="checkbox"/> ATTACHMENT E: PLOT PLAN <input checked="" type="checkbox"/> ATTACHMENT F: AREA MAP <input checked="" type="checkbox"/> ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM <input type="checkbox"/> ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS (NOT APPLICABLE) <input checked="" type="checkbox"/> ATTACHMENT I: EMISSIONS CALCULATIONS <input checked="" type="checkbox"/> ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT <input type="checkbox"/> ATTACHMENT K: ELECTRONIC SUBMITTAL (Optional) (NOT APPLICABLE) <input checked="" type="checkbox"/> ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE <input type="checkbox"/> ATTACHMENT M: SITING CRITERIA WAIVER (NOT APPLICABLE) <input checked="" type="checkbox"/> ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS) <input checked="" type="checkbox"/> ATTACHMENT O: EMISSIONS SUMMARY SHEETS <input checked="" type="checkbox"/> OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.) <p>Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.</p> |

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation.

FOR A PARTNERSHIP

I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

I certify that I am the Owner and Proprietor

I hereby certify that (please print or type) _____
is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

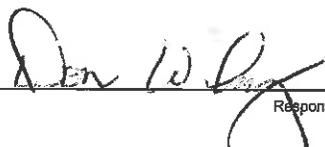
I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature _____

(please use blue ink)

Responsible Official

Date



12/3/2014

Name & Title _____

Don Wicburg, Vice President and General Manager

Signature _____

(please use blue ink)

Authorized Representative (if applicable)

Date

Applicant's Name

Williams Ohio Valley Midstream LLC
Moundsville Fractionation Plant
c/o R. Danell Zawaski, P.E., Environmental Specialist

Phone & Fax _____

(412) 787-4259

(412) 787-6002

Phone

Fax

Email _____

danell.zawaski@williams.com

ATTACHMENT A
Current Business Certificate

If the registrant is a resident of the State of West Virginia the registrant should provide a copy of the registrant's current Business Registration Certificate issued to them from the West Virginia State Tax Department. If the registrant is not a resident of the State of West Virginia, the registrant should provide a copy of the Certificate of Authority/Authority of LLC/Registration.

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

the attached true and exact copy of the Articles of Amendment to the Articles of Organization of

CAIMAN EASTERN MIDSTREAM, LLC

are filed in my office, signed and verified, as required by the provisions of West Virginia Code §31B-2-204 and conform to law. Therefore, I issue this

CERTIFICATE OF AMENDMENT TO THE CERTIFICATE OF AUTHORITY

changing the name of the limited liability company to

WILLIAMS OHIO VALLEY MIDSTREAM LLC



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
May 15, 2012*

Natalie E. Tennant

Secretary of State

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

CAIMAN EASTERN MIDSTREAM, LLC

Control Number: 99GIS

a limited liability company, organized under the laws of the State of Texas
has filed its "Application for Certificate of Authority" in my office according to the provisions
of West Virginia Code §31B-10-1002. I hereby declare the organization to be registered as a
foreign limited liability company from its effective date of September 11, 2009, until a
certificate of cancellation is filed with our office.

Therefore, I hereby issue this

CERTIFICATE OF AUTHORITY OF A FOREIGN LIMITED LIABILITY COMPANY

to the limited liability company authorizing it to transact business in West Virginia



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
September 11, 2009*

Natalie E. Tennant

Secretary of State

ATTACHMENT B

Process Description

Provide a Provide a detailed written description of the operation, plant and/or affected facilities. The Process Description is used in conjunction with the Process Flow Diagram to provide the reviewing engineer a complete understanding of the activity at the operation or plant. Describe in detail and order the complete process.

Use the following guidelines to ensure a complete Process Description:

1. The Process Flow Diagram should be prepared first and used as a guide when preparing the Process Description. The written description shall follow the logical order of the Process Flow Diagram.
 2. All sources, affected facilities, and air pollution control devices must be included in the Process Description.
 3. When modifications are proposed, describe the modifications and the effect the changes will have on affected facilities, equipment or operation.
 4. Proper Source Identification Numbers are used consistently in the Process Description.
 5. Additional information that may facilitate the reviewer's understanding of the Process Flow Diagram and/or Process Description is included.
-

A. Project Overview

ATTACHMENT B
Process Description

Williams Ohio Valley Midstream LLC
MOUNDVILLE FRACTIONATION PLANT
Emergency Generator – General Permit G60-C

A. Project Overview

Williams Ohio Valley Midstream LLC owns and operates the Moundville Fractionation Plant (Frac) located along WV Route 2, West of Moundville, in Marshall County (See Appendix B – Site Location Map). The facility fractionates raw Natural Gas Liquids (NGLs) through a series of distillation processes (de-propanizers and de-butanizers) to generate three products: propane, mixed butanes, and heavier organic liquids identified as natural gasoline. Total plant capacity is 42,500 bbl/day of NGL.

An emergency generator will be installed for the purpose of supplying power to allow key systems to continue to operate without interruption during times of utility power outages.

ATTACHMENT C
Description of Fugitive Emissions

This information is not required for General Permit G60-C. However, the Director may require a detailed written description of fugitive emissions associated with the process if there is reason to believe the affected facility is close to major source thresholds.

Not Applicable

ATTACHMENT D

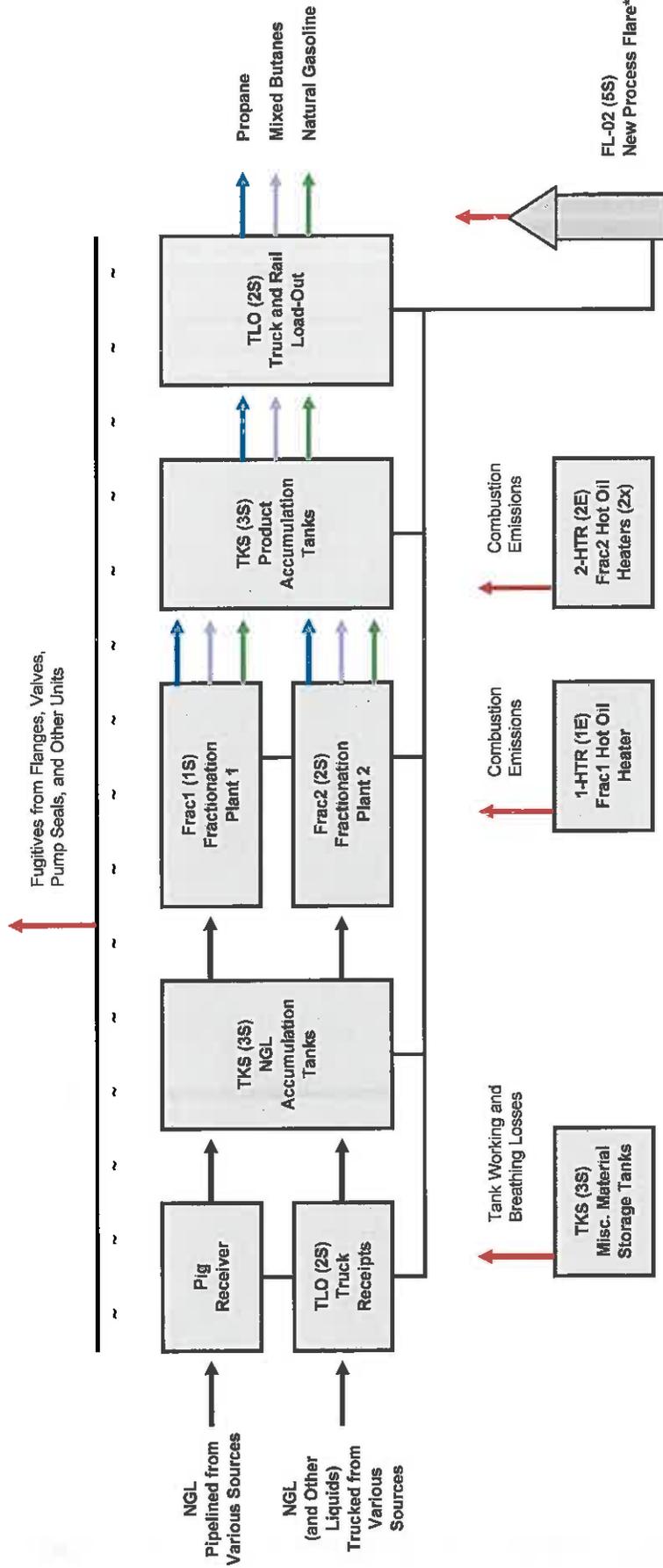
Process Flow Diagram (PFD)

Provide a diagram or schematic that supplements the Process Description of the operation or plant. The Process Flow Diagram shall show all sources, components or facets of the operation or plant in an understandable line sequence of operation. Appropriate sizing and specifications of equipment should also be shown on the Process Flow Diagram. For a proposed modification, clearly identify the process areas, affected facilities and equipment that will be modified or added, and specify the nature and extent of the modification.

Use the following guidelines to ensure a complete Process Flow Diagram:

1. The Process Flow Diagram shall logically follow the entire process from beginning to end.
 2. Identify each source, air pollution control device and transfer point with proper and consistent Source Identification Numbers, Control Device Identification Numbers and Transfer Point Identification Numbers.
 3. Include material handling rates for all lines of the Process Flow Diagram. If applicable, include pre- and post-modification material handling rates and identify accordingly.
 4. Transfer Point Identification Numbers, consistent with assignments in any emission calculation sheet, should be shown at each transfer point.
 5. The process flow lines may appear different for clarity. For example, dot-dash-dot for raw material, and a solid line for finished product. Refuse flow may be identified by a dotted line
 6. The process flow lines may be color coded. For example, new or modified equipment may be red, old or existing equipment may be blue; different stages of preparation such as raw material may be green and finished product or refuse another color.
-

Attachment D - Process Flow Diagram (PFD)



| Unit ID | DESCRIPTION |
|------------|--|
| Frac1 (1S) | 12,500 bpd (ave) Fractionation Plant 1 (Fugitives Only) |
| Frac2 (1S) | 30,000 bpd (ave) Fractionation Plant 2 (Fugitives Only) |
| TLO (2S) | Truck and Rail - Receipts and Load-Out |
| TKS (3S) | NGL/Stabilized Condensate/Product Accumulation Tanks |
| TKS (3S) | Misc Tanks (Lube Oil, Slop Liquids, Diesel, Gasoline, MeOH, and Mercaptan) |
| 1-HTR | 45.54 MMBtu/hr Frac1 Hot Oil Heater |
| 2-HTR | 89.85 MMBtu/hr (ea.) Frac2 Hot Oil Heaters (2x) |
| FL-02 (6S) | 560.00 MMBtu/hr (max) New Process Flare |
| EmGen (6S) | 49.2 bhp Kohler (GM Vortex 3.0L) Emergency Generator |

***Waste Gas to the New Process Flare:**
 Hot Oil Expansion Tank Emissions
 Truck/Rail Loading and Hose Blowdown
 Pig Receiver Blowdowns (2 Events/yr)
 Facility Equipment Blowdown (12-hr/yr)
 Natural Gasoline Tank Emissions
 Facility Maintenance Blowdown (12-hr/yr)

ATTACHMENT E

Plot Plan

Provide an accurately scaled and detailed Plot Plan showing the locations of all process equipment and/or affected facilities and air pollution control devices. Show all equipment, affected facilities, enclosures, buildings and plant entrances and exits from the nearest public road(s) as appropriate. Note height, width and length of proposed or existing buildings and structures.

A scale between 1"=10' and 1"=200' should be used with the determining factor being the level of detail necessary to show operation or plant areas, affected facilities, sources, transfer points, etc. An overall small scale plot plan (e.g., 1"=300') should be submitted in addition to larger scale plot plans for process or activity areas (e.g., 1"=50') if the plant is too large to allow adequate detail on a single plot plan. Process or activity areas may be grouped for the enlargements as long as sufficient detail is shown.

Use the following guidelines to ensure a complete Plot Plan:

1. Operation, plant or facility name
2. Company name
3. Company ID number
4. Plot scale, north arrow, date drawn, and submittal date.
5. Fence lines
6. Property lines
7. Base elevation
8. UTM reference coordinates from the Area Map and corresponding reference point elevation
9. Location of all sources labeled with proper and consistent Source Identification numbers

This information is required for all sources regardless of whether it is a construction, modification, or administrative update.

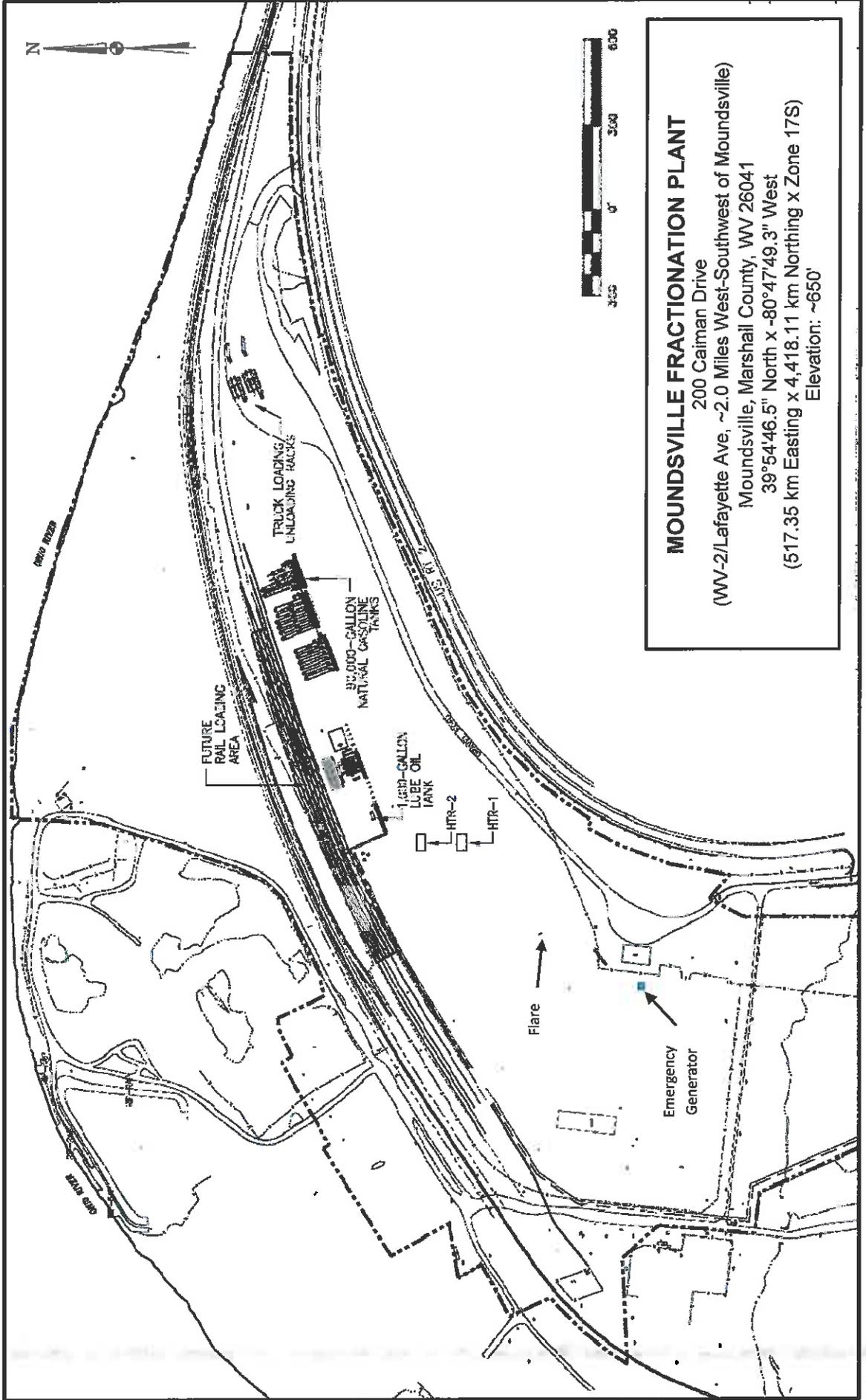
- **Moundsville Fractionation Plant – Plot Plan**
 - **Moundsville Fractionation Plant – Aerial View**
-

Williams Ohio Val., Midstream LLC

MOUNDSVILLE FRACTIONATION PLANT

Emergency Generator - General Permit G60-C

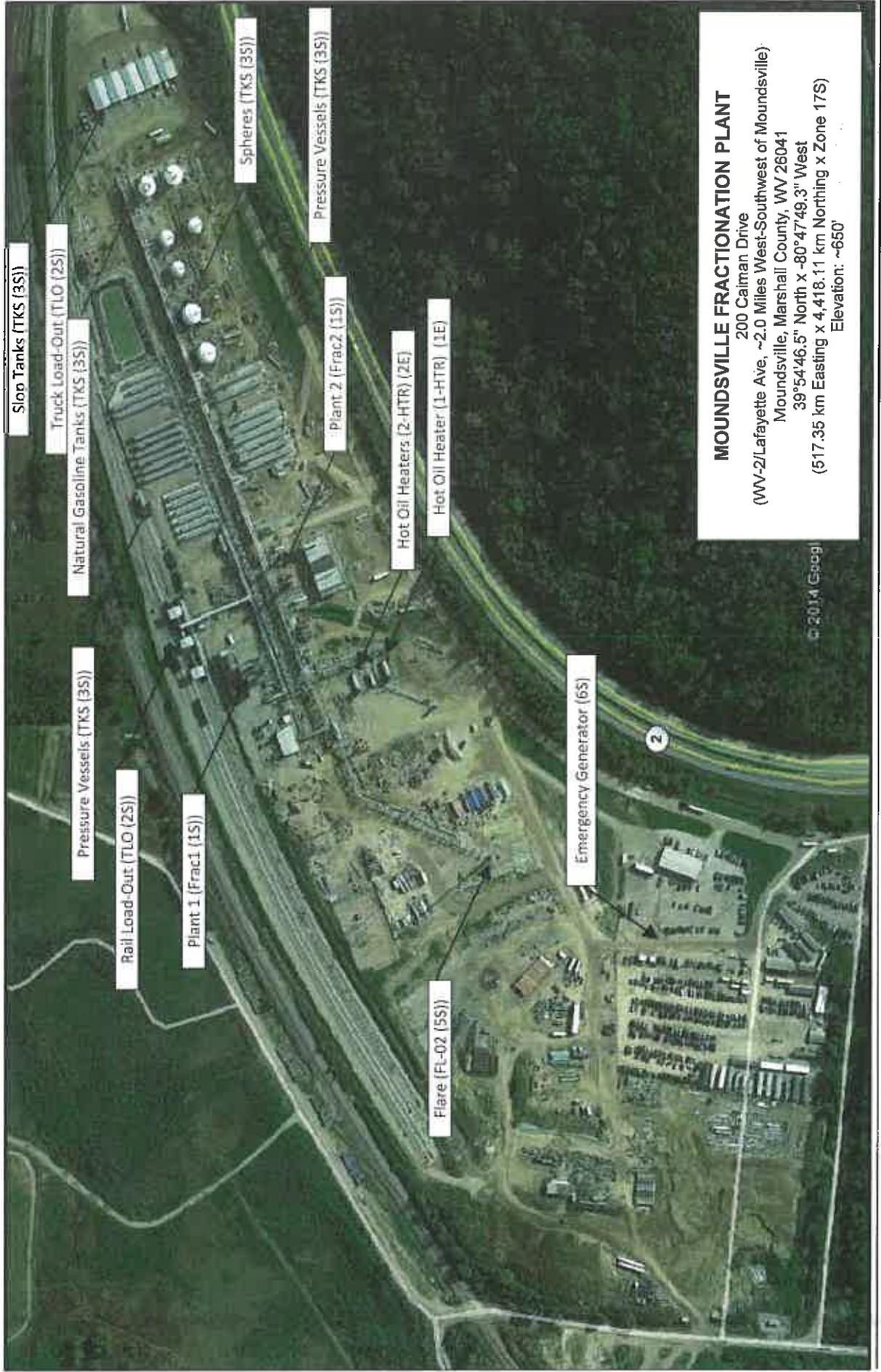
Attachment E - Plot Plan



MOUNDSVILLE FRACTIONATION PLANT
200 Caiman Drive
(WV-2/Lafayette Ave, ~2.0 Miles West-Southwest of Moundsville)
Moundsville, Marshall County, WV 26041
39°54'46.5" North x -80°47'49.3" West
(517.35 km Easting x 4,418.11 km Northing x Zone 17S)
Elevation: ~650'

Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C

Attachment E' - Aerial View



Slop Tanks (TKS (3S))

Truck Load-Out (TLO (2S))

Natural Gasoline Tanks (TKS (3S))

Pressure Vessels (TKS (3S))

Rail Load-Out (TLO (2S))

Plant 1 (Frac1 (1S))

Spheres (TKS (3S))

Pressure Vessels (TKS (3S))

Plant 2 (Frac2 (1S))

Hot Oil Heaters (2-HTR) (2E)

Hot Oil Heater (1-HTR) (1E)

Flare (FL-02 (5S))

Emergency Generator (6S)

MOUNDSVILLE FRACTIONATION PLANT
 200 Caiman Drive
 (WV-2/Lafayette Ave, ~2.0 Miles West-Southwest of Moundsville)
 Moundsville, Marshall County, WV 26041
 39°54'46.5" North x -80°47'49.3" West
 (517.35 km Easting x 4,418.11 km Northing x Zone 17S)
 Elevation: ~650'

ATTACHMENT F

Area (Topographic) Map

Provide a USGS 7.5 minute topographic Area Map showing the current or proposed location of the operation or plant. On this map, identify plant or operation property lines, access roads and any adjacent dwelling, business, public building, school, church, cemetery, community or institutional building or public park.

Mark and reference UTM coordinates (not latitude and longitude) and the corresponding elevation above mean sea level for the operation or plant. UTM coordinates may be acquired from the USGS 7.5" topographical map. UTM coordinates are marked as blue tick marks along the outside edges of the map.

These coordinates must be provided for a point inside the plant boundary near the center of the property and be accurate to within fifty meters.

This information is required for all sources regardless of whether it is a construction, modification, or administrative update.

MOUNDSVILLE FRACTIONATION PLANT (FRAC)

200 Caiman Drive

(WV-2/Lafayette Ave, ~2.0 Miles West-Southwest of Moundsville)

Moundsville, Marshall County, WV 26041

39°54'46.5"N x -80°47'49.3"W

(39.912902°N x -80.797035°W)

(517.35 km E x 4,418.11 km N x Zone 17S)

Elevation: ~650'

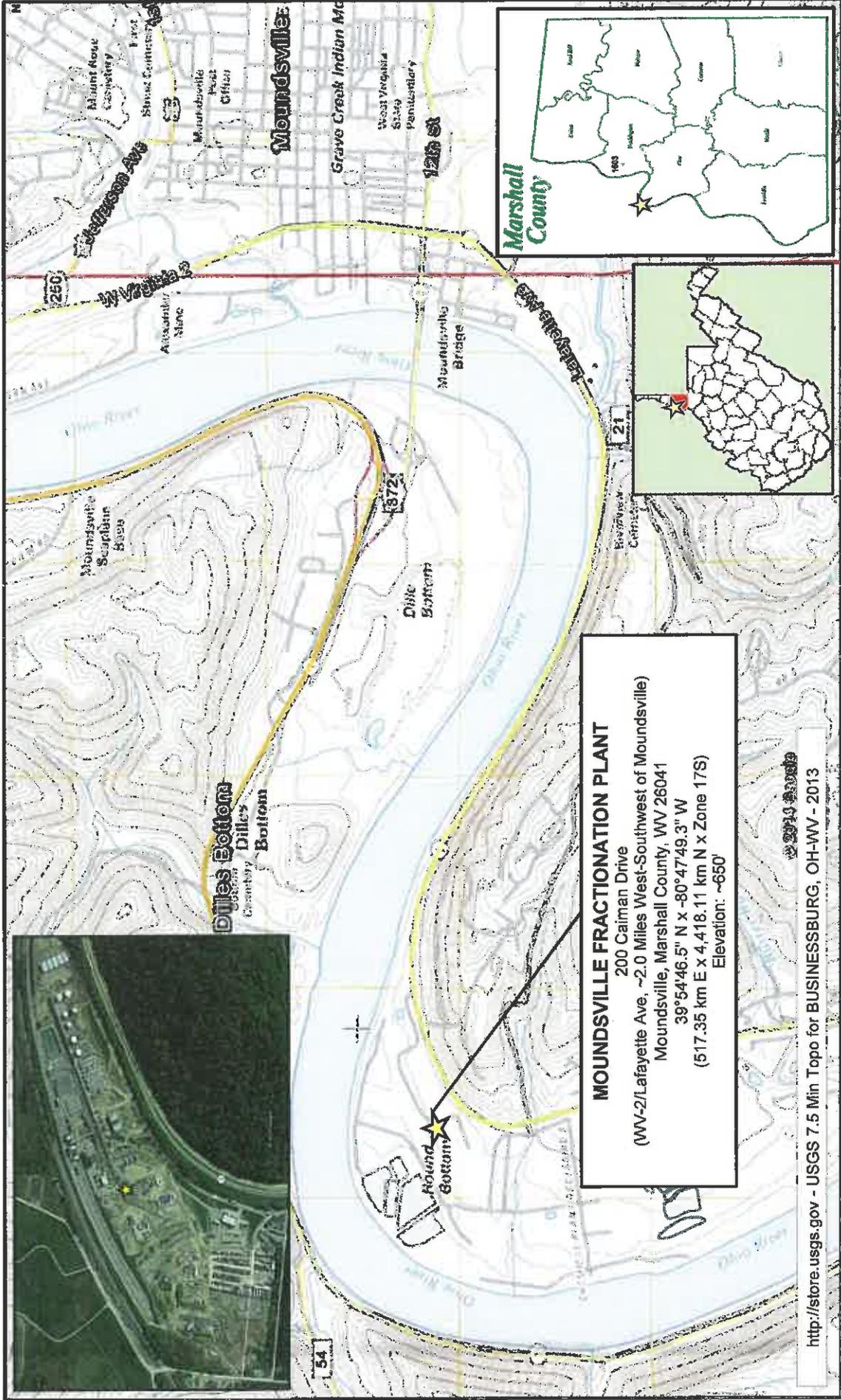
<http://store.usgs.gov> - USGS 7.5 Min Topo for BUSINESSBURG, OH-WV - 2013

Williams Ohio Valley Midstream LLC

MOUNDSVILLE FRACTIONATION PLANT

Emergency Generator - General Permit G60-C

Attachment F - Area (Topographic) Map



ATTACHMENT G

Affected Source Sheets (Section Applicability Form)

The Section Applicability Form can be found on page 15. General Permit G60-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G60-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under on the Section Applicability Form on page 15. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Provide the appropriate Equipment Data Sheets and Affected Source Sheets (Emergency Generator Engine Data Sheet, Storage Tank Data Sheet) for which sections you are applying for registration under. Proper Source Identification Numbers must be used consistently throughout the Registration Application.

General Permit G60-C Registration Section Applicability Form

General Permit G60-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G60-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

| | | |
|-----------|---|-------------------------------------|
| Section 5 | Reciprocating Internal Combustion Engines (R.I.C.E.)* | <input checked="" type="checkbox"/> |
| Section 6 | Tanks | <input type="checkbox"/> |
| Section 7 | Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII) | <input type="checkbox"/> |
| Section 8 | Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ) | <input checked="" type="checkbox"/> |

***Affected facilities that are subject to Section 5 may also be subject to Sections 7 or 8. Therefore, if the applicant is seeking registration under both sections, please select both.**

-
- Emergency Generator Engine Data Sheet
 - Table 1: Emissions Data
 - Table 2: Release Parameter Data
-

Williams Ohio Valley Midstream LLC
MOUNDVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT G

EMERGENCY GENERATOR ENGINE DATA SHEET

| | | | | | | | |
|--|-------------------------------|----------------|---------|--------|---------|--------|---------|
| Source Identification Number ¹ | | EmGen | | | | | |
| Engine Manufacturer and Model | | GM Vortex 3.0L | | | | | |
| Manufacturer's Rated bhp/rpm | | 49.2 / 1,800 | | | | | |
| Source Status ² | | NS | | | | | |
| Date Installed/Modified/Removed ³ | | tbd | | | | | |
| Manufactured/Reconstruction Date ⁴ | | Nov-2012 | | | | | |
| Certified Engine? (40CFR60 NSPS IIII) ⁵ | | na | | | | | |
| Certified Engine? (40CFR60 NSPS JJJJ) ⁶ | | Yes | | | | | |
| Engine, Fuel and Combustion Data | Engine Type ⁷ | RB4S | | | | | |
| | APCD Type ⁸ | --- | | | | | |
| | Fuel Type ⁹ | Propane | | | | | |
| | H ₂ S (gr/100 scf) | ≤ 0.25 | | | | | |
| | Operating bhp/rpm | 49.2 / 1,800 | | | | | |
| | BSFC (Btu/bhp-hr) | 8,660 | | | | | |
| | Fuel (ft ³ /hr) | 184 | | | | | |
| | Fuel (MMft ³ /yr) | 0.09 | | | | | |
| Operation (hrs/yr) | 500 | | | | | | |
| Reference ¹⁰ | PTE ¹¹ | lbs/hr | tons/yr | lbs/hr | tons/yr | lbs/hr | tons/yr |
| NSPS | NOX | 0.66 | 0.16 | | | | |
| NSPS | CO | 25.53 | 6.38 | | | | |
| AP | VOC | 0.04 | 0.01 | | | | |
| AP | SO ₂ | 2.7E-04 | 6.8E-05 | | | | |
| AP | PM _{10/2.5} | 0.01 | 2.2E-03 | | | | |
| AP | Benzene | 7.3E-04 | 1.8E-04 | | | | |
| AP | Ethylbenzene | 1.1E-05 | 2.9E-06 | | | | |
| AP | Formaldehyde | 0.01 | 2.4E-03 | | | | |
| AP | n-Hexane | --- | --- | | | | |
| AP | Toluene | 2.6E-04 | 6.5E-05 | | | | |
| AP | 2,2,4-TMP | --- | --- | | | | |
| AP | Xylenes | 9.0E-05 | 2.3E-05 | | | | |
| AP | Other HAPs | 4.4E-03 | 1.1E-03 | | | | |
| AP | Tot HAP | 0.01 | 3.7E-03 | | | | |
| AP/40CFR98 | CO ₂ e | 64 | 16 | | | | |

Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT G

EMISSION POINTS DATA SUMMARY SHEET

| Table 1: Emissions Data | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------------|---------------|------------|----------------|------|-------------------|-------|---|-----------------------------|---------|-------------------------|---------|----------------|--------------------------|----------------------------|-------|------|-------|------|-----|----|--|
| Unit ID | Type ¹ | Emission Unit | | Control Device | | Vent Time | | Pollutant ³ | Pre-Controlled ⁴ | | Controlled ⁵ | | Emission Phase | Est. Method ⁶ | Concentration ⁷ | | | | | | | |
| | | Point | Source | ID | Type | Term ² | hr/yr | | lb/hr | ton/yr | lb/hr | ton/yr | | | | | | | | | | |
| EmGen (6S) | Upward Vertical | EmGen (6S) | EmGen (6S) | na | na | I As Needed | 500 | NOX | 0.66 | 0.16 | 0.66 | 0.16 | Gas | EE | | | | | | | | |
| | | | | | | | | EmGen (6S) Emergency Generator | | | | | | | CO | 25.53 | 6.38 | 25.53 | 6.38 | Gas | EE | |
| | | | | | | | | VOC | 0.04 | 0.01 | 0.04 | 0.01 | Gas | EE | | | | | | | | |
| | | | | | | | | SO2 | 2.7E-04 | 6.8E-05 | 2.7E-04 | 6.8E-05 | Gas | EE | | | | | | | | |
| | | | | | | | | PM10/2.5 | 0.01 | 2.2E-03 | 0.01 | 2.2E-03 | Solid/Gas | EE | | | | | | | | |
| | | | | | | | | Benzene | 7.3E-04 | 1.8E-04 | 7.3E-04 | 1.8E-04 | Gas | EE | | | | | | | | |
| | | | | | | | | E-Benzene | 1.1E-05 | 2.9E-06 | 1.1E-05 | 2.9E-06 | Gas | EE | | | | | | | | |
| | | | | | | | | HCHO | 0.01 | 2.4E-03 | 0.01 | 2.4E-03 | Gas | EE | | | | | | | | |
| | | | | | | | | n-Hexane | --- | --- | --- | --- | --- | --- | | | | | | | | |
| | | | | | | | | Toluene | 2.6E-04 | 6.5E-05 | 2.6E-04 | 6.5E-05 | Gas | EE | | | | | | | | |
| | | | | | | | | 2,2,4-TMP | --- | --- | --- | --- | --- | --- | | | | | | | | |
| | | | | | | | | Xylenes | 9.0E-05 | 2.3E-05 | 9.0E-05 | 2.3E-05 | Gas | EE | | | | | | | | |
| | | | | | | | | Other HAP | 4.4E-03 | 1.1E-03 | 4.4E-03 | 1.1E-03 | Gas | EE | | | | | | | | |
| | | | | | | | | Total HAP | 0.01 | 3.7E-03 | 0.01 | 3.7E-03 | Gas | EE | | | | | | | | |
| CO2e | 64 | 16 | 64 | 16 | Gas | EE | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | |

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- 1 Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- 2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/week).
- 3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS2, VOCs, H2S, Inorganics, Lead, Organics, O3, NO, NO2, SO2, SO3, all applicable Greenhouse Gases (including CO2 and methane). DO NOT LIST H2, H2O, N2, O2, and Noble Gases.
- 4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- 5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- 6 Indicate method used to determine emission rate as follows:
 MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- 7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv). If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m3), at STP. If the pollutant is SO2, use units of ppmv (See 45CSR10).

Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT G

EMISSION POINTS DATA SUMMARY SHEET

| Table 2: Release Parameter Data | | | | | | | | | |
|--|--|-----------------------------|-------------------|---|-----------------------|---|---|-----------------------------|----------------|
| Unit ID | Emission Point ID No. (Must match Emission Units Table) | Inner Diameter (ft.) | Exit Gas | | | Emission Point Elevation (ft) | | UTM Coordinates (km) | |
| | | | Temp. (oF) | Volumetric Flow¹ (acfm) (At operating conditions) | Velocity (fps) | Ground Level (Height above mean sea level) | Stack Height² (Release height above ground level) | Northing | Easting |
| 6S | EmGen | 0.5 | 1,270 | 250 | -- | 1,490 | 10 | 4,418.1 | 517.4 |

¹ Give at operating conditions. Include inerts.

² Release height of emissions above ground level.

ATTACHMENT H
Air Pollution Control Device Data Sheet
(Not Applicable)

This information is not required for General Permit G60-C.

ATTACHMENT I

Emissions Calculations

Provide detailed emission calculations which lists the plant or operation's potential to emit (PTE) for criteria and hazardous/toxic pollutants.

Use the following guidelines to ensure complete emission calculations

1. All emission sources are included in the emission calculations, as well as all methods used in the emissions calculations.
 2. Proper Source Identification Numbers and Control Device Identification Numbers are used consistently in the Emission Calculations.
 3. A printout of the Emission Summary Sheets is attached to the Registration Application.
-

SUMMARIES:

- Criteria Pollutants - Controlled Emissions Summary
- Hazardous Air Pollutants - Controlled Emissions Summary
- Greenhouse Gas (GHG) - Controlled Emissions Summary
- Pre-Controlled Emissions Summary

UNIT SPECIFIC:

- Emergency Generator (EmGen) (6S)

AP-42 and GHG EMISSION FACTORS

Williams Ohio V. idstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
 ATTACHMENT I - EMISSION CALCULATIONS

Criteria Pollutants - Controlled Emissions Summary

| Unit ID | Point ID | Description | Site Rating | NOX | CO | VOC | SO2 | PM10/2.5 | CO2e | | | | | | |
|---------------------|----------|--|------------------------|-------|-------|--|-------|----------|--------|---------|---------|------|---------|---------|---------|
| | | | | lb/hr | tpy | lb/hr | tpy | lb/hr | tpy | | | | | | |
| 1S | Frac1 | Fractionation Plant 1 (Fugitives Only) | 12,500 bpd (ave) | --- | --- | 7.01 | --- | --- | 23 | | | | | | |
| | Frac2 | Fractionation Plant 2 (Fugitives Only) | 30,000 bpd (ave) | --- | --- | 5.30 | --- | --- | 7 | | | | | | |
| 2S | TLO | Loading/Unloading - Pressure Vessels | 42,500 bpd (ave) | --- | --- | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | --- | --- | 30 | | | | | | |
| 3S | | NGL - Pressure Vessels | 908,400 gals (total) | --- | --- | No Emissions Except Fugitives (1S) | --- | --- | --- | | | | | | |
| | | Propane - Pressure Vessels | 1,518,000 gals (total) | --- | --- | No Emissions Except Fugitives (1S) | --- | --- | --- | | | | | | |
| | | Butane - Pressure Vessels | 910,000 gals (total) | --- | --- | No Emissions Except Fugitives (1S) | --- | --- | --- | | | | | | |
| | | Natural Gasoline - Tanks and Vessels | 1,050,000 gals (total) | --- | --- | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | --- | --- | --- | | | | | | |
| | | Stabilized Condensate - Pressure Vessels | 270,000 gals (total) | --- | --- | No Emissions Except Fugitives (1S) | --- | --- | --- | | | | | | |
| | | Stop Liquids (2x) | 17,640 gals (total) | --- | --- | No Emissions Except Fugitives (1S) | --- | --- | --- | | | | | | |
| | | Diesel Fuel | 520 gals | --- | --- | 0.01 | --- | --- | --- | | | | | | |
| | | Gasoline | 520 gals | --- | --- | 3.7E-03 | --- | --- | --- | | | | | | |
| | | Methanol (MeOH) | 300 gals | --- | --- | 3.3E-03 | --- | --- | --- | | | | | | |
| | | Mercaptan (Odorant) (3x) | 5,000 gals (total) | --- | --- | 0.38 | --- | --- | --- | | | | | | |
| 1-HTR | 1E | Fractionation Plant 1 - Hot Oil Heater | 45.64 MMBtu/hr | 4.46 | 19.56 | 3.75 | 16.43 | 0.25 | 1.08 | 0.03 | 0.12 | 0.34 | 1.49 | 5,333 | 23,357 |
| 2-HTR | 2E | Fractionation Plant 2 - Hot Oil Heaters (2x) | 89.85 MMBtu/hr (ea) | 3.23 | 17.03 | 6.65 | 35.00 | 0.36 | 1.89 | 0.05 | 0.28 | 0.67 | 3.52 | 10,491 | 55,231 |
| 5S | 5E | New Process Flare (FL-02) | 560.00 MMBtu/hr (max) | 4.01 | 17.55 | 8.00 | 35.03 | 61.06 | 57.73 | 0.01 | 0.03 | 0.08 | 0.36 | 4,121 | 18,057 |
| 6S | EmGen | Emergency Generator | 49.2 bhp | 0.86 | 0.16 | 25.53 | 6.38 | 0.04 | 0.01 | 2.7E-04 | 6.8E-05 | 0.01 | 2.2E-03 | 64 | 16 |
| TOTAL PTE: | | | | 12.37 | 54.30 | 43.83 | 92.85 | 74.48 | 116.68 | 0.09 | 0.42 | 1.10 | 5.38 | 20,039 | 96,793 |
| NNSR/PSD Threshold: | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | na | na |
| TVOP Threshold: | | | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100,000 | 100,000 |

Notes: 1 - PM10/2.5 is filterable and condensable particulate matter, including PM10 and PM2.5.
 2 - CO2e is aggregated Greenhouse Gas (GHG), comprised of carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O), as adjusted for Global Warming Potential (GWP).

Williams Ohio V ,dstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
 ATTACHMENT I - EMISSION CALCULATIONS

Hazardous Air Pollutants - Controlled Emissions Summary

| Unit ID | Point ID | Description | Benzene lb/hr | Ethylbenzene lb/hr | HCHO lb/hr | n-Hexane lb/hr | Toluene lb/hr | 2,2,4-TMP lb/hr | Xylenes lb/hr | Other HAP lb/hr | Total HAP lb/hr | |
|---------|----------|--|------------------|-----------------------|---------------|-------------------|------------------|--------------------|------------------|--------------------|--------------------|---------|
| 1S | Frac1 | Fractionation Plant 1 (Fugitives Only) | --- | --- | --- | 0.21 | 0.93 | --- | --- | --- | 0.21 | |
| | Frac2 | Fractionation Plant 2 (Fugitives Only) | --- | --- | --- | 0.68 | 2.96 | --- | --- | --- | 0.68 | |
| 2S | TLO | Loading/Unloading - Pressure Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | NGL - Pressure Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 3S | | Propane - Pressure Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Butane - Pressure Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Natural Gasoline - Tanks and Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Stabilized Condensate - Pressure Vessels | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Slop Liquids (2x) | --- | --- | --- | 2.8E-03 | 0.01 | --- | --- | --- | 2.6E-03 | |
| | | Diesel Fuel | --- | --- | --- | 9.1E-04 | 4.0E-03 | --- | --- | --- | 9.1E-04 | |
| | | Gasoline | --- | --- | --- | 0.02 | 0.08 | --- | --- | --- | 0.02 | |
| | | Methanol (MeOH) | --- | --- | --- | --- | --- | --- | --- | 3.3E-03 | 0.01 | 3.3E-03 |
| | | Mercaptan (Odorant) (3x) | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Fractionation Plant 1 - Hot Oil Heater | 9.4E-05 | 4.1E-04 | 3.3E-03 | 0.01 | 0.08 | 0.35 | 1.5E-04 | 6.6E-04 | 8.5E-05 | 3.7E-04 |
| 1-HTR | | | | | | | | | | | | |
| 2-HTR | | Fractionation Plant 2 - Hot Oil Heaters (2x) | 1.8E-04 | 9.7E-04 | 0.01 | 0.03 | 0.16 | 0.83 | 3.0E-04 | 1.6E-03 | 0.17 | |
| 5S | | New Process Flare (FL-02) | 0.05 | 0.07 | 2.1E-03 | 2.26 | 2.13 | --- | 0.07 | 5.4E-05 | 4.68 | |
| 6S | EmGen | Emergency Generator | 7.3E-04 | 1.1E-05 | 2.9E-06 | 0.01 | 2.4E-03 | --- | 9.0E-05 | 4.4E-03 | 0.01 | |
| | | TOTAL PTE: | 0.05 | 0.07 | 0.02 | 3.41 | 7.31 | 2.23 | 0 | 0.07 | 8.5E-03 | 9.68 |
| | | NNSR/PSD Threshold: | na | na | na | na | na | na | na | na | na | |
| | | TVOP Threshold: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 25 | |

Notes: 1 - Emissions are based on operation at 100% of rated load for 8,760 hrs/yr; except TLO and SSM emissions are intermittent (and infrequent).
 2 - HCHO is formaldehyde; Other HAP includes, but not limited to, acetaldehyde, acrolein, and methanol (MeOH).

Williams Ohio V. Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT I - EMISSION CALCULATIONS

Greenhouse Gas (GHG) - Emissions Summary

| Unit ID | Point ID | Description | Site Rating | Operating Hours hr/yr | Heat Input LHV MMBtu/hr | HHV MMBtu/hr | CO2 GWP tpy | CO2e 1 tpy | CH4 GWP tpy | CO2e 25 tpy | N2O GWP tpy | CO2e 298 tpy | TOTAL CO2e tpy | |
|---------|----------|--|------------------------|--------------------------|-------------------------------|-----------------|--|------------------|-------------------|-------------------|-------------------|--------------------|----------------------|---------|
| 1S | Frac1 | Fractionation Plant 1 (Fugitives Only) | 12,500 bpd (ave) | 8,760 | --- | --- | --- | --- | 4.08 | 101.97 | --- | --- | 102 | |
| | Frac2 | Fractionation Plant 2 (Fugitives Only) | 30,000 bpd (ave) | 8,760 | --- | --- | --- | --- | 1.20 | 30.11 | --- | --- | 30 | |
| 2S | TLO | Loading/Unloading - Pressure Vessels | 42,500 bpd (ave) | | | | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | | | | | | | |
| | | Pressure Vessels | 908,400 gals (total) | | | | No Emissions Except Fugitives (1S) | | | | | | | |
| 3S | | Propane - Pressure Vessels | 1,518,000 gals (total) | | | | No Emissions Except Fugitives (1S) | | | | | | | |
| | | Butane - Pressure Vessels | 910,000 gals (total) | | | | No Emissions Except Fugitives (1S) | | | | | | | |
| | | Natural Gasoline - Tanks and Vessels | 1,050,000 gals (total) | | | | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | | | | | | |
| | | Stabilized Condensate - Pressure Vessels | 270,000 MMBtu/hr | | | | No Emissions Except Fugitives (1S) | | | | | | | |
| | | Slop Liquids (2x) | 17640.00 gals (total) | 8,760 | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Diesel Fuel | 520.00 gals | 8,760 | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Gasoline | 520.00 gals | 8,760 | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Methanol (MeOH) | 300.00 gals | 8,760 | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Mercaptan (Odorant) (3x) | 5000.00 gals (total) | 8,760 | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | Fractionation Plant 1 - Hot Oil Heater | 45.54 MMBtu/hr | 8,760 | 40.99 | 45.54 | 23,333 | 23,333 | 0.44 | 11 | 13 | 0.04 | 23,357 | |
| 1-HTR | | | | | | | | | | | | | | |
| 2-HTR | | | | | | | | | | | | | | |
| 5E | | | | | | | | | | | | | | |
| 5S | | | | | | | | | | | | | | |
| 6S | EmGen | New Process Flare (FL-02) | 560.00 MMBtu/hr (max) | 8,760 | 26.13 | 29.03 | 17,980 | 17,980 | 1 | 21 | 0.2 | 56 | 18,057 | |
| | | Emergency Generator | 49.20 bhp | 8,760 | 0.43 | 0.46 | 16 | 16 | 0.00 | 0 | 1.5E-04 | 0.05 | 16 | |
| | | | | | | | TOTAL POINT-SOURCE PTE: 96,503 | | | | | | | 96,783 |
| | | | | | | | NNSR/PSD Threshold: (| | | | | | | na |
| | | | | | | | TVOP Threshold: | | | | | | | na |
| | | | | | | | 8 | | | | | | | na |
| | | | | | | | na | | | | | | | na |
| | | | | | | | na | | | | | | | na |
| | | | | | | | - OR - | | | | | | | - AND - |
| | | | | | | | - OR - | | | | | | | - AND - |

Williams Ohio V. Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
 ATTACHMENT I - EMISSION CALCULATIONS

Pre-Controlled Emissions Summary

| Unit ID | Point ID | Description | Site Rating | NOX | CO | VOC | n-Hexane | Total HAP | CO2e | |
|---------------------|----------|--|------------------------|--|-------|--|----------|-----------|----------|------|
| | | | tpy | lb/hr | tpy | lb/hr | tpy | lb/hr | tpy | |
| 1S | Frac1 | Fractionation Plant 1 (Fugitives Only) | 12,500 bpd (ave) | --- | --- | 7.01 | 0.21 | 0.93 | 23 | |
| | Frac2 | Fractionation Plant 2 (Fugitives Only) | 30,000 bpd (ave) | --- | --- | 23.12 | 101.25 | 2.86 | 12.52 | |
| 2S | TLO | Loading/Unloading - Pressure Vessels | 42,500 bpd (ave) | --- | --- | No Emissions Except Fugitives (1S) and Blowdown/Purge (5S) | | | | |
| | | Pressure Vessels | 908,400 gals (total) | No Emissions Except Fugitives (1S) | | | | | | |
| 3S | | Propane - Pressure Vessels | 1,518,000 gals (total) | No Emissions Except Fugitives (1S) | | | | | | |
| | | Butane - Pressure Vessels | 910,000 gals (total) | No Emissions Except Fugitives (1S) | | | | | | |
| | | Natural Gasoline - Tanks and Vessels | 1,050,000 gals (total) | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | | | | | |
| | | Stabilized Condensate - Pressure Vessels | 270,000 gals (total) | No Emissions Except Fugitives (1S) | | | | | | |
| | | Strip Liquids (2x) | 17,640 gals (total) | --- | --- | --- | --- | --- | --- | --- |
| 4S | | Diesel Fuel | 520 gals | --- | --- | --- | --- | --- | --- | |
| | | Gasoline | 520 gals | --- | --- | --- | --- | --- | --- | |
| | | Methanol (MeOH) | 300 gals | --- | --- | --- | --- | --- | --- | |
| | | Mercaptan (Odorant) (3x) | 5,000 gals (total) | --- | --- | --- | --- | --- | --- | |
| | | Fractionation Plant 1 - Hot Oil Heater | 45.54 MMBtu/hr | 4.46 | 19.56 | 3.75 | 16.43 | 0.25 | 1.08 | 0.03 |
| 1-HTR | | | 4.46 | 19.56 | 3.75 | 16.43 | 0.25 | 1.08 | 0.03 | |
| 2-HTR | | | 3.23 | 17.03 | 6.65 | 35.00 | 0.36 | 1.89 | 0.05 | |
| 5S | | | --- | --- | --- | --- | --- | --- | --- | |
| 6S | | | 0.66 | 0.16 | 25.63 | 6.38 | 0.04 | 0.01 | --- | |
| EmGen | | Emergency Generator | 49.2 bhp | 8.36 | 36.75 | 35.93 | 57.81 | 6,136.71 | 5,907.79 | |
| TOTAL PTE: | | | | 250 | 250 | 250 | 250 | 471.33 | 467.157 | |
| NNSR/PSD Threshold: | | | | 100 | 100 | 100 | 10 | na | na | |
| TVOP Threshold: | | | | 100 | 100 | 100 | 25 | 25 | 100,000 | |

Williams Ohio V. Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT I - EMISSION CALCULATIONS

"NEW" Emergency Generator Engine - 49.2 bhp Kohler GM Vortex 3.0L (6S)

| Unit ID | Description | Reference | Pollutant | Pre-Controlled Emissions g/bhp-hr | Pre-Controlled Emissions lb/hr | tpy | Control Efficiency | g/bhp-hr | Controlled Emissions lb/hr | tpy |
|------------------------|--|---------------------|---------------|--------------------------------------|-----------------------------------|---------|--------------------|----------|-------------------------------|---------|
| "NEW" EmGen (6S) | "NEW" Emergency Generator Engine 01 Kohler GM Vortex 3.0L 49.2 bhp 1,800 rpm, 4 cyl 45 in3/cyl 4SRB / AFRIC EPA Certified Propane Fuel NSPS JJJJ Affected 500 hr/yr 8,660 Btu/bhp-hr (LHV) 9,412 Btu/bhp-hr (HHV) 0.43 MMBtu/hr (LHV) 0.46 MMBtu/hr (HHV) 184 scf/hr 0.09 MMscf/yr 2,315 Btu/scf (LHV) 2,516 Btu/scf (HHV) | NSPS JJJJ | NOX | 10 | 0.66 | 0.16 | --- | 10 | 0.66 | 0.16 |
| | | NSPS JJJJ | CO | 387 | 25.53 | 6.38 | --- | 387 | 25.53 | 6.38 |
| | | AP-42 Table 3.2-3 | THC (TOC) | 2.51 | 0.17 | 0.04 | --- | 2.51 | 0.17 | 0.04 |
| | | AP-42 Table 3.2-3 | NMHC | 0.90 | 0.06 | 0.01 | --- | 0.90 | 0.06 | 0.01 |
| | | AP-42 Table 3.2-3 | NMNEHC | 0.40 | 0.03 | 0.01 | --- | 0.40 | 0.03 | 0.01 |
| | | AP-42 Table 3.2-3 | VOC | 0.55 | 0.04 | 0.01 | --- | 0.55 | 0.04 | 0.01 |
| | | AP-42 Table 3.2-3 | SO2 | 4.1E-03 | 2.7E-04 | 6.8E-05 | --- | 4.1E-03 | 2.7E-04 | 6.8E-05 |
| | | AP-42 Table 3.2-3 | PM10/2.5 | 0.14 | 0.01 | 2.2E-03 | --- | 0.14 | 0.01 | 2.2E-03 |
| | | AP-42 Table 3.2-3 | Benzene | 1.1E-02 | 7.3E-04 | 1.8E-04 | --- | 1.1E-02 | 7.3E-04 | 1.8E-04 |
| | | AP-42 Table 3.2-3 | Ethylbenzene | 1.7E-04 | 1.1E-05 | 2.9E-06 | --- | 1.7E-04 | 1.1E-05 | 2.9E-06 |
| | | AP-42 Table 3.2-3 | Formaldehyde | 0.14 | 0.01 | 2.4E-03 | --- | 0.14 | 0.01 | 2.4E-03 |
| | | AP-42 Table 3.2-3 | n-Hexane | --- | --- | --- | --- | --- | --- | --- |
| | | AP-42 Table 3.2-3 | Toluene | 3.9E-03 | 2.6E-04 | 6.5E-05 | --- | 3.9E-03 | 2.6E-04 | 6.5E-05 |
| | | AP-42 Table 3.2-3 | 2,2,4-TMP | --- | --- | --- | --- | --- | --- | --- |
| | | AP-42 Table 3.2-3 | Xylenes | 1.4E-03 | 9.0E-05 | 2.3E-05 | --- | 1.4E-03 | 9.0E-05 | 2.3E-05 |
| | | AP-42 Table 3.2-3 | Other HAPs | 0.07 | 4.4E-03 | 1.1E-03 | --- | 0.07 | 4.4E-03 | 1.1E-03 |
| | | Sum | Tot HAP | 0.23 | 0.01 | 3.7E-03 | --- | 0.23 | 0.01 | 3.7E-03 |
| | | 40CFR98 - Table C-1 | CO2 (GWP=1) | 972 | 64 | 16 | --- | 972 | 64 | 16 |
| | | 40CFR98 - Table C-2 | CH4 (GWP=25) | 4.6E-02 | 3.1E-03 | 7.7E-04 | --- | 4.6E-02 | 3.1E-03 | 7.7E-04 |
| | | 40CFR98 - Table C-2 | N2O (GWP=298) | 9.3E-03 | 6.1E-04 | 1.5E-04 | --- | 9.3E-03 | 6.1E-04 | 1.5E-04 |
| 40CFR98 - Table A-1 | CO2e | 976 | 64 | 16 | --- | 976 | 64 | 16 | | |

- Notes:
- 1 - Pre-Controlled emissions shown are based on operation at 100% of rated load for 8,760 hr/yr.
 - 2 - As per NSPS JJJJ, NMNEHC (non-methane/non-ethane hydrocarbon) does not include HCHO. VOC is the sum of NMNEHC and formaldehyde (HCHO).
 - 3 - PM10/2.5 is filterable and condensable particulate matter, including PM10 and PM2.5
 - 4 - HCHO is formaldehyde; Total HAP includes, but not limited to, HCHO, n-hexane, BTEX (benzene, toluene, ethylbenzene, xylene), acetaldehyde, acrolein, and MeOH (methanol).
 - 5 - Only the calculations based on vendor guarantees (or applicable regulations) should be used to establish emission limitations.
 - 6 - Emergency generator engine will operate on propane fuel.

Potentially Applicable
AP-42 and GHG EMISSION FACTORS
(Preferentially use test data or vendor data where available)

| Pollutant | GAS-FIRED ENGINES | | | GAS-FIRED TURBINES | | |
|---------------------------|--|------------------|------------------|---|-----------------------------|---------------------------|
| | AP-42 Table 3.1-1, 3.2-2, 3.2-3, 07/00 | | | AP-42 Table 3.1-1, 3.1-2a, 3.1-3, 04/00 | | |
| | 2SLB lb/MMBtu | 4SLB lb/MMBtu | 4SRB lb/MMBtu | Uncontrolled lb/MMBtu | Water Injection lb/MMBtu | Lean Pre-Mix# lb/MMBtu |
| CRITERIA | | | | | | |
| NOx (≥ 90% Load) | 3.17E+00 | 4.08E+00 | 2.21E+00 | 3.20E-01 | 1.30E-01 | 9.90E-02 |
| CO (≥ 90% Load) | 3.86E-01 | 3.17E-01 | 3.72E+00 | 8.20E-02 | 3.00E-02 | 1.50E-02 |
| THC (TOC) | 1.64E+00 | 1.47E+00 | 3.58E-01 | 1.10E-02 | 1.10E-02 | 1.10E-02 |
| NMHC (THC-CH4) | 1.90E-01 | 2.20E-01 | 1.28E-01 | 2.40E-03 | 2.40E-03 | 2.40E-03 |
| NMNEHC (NMHC-C2H6) | 1.19E-01 | 1.15E-01 | 5.76E-02 | 2.10E-03 | 2.10E-03 | 2.10E-03 |
| VOC | 1.20E-01 | 1.18E-01 | 2.96E-02 | 2.10E-03 | 2.10E-03 | 2.10E-03 |
| SO2*** (2,000 gr-S/MMscf) | 5.88E-04 | 5.88E-04 | 5.88E-04 | 5.88E-04 | 5.88E-04 | 5.88E-04 |
| PM10/2.5 (Filter+Cond) | 4.83E-02 | 9.99E-03 | 1.94E-02 | 6.60E-03 | 6.60E-03 | 6.60E-03 |
| HAPs | | | | | | |
| Benzene | 1.94E-03 | 4.40E-04 | 1.58E-03 | 1.20E-05 | 1.20E-05 | 9.10E-07 |
| Ethylbenzene | 1.08E-04 | 3.97E-05 | 2.48E-05 | 3.20E-05 | 3.20E-05 | 3.20E-05 |
| Formaldehyde (HCHO) | 5.52E-02 | 5.28E-02 | 2.05E-02 | 7.10E-04 | 7.10E-04 | 2.00E-05 |
| n-Hexane | 4.45E-04 | 1.11E-03 | --- | --- | --- | --- |
| Toluene | 9.63E-04 | 4.08E-04 | 5.58E-04 | 1.30E-04 | 1.30E-04 | 1.30E-04 |
| 2,2,4-Trimethylpentane | 8.46E-04 | 2.50E-04 | --- | --- | --- | --- |
| Xylenes | 2.68E-04 | 1.84E-04 | 1.95E-04 | 6.40E-05 | 6.40E-05 | 6.40E-05 |
| Other HAPs | 1.96E-02 | 1.69E-02 | 9.42E-03 | 1.06E-04 | 1.06E-04 | 1.06E-04 |
| GHG | | | | | | |
| CO2**** (GWP=1) | 1.17E+02 | 1.17E+02 | 1.17E+02 | 1.17E+02 | 1.17E+02 | 1.17E+02 |
| CH4 (GWP=25) | 1.45E+00 | 1.25E+00 | 2.30E-01 | 8.60E-03 | 8.60E-03 | 8.60E-03 |
| N2O (GWP=298) | 2.20E-04 | 2.20E-04 | 2.20E-04 | 3.00E-03 | 3.00E-03 | 3.00E-03 |
| CO2e | 1.53E+02 | 1.48E+02 | 1.23E+02 | 1.18E+02 | 1.18E+02 | 1.18E+02 |

(#Lean Pre-Mix - aka: Dry Low Emissions (DLE or DLN) and SoLoNOx)

| Pollutant | GAS-FIRED EXTERNAL COMBUSTION | | | FLARES | DIESEL ENGINES |
|----------------------------|---|---------------------------|-----------------------------|--------------------------|--------------------------|
| | AP-42 Table 1.4-1, 1.4-2, 1.4-3 (-100 MMBtu/hr) 07/99 | | | 13.5-1 01/95 | 3.3-1, 3.3-2 10/98 |
| | Uncontrolled lb/MMBtu | LoNOx Burners lb/MMBtu | Flue Gas Recirc lb/MMBtu | (Combustion) lb/MMBtu | Uncontrolled lb/MMBtu |
| CRITERIA | | | | | |
| NOx | 9.50E-02 | 4.90E-02 | 3.14E-02 | 6.80E-02 | 4.41E+00 |
| CO | 8.24E-02 | 8.24E-02 | 8.24E-02 | 3.70E-01 | 9.50E-01 |
| THC (TOC) | 1.08E-02 | 1.08E-02 | 1.08E-02 | 1.40E-01 | 3.60E-01 |
| NMHC (THC-CH4) | 8.53E-03 | 8.53E-03 | 8.53E-03 | 1.38E-01 | 3.53E-01 |
| NMNEHC (NMHC-C2H6) | 5.49E-03 | 5.49E-03 | 5.49E-03 | 5.49E-03 | 3.50E-01 |
| VOC | 5.39E-03 | 5.39E-03 | 5.39E-03 | 5.39E-03 | 3.60E-01 |
| SO2 (2,000 gr-S/MMscf) | 5.88E-04 | 5.88E-04 | 5.88E-04 | 5.88E-04 | 2.90E-01 |
| PM10/2.5 (Filter+Condense) | 7.45E-03 | 7.45E-03 | 7.45E-03 | 7.45E-03 | 3.10E-01 |
| HAPs | | | | | |
| Benzene | 2.06E-06 | 2.06E-06 | 2.06E-06 | 2.06E-06 | 9.33E-04 |
| Ethylbenzene | --- | --- | --- | --- | --- |
| HCHO (Formaldehyde) | 7.35E-05 | 7.35E-05 | 7.35E-05 | 7.35E-05 | 1.18E-03 |
| n-Hexane | 1.76E-03 | 1.76E-03 | 1.76E-03 | 1.76E-03 | --- |
| Toluene | 3.33E-06 | 3.33E-06 | 3.33E-06 | 3.33E-06 | 4.09E-04 |
| 2,2,4-Trimethylpentane | --- | --- | --- | --- | --- |
| Xylenes | --- | --- | --- | --- | 2.85E-04 |
| Other HAPs | 1.86E-06 | 1.86E-06 | 1.86E-06 | 1.86E-06 | 1.05E-03 |
| GHG | | | | | |
| CO2 (GWP=1) | 1.18E+02 | 1.18E+02 | 1.18E+02 | 1.18E+02 | 1.64E+02 |
| CH4 (GWP=25) | 2.25E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 | 6.61E-03 |
| N2O (GWP=298) | 2.16E-03 | 6.27E-04 | 6.27E-04 | 2.16E-03 | 1.32E-03 |
| CO2e | 1.18E+02 | 1.18E+02 | 1.18E+02 | 1.18E+02 | 1.65E+02 |

| 40 CFR 99 - DEFAULT EMISSION FACTORS | | | | |
|--------------------------------------|-----------------------------------|--------------------------------|-----------------------------------|-------------------------------|
| Fuel Type | Table C-1 to Subpart C of Part 99 | | Table C-2 to Subpart C of Part 99 | |
| | Default HHV | Carbon Dioxide lb CO2/MMBtu | Methane lb CH4/MMBtu | Nitrous Oxide lb N2O/MMBtu |
| Fuel Oil No. 2 (Diesel) | 0.138 MMBtu/gal | 1.61E+02 | 5.61E-03 | 1.32E-03 |
| Natural Gas | 1.028 MMBtu/scf | 1.17E+02 | 2.20E-03 | 2.20E-04 |

| Global Warming Potential (100 Yr) (GWP) | | |
|---|------|------|
| Table A-1 to Subpart A of Part 99 | | |
| CO2 | CH4* | N2O# |
| 1 | 25 | 298 |

#Revised by EPA on 11/29/13

Conversion Factors
<http://www.onlineconversion.com/>

| | | |
|-----------------|---|--------------------|
| 1.0 lb | = | 453.5924 g |
| 1.0 kg | = | 2.2046 lb |
| 1.0 hp | = | 2,544.4332 Btu/hr |
| 1.0 hp | = | 745.6999 Watt |
| 1.0 kW | = | 3,412.1416 Btu/hr |
| 1.0 kW-hr | = | 1,3400 hp-hr |
| 1.0 cf | = | 7.4805 gal |
| 1.0 gal H2O | = | 8.3378 lb |
| 1.0 cf H2O | = | 62.3711 lb |
| 1.0 m | = | 3.2808 ft |
| 1.0 km | = | 0.6214 mi |
| 1.0 acre | = | 43,560.1742 ft2 |
| 1.0 °F | = | (°C*9/5)+32 |
| 1.0 °R | = | °F+459.67 |
| 1.0 % | = | 10,000 ppm |
| Std Temperature | = | 60.0 oF |
| Std Pressure | = | 14.696 psia |
| UGC (stp) | = | 379.4820 cf/lb-mol |

*Converted Ext Comb Emission Factors to lb/MMBtu by dividing lb/MMscf by AP-42 default high heating value of 1,020 Btu/scf.
**Converted GHG Emission Factors to lb/MMBtu by multiplying kg/MMBtu by 2.2046 lb/kg.
***Assumes 100% conversion of fuel sulfur to SO2 (2,000 gr/MMscf).
****Assumes 99.5% conversion of fuel carbon to CO2 for natural gas.

ATTACHMENT J

Legal Advertisement

Publication of a proper Class I legal advertisement is a requirement of the application process. In the event the applicant's legal advertisement fails to follow the requirements of 45CSR 13 (45-13-8) or the requirements of Chapter 59, Article 3, of the West Virginia Code, the application will be considered incomplete.

The applicant, utilizing the format for the Class I legal advertisement appearing below, shall cause such legal advertisement to appear a minimum of one (1) day in the newspaper most commonly read in the area where the affected facility exists or will be constructed. The notice must be published no earlier than five (5) working days of receipt by this office of your application. If this happens, the applicant may be required to republish the notice. The original affidavit of publication must be received by this office no later than the last day of the public comment period.

The advertisement shall contain, at a minimum, the name of the applicant, the type and location of the source, the type and amount of air pollutants that will be discharged, the nature of the permit being sought, the proposed start-up date for the source and a contact telephone number for more information.

The location of the source should be as specific as possible starting with: 1.) the street address of the source (If no street address is available, provide location relative to the closest intersection or mile marker); 2.) the nearest street or road; 3.) the nearest town or unincorporated area, and 4.) the county.

If the location description is not sufficiently detailed, the DAQ may require the applicant to republish the Class I legal advertisement.

Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
Emergency Generator - General Permit G60-C
ATTACHMENT J

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Williams Ohio Valley Midstream LLC (OVM) has applied to the West Virginia Department of Environmental Protection, Division of Air Quality (WV-DAQ), for a Class II General Permit G60-C Registration to construct and operate a 49.2 bhp emergency generator at the existing Moundsville Natural Gas Liquids Fractionation Plant; located at 200 Caiman Road, approximately 2.0 miles West-Southwest of Moundsville in Marshall County, West Virginia.

The latitude and longitude coordinates are 39.91291° North x -80.79704° West, respectively

The applicant estimates the increase in the potential to discharge the following regulated air pollutants will be:

0.16 tons of nitrogen oxides (NOX) per year
6.38 tons of carbon monoxide (CO) per year
0.01 tons of volatile organic compounds (VOC) per year
0.0001 tons of sulfur dioxide (SO₂) per year
0.002 tons of particulate matter PM_{10/2.5} per year
0.002 tons of formaldehyde (HCHO) per year
0.0002 tons of benzene per year
0.0001 tons of toluene per year
0.000003 tons of ethylbenzene per year
0.00002 tons of xylenes per year
0.004 tons of total hazardous air pollutants (HAP) per year
16.11 tons of carbon dioxide equivalent (CO_{2e}) per year

Startup of operation is planned to begin on or about the 15th of February, 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 WV-DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the _____ day of _____ 2014.

By: Mr. Don Wicburg, Vice President and General Manager
Williams Ohio Valley Midstream LLC
Park Place Corporate Center 2
2000 Commerce Dr
Pittsburgh, PA 15275

ATTACHMENT K
Electronic Submittal
(Optional)

Provide an Electronic Submittal Diskette(s) for all files that are available electronically. The Electronic Submittal Diskette should have the following files in their respective formats (if available):

1. Registration Application file (Microsoft Word or Word Perfect format)
 2. Affected Source Sheets (Microsoft Word or Word Perfect format)
 3. Process Flow Diagram file
 4. Process Description file (Microsoft Word or Word Perfect format)
 5. Area Map file
 6. Plot Plan file
 7. Emission Calculations Spreadsheet (Microsoft Excel format)
 8. Air Pollution Control Device Sheet, if required (Microsoft Word or Word Perfect format)
-

- **Applicant chooses to submit a traditional, paper application.**
-

ATTACHMENT L

General Permit Registration Application Fee

A person submitting a Class II General Permit Registration Application to construct, modify, relocate or administratively update an emergency generator shall pay a Class II General Permit registration fee pursuant to 45CSR13. The registration fee shall be paid by a negotiable instrument (check, draft, warrant or money order) to DEP - Division of Air Quality. The fees associated with General Permit G60-C include:

- a. \$500.00 for Class II General Permit Registrations (Construction/Modification);
- b. \$300.00 for Class II Administrative Updates; and
- c. \$1000.00 for New Source Performance Standard (NSPS) fee for applicable emergency generators.

Any submitted Registration Application shall not be deemed to have been received nor administratively complete unless payment of the proper Class II General Permit registration fee(s) is (are) included (45CSR22);

Any General Permit registration fee paid hereunder is not refundable (45CSR22).

G60-A - Class II Emergency Generator

| | Application Fee | NSPS Fee | Total Fee | Total Days* |
|------------------------|-----------------|-------------|-------------|-------------|
| Construction | \$ 500.00 | \$ 1,000.00 | \$ 1,500.00 | 45 |
| Modification | \$ 500.00 | \$ 1,000.00 | \$ 1,500.00 | 45 |
| Relocation | \$ 500.00 | \$ 1,000.00 | \$ 1,500.00 | 45 |
| Class I Admin. Update | NA | NA | NA | 45 |
| Class II Admin. Update | \$ 300.00 | \$ 1,000.00 | \$ 1,300.00 | 45 |

-
- Please find attached \$1,500.00 check to WV-DEP – Division of Air Quality
-

ATTACHMENT M
Siting Criteria Waiver
(Not Applicable)

If registrant is seeking a waiver from the siting criteria in G60-C Section 2.1, please complete the siting criteria waiver. This waiver needs to be completed by the registrant and person(s) granting the waiver, and notarized by an authorized West Virginia Notary Public. The waiver is only good for the submitted registration application. Therefore, any further modification or administrative update requiring public notice will require a new waiver.

- **Not Applicable: There is no occupied dwelling, business, public building, school, church, community, institutional building or public park within 300' feet of the proposed emergency generator.**
-

ATTACHMENT N
Material Safety Data Sheets (MSDS)
(And Representative Composition Analyses)

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

- **Fuel Gas Composition**
-

Williams Ohio Valley Midstream LLC
MOUNDSVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT N - MSDS AND COMPOSITION ANALYSIS

Fuel / Purge Gas Composition

Representative Fuel Gas Composition (Ft Beeler Residue Gas)

<http://www.chemindustry.com/apps/chemicals>

| Compound | CAS | Formula | Molecular Weight (MW) | Mole % (M% = V%) | Mole Fraction (M%/Sum-M%) | Weighted Sum (MW*MF) | Weight % (WS/Sum-WS) | lb/MMscf (WS/UGC#) |
|---------------------|-----------|---------|-----------------------|------------------|---------------------------|----------------------|----------------------|--------------------|
| Nitrogen | 7727-37-9 | N2 | 28.013 | --- | --- | --- | --- | --- |
| Hydrogen Sulfide | 2148-87-8 | H2S | 34.086 | --- | --- | --- | --- | --- |
| Carbon Dioxide | 124-38-9 | CO2 | 44.010 | 0.1754 | 0.001754 | 0.0772 | 0.4228 | 203.42 |
| Methane* | 75-82-8 | CH4 | 16.042 | 85.0798 | 0.850821 | 13.6493 | 74.7542 | 35,968.16 |
| Ethane* | 74-84-0 | C2H6 | 30.069 | 14.0913 | 0.140917 | 4.2372 | 23.2065 | 11,165.84 |
| Propane** | 74-98-6 | C3H8 | 44.096 | 0.6174 | 0.006174 | 0.2723 | 1.4911 | 717.44 |
| i-Butane** | 75-28-5 | C4H10 | 58.122 | 0.0100 | 0.000100 | 0.0058 | 0.0318 | 15.32 |
| n-Butane** | 106-97-8 | C4H10 | 58.122 | 0.0112 | 0.000112 | 0.0065 | 0.0357 | 17.15 |
| Cyclopentane** | 287-92-3 | C5H10 | 70.100 | --- | --- | --- | --- | --- |
| i-Pentane** | 78-78-4 | C5H12 | 72.149 | 0.0007 | 0.000007 | 0.0005 | 0.0029 | 1.39 |
| n-Pentane** | 109-66-0 | C5H12 | 72.149 | 0.0008 | 0.000008 | 0.0006 | 0.0031 | 1.48 |
| Cyclohexane** | 110-82-7 | C6H12 | 84.159 | --- | --- | --- | --- | --- |
| Other Hexanes** | varies | C6H14 | 86.175 | 0.0076 | 0.000076 | 0.0066 | 0.0361 | 17.35 |
| Methylcyclohexane** | varies | C7H14 | 98.186 | --- | --- | --- | --- | --- |
| Heptanes** | varies | C7H16 | 100.202 | --- | --- | --- | --- | --- |
| C8+ Heavies** | varies | C8+ | 130.000 est | --- | --- | --- | --- | --- |
| Benzene*** | 71-43-2 | C6H6 | 78.112 | 0.0005 | 0.000005 | 0.0004 | 0.0021 | 1.03 |
| Ethylbenzene*** | 100-41-4 | C8H10 | 106.165 | 0.0005 | 0.000005 | 0.0005 | 0.0029 | 1.40 |
| n-Hexane*** | 110-54-3 | C6H14 | 86.175 | 0.0005 | 0.000005 | 0.0004 | 0.0024 | 1.14 |
| Toluene*** | 108-88-3 | C7H8 | 92.138 | 0.0005 | 0.000005 | 0.0005 | 0.0025 | 1.21 |
| 2,2,4-TMP*** | 540-84-1 | C8H18 | 114.229 | 0.0005 | 0.000005 | 0.0006 | 0.0031 | 1.51 |
| Xylenes*** | 1330-20-7 | C8H10 | 106.165 | 0.0005 | 0.000005 | 0.0005 | 0.0029 | 1.40 |

| | | | | | |
|-------------------|---------------|----------------|----------------|---------------|------------------|
| Totals: | 100.00 | 1.0000 | 18.2589 | 100.00 | 48,115.23 |
| THC: | 99.82 | 0.9982 | 18.1817 | 99.58 | 47,911.81 |
| Total VOC: | 0.65 | 0.0065 | 0.2952 | 1.62 | 777.81 |
| Total HAP: | 0.003 | 0.00003 | 0.0029 | 0.02 | 7.68 |

* = Hydrocarbon (HC) ** = also Volatile Organic Compound (EPA-VOC) *** = also Hazardous Air Pollutant (EPA-HAP)

#UGC (Universal Gas Constant) = 379.482 scf/lb-mol @ 60 °F and 14.696 psia. Pound "X"/scf = M% of "X" * MW of "X" / UGC

To be conservative, the following "worst-case" values were assumed:

| Compound | CAS | Formula | Representative Gas Analysis | | | Worst-Case (200%) | | |
|------------------------|-----------|------------|-----------------------------|--------|-----------|-------------------|---------|-----------|
| | | | Mole % | Wgt % | lb/MMscf | Mole % | Wgt % | lb/MMscf |
| Carbon Dioxide | 124-38-9 | CO2 | 0.175 | 0.423 | 203.42 | 0.351 | 0.846 | 406.84 |
| Methane | 75-82-8 | CH4 | 85.080 | 74.754 | 35,968.16 | 100.000 | 100.000 | 42,275.00 |
| Ethane | 74-84-0 | C2H6 | 14.091 | 23.206 | 11,165.84 | 28.183 | 46.413 | 22,331.68 |
| VOC | Various | C3+ | 0.651 | 1.617 | 777.81 | 1.302 | 3.233 | 1,555.62 |
| Benzene | 71-43-2 | C6H6 | 0.0005 | 0.0021 | 1.03 | 0.0010 | 0.0043 | 2.06 |
| Ethylbenzene | 110-54-3 | C8H10 | 0.0005 | 0.0024 | 1.14 | 0.0010 | 0.0047 | 2.27 |
| n-Hexane | 100-41-4 | C6H14 | 0.0005 | 0.0029 | 1.40 | 0.0010 | 0.0058 | 2.80 |
| Toluene | 108-88-3 | C7H8 | 0.0005 | 0.0025 | 1.21 | 0.0010 | 0.0050 | 2.43 |
| 2,2,4-Trimethylpentane | 540-84-1 | C8H18 | 0.0005 | 0.0031 | 1.51 | 0.0010 | 0.0063 | 3.01 |
| Xylenes | 1330-20-7 | C8H10 | 0.0005 | 0.0029 | 1.40 | 0.0010 | 0.0058 | 2.80 |
| Total HAP | Various | C6 thru C8 | 0.0030 | 0.0160 | 7.68 | 0.0060 | 0.0319 | 15.36 |

ATTACHMENT O
Emissions Summary Sheet

GENERATOR ENGINE – G60-C FORMS:

- **EMISSION UNITS TABLE**
 - **SUMMARY SHEET FOR CRITERIA POLLUTANTS**
 - **SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS**
-

Williams Ohio Valley Midstream LLC
MOUNDVILLE FRACTIONATION PLANT
 Emergency Generator - General Permit G60-C
ATTACHMENT O - EMISSIONS SUMMARY SHEETS

EMISSION UNITS TABLE

(Include 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 | Installed/Modified | Design Capacity | Type ³ | Control Device ⁴ | |
|--|--------------------------------|--|--------------------|------------------------|-------------------|--|------|
| Existing 45-CSR-13 Units | | | | | | | |
| 1S | Frac1 | Fractionation Plant 1 (Fugitives Only) | 2011 | 12,500 bpd (ave) | Existing | None | |
| | Frac2 | Fractionation Plant 2 (Fugitives Only) | 2013 | 30,000 bpd (ave) | Existing | | |
| 2S | TLO | Truck and Rail Loading/Unloading | 2011 | 12,500 bpd (ave) | Existing | FL-02 | |
| | | | 2013 | 30,000 bpd (ave) | Existing | | |
| 3S | TKS | NGL Accumulation Tanks | 2011 | 6 tanks @ 61,400 gals | Existing | Pressure Vessels (Insignificant Emissions) | |
| | | | 2013 | 6 tanks @ 90,000 gals | Existing | | |
| | | Propane Accumulation Tanks | 2011 | 4 tanks @ 90,000 gals | Existing | | |
| | | | 2011 | 2 tanks @ 114,000 gals | Existing | | |
| | | | 2013 | 1 tank @ 90,000 gals | Existing | | |
| | | Butane Accumulation Tanks | 2011 | 2 tanks @ 140,000 gals | Existing | | |
| | | | 2013 | 3 tanks @ 210,000 gals | Existing | | |
| | | Natural Gasoline Accumulation Tanks | 2011 | 2 tanks @ 60,000 gals | Existing | | |
| | | | 2011 | 1 tank @ 90,000 gals | Existing | | |
| | | | 2013 | 2 tanks @ 420,000 gals | Existing | | |
| | | Slop Liquid Tanks | 2011 | 2 tanks @ 8,240gals | Existing | | None |
| | | Diesel Fuel Tank | 2011 | 1 tank @ 520 gals | Existing | | |
| | | Gasoline Tank | 2011 | 1 tank @ 520 gals | Existing | | |
| | | Methanol (MeOH) Tank | 2011 | 1 tank @ 300 gals | Existing | | |
| | | Mercaptan (Odorant) Tanks | 2011 | 2 tank @ 1,000 gals | Existing | | |
| 2013 | 1 tank @ 3,000 gals | | Existing | | | | |
| 1-HTR | 1E | Frac1 - Hot Oil Heater | 2011 | 45.54 MMBtu/hr | Existing | None | |
| 2-HTR | 2E | Frac2 - Hot Oil Heaters (2x) | 2013 | 89.85 MMBtu/hr (ea) | Existing | | |
| 5S | 5E | Process Flare (FL-02) (99% Control) | 2013 | 0.18 MMBtu/hr (pilot) | Existing | | |
| "NEW" General Permit G60-C Unit | | | | | | | |
| 6S | 6E | Emergency Generator | tbd | 49.2 bhp | New | None | |

¹ For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S, ... or other appropriate designation.

² For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

³ New, modification, removal, etc.

⁴ For Control Devices use the following numbering system: 1C, 2C, 3C, ... or other appropriate designation.

MOUNDSVILLE FRACTIONATION PLANT

Emergency Generator - General Permit G60-C

ATTACHMENT O - EMISSIONS SUMMARY SHEETS

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

| Emergency Generator Location: | | Williams Ohio Valley Midstream LLC - Moundsville Natural Gas Fractionation Plant | | | | | | | | | | Registration Number (Agency Use) <u>G60-C</u> | | |
|-------------------------------|-----------------------|--|-------|-------|---------|---------|-------------------------------|-------|--------|---------|---------|--|----|----|
| Unit ID | Point ID | Potential Emissions (lbs/hr) | | | | | Potential Emissions (tons/yr) | | | | | | | |
| | | NOX | CO | VOC | SO2 | PM10 | NOX | CO | VOC | SO2 | PM10 | | | |
| 1S | Frac1 | -- | -- | 7.01 | -- | -- | -- | -- | 30.70 | -- | -- | -- | -- | -- |
| | Frac2 | -- | -- | 5.30 | -- | -- | -- | -- | 23.20 | -- | -- | -- | -- | -- |
| 2S | TLO | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | | | | | | | | | | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | | |
| 3S | TKS | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | | | | | | | | | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | |
| 1-HTR | 2E | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| | | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | |
| 5S | Sub-Total - Existing: | 4.46 | 3.75 | 0.25 | 0.03 | 0.34 | 19.56 | 16.43 | 1.08 | 0.12 | 1.49 | | | |
| | | 3.23 | 6.65 | 0.36 | 0.05 | 0.67 | 17.03 | 35.00 | 1.89 | 0.28 | 3.52 | | | |
| | | 4.01 | 8.00 | 61.06 | 0.01 | 0.08 | 17.55 | 35.03 | 57.73 | 0.03 | 0.36 | | | |
| | | 11.71 | 18.40 | 74.44 | 0.09 | 1.09 | 54.13 | 86.46 | 116.67 | 0.42 | 5.37 | | | |
| | | 0.66 | 25.53 | 0.04 | 2.7E-04 | 9.0E-03 | 0.16 | 6.38 | 0.01 | 6.8E-05 | 2.2E-03 | | | |
| 6S | EmGen | 0.66 | 25.53 | 0.04 | 2.7E-04 | 9.0E-03 | 0.16 | 6.38 | 0.01 | 6.8E-05 | 2.2E-03 | | | |
| Sub-Total - New: | | 0.66 | 25.53 | 0.04 | 2.7E-04 | 9.0E-03 | 0.16 | 6.38 | 0.01 | 6.8E-05 | 2.2E-03 | | | |
| Grand Total Facility: | | 12.37 | 43.93 | 74.48 | 0.09 | 1.10 | 54.30 | 92.85 | 116.68 | 0.42 | 5.38 | | | |

MOUNDSVILLE FRACTIONATION PLANT

Emergency Generator - General Permit G60-C

ATTACHMENT O - EMISSIONS SUMMARY SHEETS

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

| Emergency Generator Location: | | Williams Ohio Valley Midstream LLC - Moundsville Natural Gas Fractionation Plant | | | | | | | | | | Registration Number (Agency Use) <u>G60-C</u> | | | |
|-------------------------------|------------------------------|--|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--|--------------|-------------|-------------|
| Unit ID | Point ID | Potential Emissions (lbs/hr) | | | | | | | | | | Potential Emissions (tons/yr) | | | |
| | | Benzene | E-Benzene | Toluene | Xylenes | n-Hexane | Formaldehyde | Benzene | E-Benzene | Toluene | Xylenes | n-Hexane | Formaldehyde | | |
| 1S | Frac1 | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | 0.93 | -- |
| | Frac2 | -- | -- | -- | -- | 0.68 | -- | -- | -- | -- | -- | -- | -- | 2.96 | -- |
| 2S | TLO | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | | | | | | | | | | No Emissions Except Fugitives (1S) and Hose Blowdown/Purge to Flare (5S) | | | |
| | NGL | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | | |
| | Propane | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | | |
| | Butane | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | | |
| | Gasoline | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | | | | | | | | | No Emissions Except Fugitives (1S) and Tank Losses to Flare (5S) | | | |
| 3S | Condensate | No Emissions Except Fugitives (1S) | | | | | | | | | | No Emissions Except Fugitives (1S) | | | |
| | Slop Liquids | -- | -- | -- | -- | 2.6E-03 | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- |
| | Diesel Fuel | -- | -- | -- | -- | 9.1E-04 | -- | -- | -- | -- | -- | -- | -- | 4.0E-03 | -- |
| | Gasoline | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- |
| | Methanol | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | Mercaptan | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 1E | 9.4E-05 | -- | 1.5E-04 | -- | 0.08 | 3.3E-03 | 4.1E-04 | -- | 6.6E-04 | -- | -- | -- | 0.35 | 0.01 |
| | 2E | 1.8E-04 | -- | 3.0E-04 | -- | 0.16 | 0.01 | 9.7E-04 | -- | 1.6E-03 | -- | -- | -- | 0.83 | 0.03 |
| | 5E | 0.05 | 0.07 | 2.23 | 0.07 | 2.26 | 2.1E-03 | 0.05 | 0.07 | 2.11 | 0.07 | 2.11 | 0.07 | 2.13 | 0.01 |
| | Sub-Total - Existing: | | 0.05 | 0.07 | 2.23 | 0.07 | 3.41 | 0.01 | 0.05 | 0.07 | 2.11 | 0.07 | 2.11 | 0.07 | 7.31 |
| 6S | EmGen | 7.3E-04 | 1.1E-05 | 2.6E-04 | 9.0E-05 | -- | 0.01 | 1.8E-04 | 2.9E-06 | 6.5E-05 | 2.3E-05 | -- | -- | 2.4E-03 | |
| | Sub-Total - New: | 7.3E-04 | 1.1E-05 | 2.6E-04 | 9.0E-05 | 0.0E+00 | 0.01 | 1.8E-04 | 2.9E-06 | 6.5E-05 | 2.3E-05 | 0.0E+00 | 0.0E+00 | 2.4E-03 | |
| Grand Total Facility: | | 0.05 | 0.07 | 2.23 | 0.07 | 3.41 | 0.02 | 0.05 | 0.07 | 2.11 | 0.07 | 2.11 | 0.07 | 7.31 | 0.06 |

SUPPLEMENT 01

Vendor Data

The application forms shall include calculations or test data on which the information is based.

EMERGENCY GENERATOR SPECIFICATIONS:

- Emergency Generator (EmGen-01 (6S))
-

KOHLER[®] POWER SYSTEMS

| PSI 2013 Stationary 60 Hz Emergency Stand-by ¹ Certified Power Generation Rating Data | | | | | | | | | | | | | | |
|--|--------|--------------|------------|------|------------|-----------|-------------------------------|--------------|---------------|------------------|----------------------|-----------------|--------------------------------|----------|
| Generator Model | Engine | Speed RPM | Freq Hz | Fuel | Duty Cycle | | Flywheel power ^{2,3} | | Engine Family | C02 (g/KW-hr) | THC+NOx (g/KW-hr) | CO (g/KW-hr) | bsfc ⁵ (g/KW-hr) | Catalyst |
| | | | | | Emergency | Emergency | HP | KW | | | | | | |
| 25REZG | 3.0L | 1800 | 60 | LP | Emergency | 49.2 | 36.7 | DPSIB2.972ED | 888.49 | 9.93 | 32.66 | 265 | No | |
| | 3.0L | 1800 | 60 | NG | Emergency | 49.2 | 36.7 | DPSIB2.972ED | 805.49 | 7.22 | 29.47 | 255.9 | No | |

¹ Standby and overload ratings based on ISO3046. Continuous ratings based on ISO 8528.

² All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328 feet with no cooling fan or alternator losses using heating value for NG of 1015 BTU/SCF. Production tolerances in engines and installed components can account for power variations of +/- 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

³ Electrical ratings are an estimated based on assumed fan and generator losses and may vary depending on actual equipment losses.

⁴ Bsfsc is based on 100% gross flywheel power rating and does not include fan or generator losses.

For additional questions contact:

Power Solutions, Inc.

655 Wheat Lane – Wood Dale, IL 60191

630.350.9400 (M) – 630.350.9900 (F)

www.psiengines.com

info@psiengines.com



From: Turchin, John
Sent: Thursday, August 14, 2014 3:48 PM
To: Zawaski, Danell
Cc: Durham, Shanda; Thompson, Bill; Detling, Jeremie; Hiner
Subject: RE: backup power for Moundsville frac

Danell,
Attached is the name plate data for the 25 kw generator we would like to set at the Moundsville Frac.
Let us know if there anything else we can help with.
Thanks,

John Turchin
Cell: (985) 258-6124 | Work: (304) 843-3118 | Fax: (304) 232-6703
100 Teletech Drive Suite 2, Moundsville, WV 26041



Model: **25REZG**

KOHLER Power Systems

190-600 V

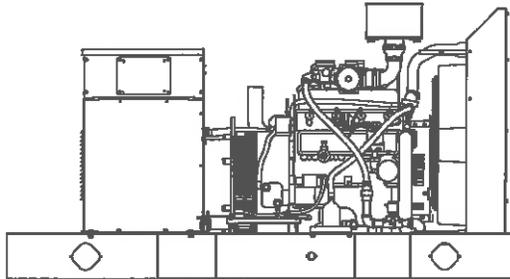
Gas



**EPA-Certified for Stationary
Emergency Applications**

Ratings Range

| Standby: | kW kVA | 60 Hz | 50 Hz |
|----------|-----------|----------------|----------------|
| | | 24-25 24-31 | 18-20 19-25 |



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A one-year limited warranty covers all systems and components. Two- and five-year extended warranties are also available.
- Alternator features:
 - The unique Fast-Response™ II excitation system delivers excellent voltage response and short-circuit capability using a permanent magnet (PM)-excited alternator.
 - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
 - Kohler designed controllers for guaranteed system integration and remote communication. See Controllers on page 3.
 - The electronic, isochronous governor incorporates an integrated drive-by-wire throttle body actuator delivering precise frequency regulation.

Generator Set Ratings

| Alternator | Voltage | Ph | Hz | Natural Gas 130°C Rise Standby Rating | | LP Gas 130°C Rise Standby Rating | |
|------------|---------|----|-------|---|-------|--|------|
| | | | | kW/kVA | Amps | kW/kVA | Amps |
| 4P4 | 120/208 | 3 | 60 | 25/31 | 87 | 25/31 | 87 |
| | 127/220 | 3 | 60 | 25/31 | 82 | 25/31 | 82 |
| | 120/240 | 3 | 60 | 25/31 | 75 | 25/31 | 75 |
| | 120/240 | 1 | 60 | 24/24 | 100 | 24/24 | 100 |
| | 139/240 | 3 | 60 | 25/31 | 75 | 25/31 | 75 |
| | 220/380 | 3 | 60 | 25/31 | 47 | 25/31 | 47 |
| | 277/480 | 3 | 60 | 25/31 | 38 | 25/31 | 38 |
| | 347/600 | 3 | 60 | 25/31 | 30 | 25/31 | 30 |
| | 110/190 | 3 | 50 | 20/25 | 76 | 20/25 | 76 |
| | 115/200 | 3 | 50 | 20/25 | 72 | 20/25 | 72 |
| | 120/208 | 3 | 50 | 18/23 | 62 | 18/23 | 62 |
| | 110/220 | 1 | 50 | 19/19 | 86 | 19/19 | 86 |
| | 110/220 | 3 | 50 | 20/25 | 66 | 20/25 | 66 |
| | 220/380 | 3 | 50 | 20/25 | 38 | 20/25 | 38 |
| 230/400 | 3 | 50 | 20/25 | 36 | 20/25 | 36 | |
| 240/416 | 3 | 50 | 18/23 | 31 | 18/23 | 31 | |
| 4Q4 | 120/240 | 1 | 60 | 25/25 | 104 | 25/25 | 104 |
| | 110/220 | 1 | 50 | 20/20 | 91 | 20/20 | 91 |

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. **Standby Ratings:** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. **Prime Power Ratings:** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

Alternator Specifications

| Specifications | Alternator |
|--|-------------------------------|
| Manufacturer | Kohler |
| Type | 4-Pole, Rotating-Field |
| Exciter type | Brushless, Permanent-Magnet |
| Leads: quantity, type | |
| 4P4 | 12, Reconnectable |
| 4Q4 | 4, 110-120/220-240 |
| Voltage regulator | Solid State, Volts/Hz |
| Insulation: | NEMA MG1 |
| Material | Class H |
| Temperature rise | 130°C, Standby |
| Bearing: quantity, type | 1, Sealed |
| Coupling | Flexible Disc |
| Amortisseur windings | Full |
| Voltage regulation, no-load to full-load | Controller Dependent |
| One-step load acceptance | 100% of Rating |
| Unbalanced load capability | 100% of Rated Standby Current |
| Peak motor starting kVA: | (35% dip for voltages below) |
| 480 V, 380 V 4P4 (12 lead) | 121 (60 Hz), 88 (50 Hz) |
| 240 V, 220 V 4Q4 (4 lead) | 62 (60 Hz), 62 (50 Hz) |

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

| Engine Specifications | 60 Hz | 50 Hz |
|--|---|-----------|
| Manufacturer | General Motors | |
| Engine model, type | Industrial Powertrain 3.0 L, 4-Cycle Natural Aspiration | |
| Cylinder arrangement | 4 Inline | |
| Displacement, L (cu. in.) | 3.0 (181) | |
| Bore and stroke, mm (in.) | 101.6 x 91.4 (4.00 x 3.60) | |
| Compression ratio | 8.2:1 | |
| Piston speed, m/min. (ft./min.) | 329 (1080) | 274 (900) |
| Main bearings: quantity, type | 2 Bolt | |
| Rated rpm | 1800 | 1500 |
| Max. power at rated rpm, kW (HP) | 33 (44) | 27.5 (37) |
| Engine power at standby rating, kW (HP) | 33 (44) | 27.5 (37) |
| Cylinder head material | Cast Iron | |
| Piston type and material | High Silicon Aluminum | |
| Crankshaft material | Nodular Iron | |
| Governor type | Electronic | |
| Frequency regulation, no-load to full-load | Isochronous | |
| Frequency regulation, steady state | ±0.5% | |
| Frequency | Fixed | |
| Air cleaner type, all models | Dry | |

Exhaust

| Exhaust System | 60 Hz | 50 Hz |
|---|-------------|-----------|
| Exhaust manifold type | Dry | |
| Exhaust flow at rated kW, m ³ /min. (cfm) | 7.1 (250) | 5.9 (208) |
| Exhaust temperature at rated kW, dry exhaust, °C (°F) | 688 (1270) | |
| Maximum allowable back pressure, kPa (in. Hg) | 10.2 (3.0) | |
| Exhaust outlet size at engine hookup, mm (in.) | 64 (2.5) OD | |

Engine Electrical

| Engine Electrical System | 60 Hz | 50 Hz |
|--|-------------------------|-------|
| Ignition system | Electronic, Distributor | |
| Battery charging alternator: | | |
| Ground (negative/positive) | Negative | |
| Volts (DC) | 12 | |
| Ampere rating | 70 | |
| Starter motor rated voltage (DC) | 12 | |
| Battery, recommended cold cranking amps (CCA): | | |
| Qty., rating for -18°C (0°F) | 1, 630 | |
| Battery voltage (DC) | 12 | |

Fuel

| Fuel System | 60 Hz | 50 Hz |
|---|-----------------------------------|-------|
| Fuel type | Natural Gas, LP Gas, or Dual Fuel | |
| Fuel supply line inlet | 1 NPTF | |
| Natural gas fuel supply pressure, kPa (in. H ₂ O) | 1.74-2.74 (7-11) | |
| LPG vapor withdrawal fuel supply pressure, kPa (in. H ₂ O) | 1.24-2.74 (5-11) | |
| Dual fuel engine, LPG vapor withdrawal fuel supply pressure, kPa (in. H ₂ O) | 1.24 (5) | |

| Fuel Composition Limits * | Nat. Gas | LP Gas |
|---|------------|-------------|
| Methane, % by volume | 90 min. | — |
| Ethane, % by volume | 4.0 max. | — |
| Propane, % by volume | 1.0 max. | 85 min. |
| Propene, % by volume | 0.1 max. | 5.0 max. |
| C ₄ and higher, % by volume | 0.3 max. | 2.5 max. |
| Sulfur, ppm mass | 25 max. | |
| Lower heating value, MJ/m ³ (Btu/ft ³), min. | 33.2 (890) | 84.2 (2260) |

* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

Application Data

Lubrication

| Lubricating System | 60 Hz | 50 Hz |
|---------------------------------------|---------------|-------|
| Type | Full Pressure | |
| Oil pan capacity, L (qt.) | 3.8 (4.0) | |
| Oil pan capacity with filter, L (qt.) | 4.1 (4.3) | |
| Oil filter: quantity, type | 1, Cartridge | |

Cooling

| Radiator System | 60 Hz | 50 Hz |
|--|-------------|-------------|
| Ambient temperature, °C (°F) * | 50 (122) | |
| Engine jacket water capacity, L (gal.) | 6.8 (1.8) | |
| Radiator system capacity, including engine, L (gal.) | 14.9 (3.9) | |
| Engine jacket water flow, Lpm (gpm) | 42 (11) | 35 (9) |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.) | 34.1 (1940) | 28.4 (1617) |
| Water pump type | Centrifugal | |
| Fan diameter, including blades, mm (in.) | 533 (21) | |
| Fan, kWm (HP) | 1.5 (2.0) | 1.0 (1.2) |
| Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O) | 0.125 (0.5) | |

* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

Operation Requirements

| Air Requirements | 60 Hz | 50 Hz |
|--|------------|------------|
| Radiator-cooled cooling air, m ³ /min. (scfm) † | 142 (5000) | 113 (4000) |
| Combustion air, m ³ /min. (cfm) | 2.1 (74) | 1.75 (62) |
| Heat rejected to ambient air: | | |
| Engine, kW (Btu/min.) | 9.2 (522) | 15.4 (860) |
| Alternator, kW (Btu/min.) | 4.5 (259) | 3.75 (216) |

† Air density = 1.20 kg/m³ (0.075 lbm/ft³)

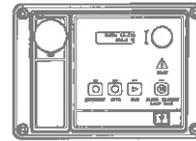
| Fuel Consumption ‡ | 60 Hz | 50 Hz |
|---|------------------------|-----------|
| Natural Gas, m³/hr. (cfh) at % load | Standby Ratings | |
| 100% | 10.5 (366) | 8.8 (305) |
| 75% | 8.5 (297) | 7.1 (248) |
| 50% | 5.5 (194) | 4.6 (162) |
| 25% | 3.3 (115) | 2.8 (96) |
| LP Gas, m³/hr. (cfh) at % load | Standby Ratings | |
| 100% | 4.5 (156) | 3.8 (130) |
| 75% | 3.6 (127) | 3.0 (106) |
| 50% | 2.4 (83) | 2.0 (69) |
| 25% | 1.4 (50) | 1.2 (42) |

‡ Nominal fuel rating: Natural gas, 37 MJ/m³ (1000 Btu/ft.³)
LP vapor, 93 MJ/m³ (2500 Btu/ft.³)

LP vapor conversion factors:

8.58 ft.³ = 1 lb.
0.535 m³ = 1 kg.
36.39 ft.³ = 1 gal.

Controllers

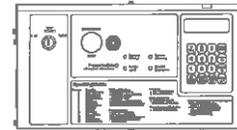


Decision-Maker[®] 3000 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus[®] protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-100 for additional controller features and accessories.



Decision-Maker[®] 550 Controller

Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.

- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus[®] protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.

Standard Features

- Alternator Protection
- Battery Rack and Cables
- Electronic, Isochronous Governor
- Gas Fuel System (includes fuel mixer, electronic secondary gas regulator, gas solenoid valve, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature

Available Options

Approvals and Listings

- CSA Approval
- IBC Seismic Certification
- UL 2200 Listing

Enclosed Unit

- Sound Enclosure (with enclosed critical silencer)
- Weather Enclosure (with enclosed critical silencer)

Open Unit

- Exhaust Silencer, Critical (kit: PA-352663)
- Flexible Exhaust Connector, Stainless Steel

Fuel System

- Dual Fuel NG/LPG (automatic changeover)
- Flexible Fuel Line (required when the generator set skid is spring mounted)
- Gas Filter
- LP Liquid Withdrawal (vaporizer)
- Secondary Gas Solenoid Valve

Controller

- Common Fault Relay
- Communication Products and PC Software (Decision-Maker® 550 controller only)
- Customer Connection (Decision-Maker® 550 controller only)
- Dry Contact (isolated alarm) (Decision-Maker® 550 controller only)
- Input/Output Module (Decision-Maker® 3000 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel (Decision-Maker® 550 controller only)
- Remote Emergency Stop
- Run Relay

Cooling System

- Block Heater, 1000 W, 110-120 V Recommended for ambient temperatures below 10°C (50°F)
- Radiator Duct Flange

Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)

Miscellaneous

- Air Cleaner Restrictor Indicator
- Certified Test Report
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards

Literature

- General Maintenance
- NFPA 110
- Overhaul
- Production

Warranty

- 2-Year Basic
- 5-Year Basic
- 5-Year Comprehensive

Other Options

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

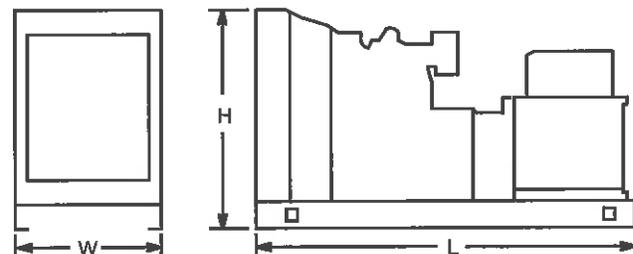
Dimensions and Weights

Overall Size, L x W x H, mm (in.)

Wide Skid 2200 x 1040 x 1172 (86.6 x 40.9 x 46.1)

Narrow Skid 2200 x 864 x 1172 (86.6 x 34.0 x 46.1)

Weight (radiator model), wet, kg (lb.): 639 (1409)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

SUPPLEMENT 02
Source Aggregation Discussion

Williams Ohio Valley Midstream LLC (OVM)
Emergency Generator
MOUNDVILLE FRACTIONATION PLANT
Registration Application for Emergency Generator Class II General Permit G60-C

SUPPLEMENT 02
Source Aggregation Discussion

A. Applicability of Source Aggregation

Emergency Generator and Moundsville Fractionation Plant Emission Sources

The proposed emergency generator and associated equipment is adjacent to the Moundsville Fractionation Plant. Subsequently, emergency generator emissions in addition to the Moundsville Fractionation Plant emissions will be combined to determine applicability to Title V and PSD permitting.

Other Sites Excluding Moundsville Fractionation Plant

For New Source Review (NSR) and Title V permitting, the three-part regulatory analysis used to determine whether emissions from two or more facilities should be aggregated and treated as a single source are whether the activities:

- i) Belong to the same major industrial grouping; and
- ii) Are located on one or more contiguous or adjacent properties; and
- iii) Are under common control.

i) Same Industrial Grouping

The emergency generator (subject facility), operates under SIC code 1321 (Natural Gas Liquids Extraction). The Moundsville Fractionation Plant also operates under SIC code 1321 (Natural Gas Liquids Extraction). Therefore, the subject facility shares the same two-digit major SIC code of 13 as the Moundsville Fractionation Plant.

ii) Contiguous or Adjacent

The determination of whether two or more facilities are “contiguous” or “adjacent” is made on a case-by-case basis. This determination is proximity based, and it is important to focus on this criteria and whether it meets the common sense notion of a plant. The functional interrelationship of the two or more facilities is not a relevant inquiry in determining whether the facilities are “contiguous” or “adjacent.”

Neither West Virginia nor federal regulations define the terms “contiguous” or “adjacent” or place any definitive restrictions on how distant two emission units can be and still be considered located on contiguous or adjacent properties for the purposes of a single source determination. It is clear, however, that the determination of whether two or more facilities are “contiguous” or “adjacent” is based on the plain meaning of the terms “adjacent” and “contiguous”, which consider the physical distance between the facilities. The term

contiguous is defined in the dictionary as being in actual contact; touching along a boundary or at a point. The term "adjacent" is defined in the dictionary as not distant, nearby, having a common endpoint or border.

There is no other Williams site, excluding Moundsville Fractionation Plant, within ½ mile. As such, there are no other facilities that are considered adjacent.

iii) Common Control

Williams OVM operates under its parent company The Williams Companies, Inc. (Williams) and is the sole operator of the subject facility. Neither Williams OVM, nor Williams, exercise operational control over any equipment owned or operated by any natural gas producer upstream of the subject facility. Williams OVM is unaware at this time of any upstream producer facilities within ½ mile of the Moundsville Fractionation Plant. All employees at the subject facility are under the exclusive direction of Williams and are not under the control of any other entity. Similarly, Williams has no authority over employees of the production wells. These companies operate wholly independent of one another. No employees are expected to shuttle back and forth between the subject facility and any production well.

Summary

The subject facility and the Moundsville Fractionation Plant should be aggregated and treated as a single source of emissions because these facilities share an SIC Code, are contiguous and adjacent, and are under common ownership and control. The emergency generator and ancillary equipment emissions should be combined with other Moundsville Fractionation Plant emission sources when determining if the Title V Operating Permit or Prevention of Significant Deterioration programs become applicable.

The subject facility should not, however, be aggregated with any other upstream facility because the subject facility is not under common control with any upstream production well. Accordingly, the subject facility should not be aggregated with upstream production facilities in determining major source or PSD status.

***** End of Application for Emergency Generator – Class II General Permit G60-C *****



WILLIAMS FIELD SERVICES GROUP, INC
 PO BOX 21218
 TULSA, OK 74121-1218

COMPANY NUMBER: 4000

CHECK NUMBER: 4000093097

| PAY DATE | SUPPLIER NO. | SUPPLIER NAME | CHECK TOTAL |
|-----------|--------------|------------------------|-------------|
| 12-DEC-14 | 401733 | STATE OF WEST VIRGINIA | 1,500.00 |

| Invoice Date | Invoice Or Credit Memo / Invoice Description | Gross | Discount | Net |
|--------------|---|--------------------|----------|----------|
| 09-DEC-14 | 09-DEC-2014 / AIR PERMIT APPLICATION FEE FOR MOUN | 1,500.00 | 0.00 | 1,500.00 |
| | | Page Totals | 0.00 | 1,500.00 |

Supplier Support 1-866-778-2665

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 TULSA, OK 74121-1218
 Company Number: 4000

JPMorgan Chase Bank, N.A. 70-2322719
 Chicago, IL

Check Number: 4000093097

Check Date: 12-DEC-14

One Thousand Five Hundred Dollars And Zero Cents

Pay To The Order Of:

STATE OF WEST VIRGINIA
 WV DEP - DIVISION OF AIR QUALITY
 601 57TH ST SE
 CHARLESTON, WV 25304 United States

PAY (USD) \$1,500.00

Donald R Chappel
 Authorized Signature

⑈ 4000093097 ⑈ ⑆ 071923226 ⑆

009401167⑈

From: (412) 787-4197
Danell Zawaski
WILLIAMS
2000 Commerce Drive
Park Place 2
Pittsburgh, PA 15275

Origin ID: OILA



Ship Date: 16DEC14
ActWgt: 2.0 LB
CAD: 104269589/NET3550

Delivery Address Bar Code



SHIP TO: (304) 926-0499 X 1260 BILL SENDER

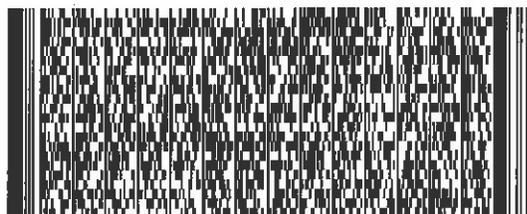
Beverly McKeone
WV Div of Air Quality - Permitting
601 57th Street, SE

Charleston, WV 25304

Ref # 60000006200060034.6228.8325
Invoice #
PO #
Dept #

THU - 18 DEC AA
**** 2DAY ****

TRK# 7722 6523 2219
0201



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