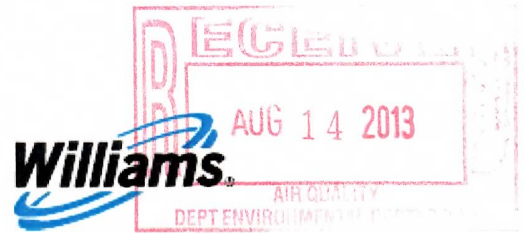


GP5-26-00587C



Laurel Mountain Midstream Operating, LLC
Park Place Corporate Center 2
2000 Commerce Drive
Pittsburgh, PA 15275
(412) 787-7300
(412) 787-6006 fax

August 9, 2013

Mark R. Gorog, P.E.
Environmental Engineer Manager
Air Quality Program
Southwest Regional Office
Pennsylvania Department of Environmental Protection
400 Waterfront Drive
Pittsburgh, PA 15222-4745

**Subject: Application for Authorization to Use General Permit GP-5
Laurel Mountain Midstream Operating, LLC
Springhill Compressor Station (CS)
(Modifies GP5-26-00587B)
Springhill Township, Fayette County, PA**

Dear Mr. Gorog:

Laurel Mountain Midstream Operating, LLC (LMM) is submitting replacement pages for the June 2013 Application for Authorization to Use General Permit GP-5 for the existing Springhill Compressor Station (CS) located in Springhill Township, Fayette County, PA.

The permit application forms have been updated to match the DEP's unaltered application forms. Additionally, all application forms are now provided, including those sections that do not apply and marked as not applicable.

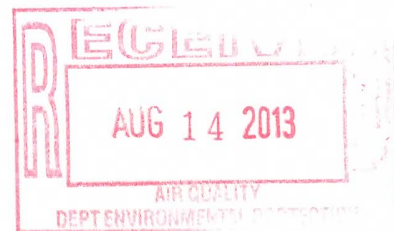
If you have any questions concerning this submittal, or need additional information, please contact me at (412) 787-4296 or richard.baker@williams.com.

Sincerely,

Dick Baker
Senior Environmental Specialist

Attachments

ATTACHMENT B-2
PERMIT APPLICATION FORMS



APPLICATION FOR AUTHORIZATION TO USE
GENERAL PLAN APPROVAL & GENERAL OPERATING PERMIT GP-5
(General Permit BAQ-GPA/GP-5)

- **Section A – Application Types**
- **Section B – Owner Information**
- **Section C – Operator Information**
- **Section D – Contact Information**
- **Section E – Permit Information**
- **Section F – Applicant’s Checklist**
- **Section G – Affidavit**
- **Section H – Facility Information**
 - H1. – Internal Combustion Engine Information – CE-02 and -03
 - H2. – Simple Cycle Natural Gas Turbine(s) Information – NOT APPLICABLE
 - H3. – Dehydrator Information¹ – DEHY-01
 - H4. – Flash Tank/Regenerator Information – BLR-01
 - H5. – Fractionator Information – NOT APPLICABLE
 - H6. – Condensate or Misc Storage Tank Information – TKS
 - H7. – Storage Tank (Pressure Vessel) Information – NOT APPLICABLE
 - H8. – Control Equipment Information – NOT APPLICABLE
 - H9. – Fugitive Emissions From Component Leaks – FUG
 - H10. – Estimated Atmospheric Emissions from Each Source¹
 - H11. – Total Estimated Atmospheric Emissions from All Sources¹

¹ There is no GP-5 Application Form for reporting truck load-out (TLO) or for startup/shutdown/maintenance (SSM) emissions. The emission calculations for TLO and SSM are provided in Attachment C and the results are included on the GP-5 Application Emission Summary Forms H10 and H11.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

APPLICATION FOR AUTHORIZATION TO USE
GENERAL PLAN APPROVAL AND/OR GENERAL OPERATING PERMIT

General Permit BAQ-GPA/GP-5

Natural Gas Compression and/or Processing Facilities



SECTION A.
APPLICATION TYPES

This application is for:

- ☐ A new authorization for General Plan Approval & Operating Permit ☐ A General Plan Approval Only
- ☐ A re-authorization with no modification Specify the first GP-5 authorization date: **na** ☐ A re-authorization with modification Specify the first GP-5 authorization date: **na**
- ☐ A new authorization due to transfer of ownership. ☒ Modification at an existing facility with a GP-5 authorization.
- Source(s) associated with: ☒ Marcellus Shale ☐ Utica Shale
☐ Coal bed methane or gob gas ☐ None-Specify: **na**

Remarks:

SECTION B.
OWNER INFORMATION

Owner's Name: **Laurel Mountain Midstream Operating, LLC (LMM)**
Tax ID: **26-4578063**
Address Line1: **Park Place Corporate Center 2**
Address Line2: **2000 Commerce Drive**
City State Zip+4: **Pittsburgh, PA 15275** Phone: **(412) 787-7300**

SECTION C.
OPERATOR INFORMATION (If different from Owner)

Operator's Name: **na - The Owner (WFS) is also the Operator**
Address Line1: _____
Address Line2: _____
City State Zip+4: _____ Phone: _____

SECTION D.
CONTACT INFORMATION

Contact Name: **Dick Baker**
Contact Title: **Senior Environmental Specialist**
Address Line1: **Park Place Corporate Center 2**
Address Line2: **2000 Commerce Drive**
Email Address: **Richard.Baker@Williams.com**
City State Zip+4: **Pittsburgh, PA 15275** Phone: **(412) 787-4296**

SECTION E.
PERMIT INFORMATION

Is this facility currently permitted?: ☒ Yes, provide current and past authorization numbers: ☐ No

<u>Springhill Compressor Station (CS)</u>	Auth#: 894174	Permit#: GP5-26-00587B	Status: Current ('12)
	Auth#: 812704	Permit#: GP5-26-00587A	Status: Replaced
	Auth#: 791422	Permit#: GP5-26-00587	Status: Replaced
	Auth#: _____	Permit#: _____	Status: _____

Does the facility contain source(s) previously exempted and not listed in this application? ☐ Yes, List the source(s) w/ date of exemption(s): ☒ No

Source: **na** Date: **na**

**SECTION F.
APPLICANT'S CHECKLIST**

I have enclosed the following:

- | | |
|---|---|
| <input checked="" type="checkbox"/> General Information Form (GIF). (Attach B-1) | <input checked="" type="checkbox"/> Compliance Review Form (CRF). (Attach B-3) |
| <input checked="" type="checkbox"/> General Permit fees. (Attach D-8) | <input checked="" type="checkbox"/> Control device manufacturer guarantees. (Attach D-1) |
| <input checked="" type="checkbox"/> Engine performance data sheets. (Attach D-1) | <input checked="" type="checkbox"/> GRI-GLYCalc data. (Attach D-2) |
| <input checked="" type="checkbox"/> Process Flow Diagram showing all associated equipment and emission points/stacks. (Sup) | <input checked="" type="checkbox"/> Tank emission data (using EPA's Tanks software, Simulation Software, or TANKCalc, etc.). (Attach C) |
| <input checked="" type="checkbox"/> Attachment-A (the Questionnaire and Checklist for Single Source Determination). (Attach A) | |
| <input checked="" type="checkbox"/> Proof of submittal of the municipal notification along with a copy of application for authorization to use GP-5. (D-7) | |
| <input type="checkbox"/> Map/Layout of adjacent facilities ¹ (e.g., well(s), compressor station(s), processing plant(s), etc.) under common control. | |
| na Mark SIC code, permit number (if any) of each source, and indicate distances between compressor station(s), well(s), and associated processing plant(s) on the map/layout. See attachment-A. (Not Applicable) | |
| <input type="checkbox"/> Pennsylvania Natural Diversity Inventory (PNDI) review receipt and clearance letter ² . See instructions. (D-5) | |
| na (Not Applicable) | |

¹ e.g., well(s), compressor station(s), processing plant(s), etc.

² See instructions

**SECTION G.
AFFIDAVIT**

I certify that, subject to the penalties of Title 18 Pa. C.S.A. Section 4904 and 35 P.S. Section 4009(b)(2), I am the responsible official having primary responsibility for the design and operation of the facilities to which this application applies and that the information provided in this application is true, accurate and complete to the best of my knowledge, information and belief formed after reasonable inquiry. I further certify that the facility will be operated in conformity with the information provided in this application form and all limitations and conditions of the Natural Gas Production and/or Processing Facilities General Permit (BAQ-GPA/GP-5).

Signature

Daniel Haefelin

Date

8/9/13

Manager of Operations

Typed/Printed Name

Title

SECTION H.
FACILITY INFORMATION
(If necessary use Oil & Gas Application Form 8000-PM-OOGM0001)
 (Use extra pages as necessary.)

Facility Name:		Springhill Compressor Station (CS)				(Site ID: 720794)	
Address of Proposed Facility - Line 1:		1.5 Mi Northwest of Point Marion					
Address of Proposed Facility - Line 2:		585 Hope Hollow Rd, Lake Lynn					
Municipality:		Springhill Township				County: Fayette	
NAICS or SIC Code:		NAICS 213112 - Support Activities for Oil and Gas Operations (SIC 1389 - O&G Field Services, NEC)					
Project Description:		Replace Two (2) 1,340 bhp CAT G3516LE Engines with Two (2) 1,380 bhp CAT G3516B Engines Relocated from the LMM Clyde CS, GP5- 32-00399B.					
Location of Stack (Use extra pages as necessary) Point of Origin		Latitude		Longitude			
		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
Approx. Center of Property		39	45	04	-79	52	23
DEP Client ID Number: 274129		Project Number: tbd					
List all sources to be considered by this application (e.g., IC Engines, Turbine, Dehydrator, Fractionator, Tanks, Pumps, etc.)							
Unit ID	Description	Ref.	Unit ID	Description	Ref.		
CE-01	Engine 01 - 1,500 bhp Electric Motor	---					
CE-02	Engine 02 - 1,380 bhp CAT G3516B (Relocated)	H1.					
CE-03	Engine 03 - 1,380 bhp CAT G3516B (Relocated)	H1.					
DEHY-01	Dehydrator 01 - 25 MMscfd (Existing)	H4.					
BLR-01	Reboiler 01 - 0.25 MMBtu/hr (Existing)	H3.*					
TKS	Storage Tanks (474 bbl Total Capacity) (Existing)	H7.					
TLO	Truck Load-Out (Existing)	na*					
SSM	Startup/Shutdown/Maintenance (Existing)	na*					
FUG	Process Piping Fugitives (Existing)	H10.					

***Note:** There is no GP-5 Application Form for reporting truck load-out (TLO) nor for startup/shutdown/maintenance (SSM) emissions. The emission calculations for TLO and SSM are provided in Attachment C and the results are included on the GP-5 Application Emission Summary Forms H10 and H11.

SECTION H1.
INTERNAL COMBUSTION (IC) ENGINE(S) INFORMATION
 (Copy this section to describe each engine.)

Engine ID:	CE-02 and CE-03 (Engine 02 and 03) (Each)	Model & Serial No:	G3516B (SN JEF01687) G3516B (SN JEF01689)	Date of Installation:	≥ 07/01/09
Manufacturer:	Caterpillar (CAT)	Combustion Type:	<input type="checkbox"/> Rich Burn <input checked="" type="checkbox"/> Lean Burn	Order Date for New or Reconstructed Engine:	≥ 06/12/06
Date of Manufacture:	≥ 07/01/10	Engine Displacement:	264 in3/cylinder	Projected Startup Date for New or Reconstructed Engine	2013
Max. Rated Capacity (BHP) (Specify site-rated HP if de-rated for site conditions):		1,380 BHP @ 1,400 RPM			
Stroke Type:		<input type="checkbox"/> 2 Stroke <input checked="" type="checkbox"/> 4 Stroke			
General description of engine function and purpose: Driver for Natural Gas Compressor					
Check All Applicable Federal Rules for this Engine:	<input checked="" type="checkbox"/> 40CFR60, Subpart JJJJ Engines (SI-ICE)	<input checked="" type="checkbox"/> 40CFR60, Subpart OOOO Oil & Gas (Compressor)	<input checked="" type="checkbox"/> 40CFR63, Subpart ZZZZ Engines (JJJJ Only)	<input type="checkbox"/> Other:	na
ENGINE CONTROL					
CE-02 and CE-03 (Engine 02 and 03) (Each)					
<input type="checkbox"/> Non-Selective Catalytic Reduction (NSCR)		<input checked="" type="checkbox"/> Oxidation Catalyst (OxCat)			
Is this engine equipped with an Air/Fuel ratio controller?		<input checked="" type="checkbox"/> Yes (Details):			
Details of process control used for proper mixing/control of reducing agent with gas stream:		na			
Manufacturer:	Miratech Technologies Inc.				
Design operating temperature:	992 °F (at 100 °F Ambient)	Model No:	Miratech SP-ZESO-36x31-14-XH2B1 (or equivalent)		
Service life of catalyst:	Guaranteed for 1 yr from installation	Design gas volume:	9,107 acfm		
Attach efficiency and other pertinent information:		See Attachment D-1			
Operating Parameters:					
Volume of Gas Handled:	9,107 acfm	@	992 °F	Operating temperature for NSCR/OxCat:	550 °F to 1,250 °F
Reducing Agent used, if any:	na	Ammonia Slip (ppm):		na	
Pressure drop across catalyst bed ΔP (if monitored):	na	inches of H2O			
Describe the warning/alarm system that protects unit when operation is not meeting design conditions:					
Describe fully with sketch giving location of equipment, control systems, important parameters and method of operation:					
Remarks:	These are existing permitted engines, relocated from the LMM Clyde CS (GP5-32-00399B).				

ENGINE FUEL INFORMATION						
CE-02 and CE-03 (Engine 02 and 03) (Each)						
Fuel Type	Fuel Use @ 100% load - scf/hr	Annual Fuel Consumption (MMscf/yr)		Fuel Heating Value (Btu/SCF)	Sulfur Content (% wt.)	
		Actual Reported for Calendar Year	Maximum Estimated Amount			
Natural Gas	11,163	na	97.79	920 LHV	0.001% Max	
Fuel Usage Metered?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Remarks:						
ENGINE EMISSIONS DATA						
CE-02 and CE-03 (Engine 02 and 03) (Each)						
Pollutants	Emission Rates and Control Efficiency			Estimated Atmospheric Emissions*		Estimation Basis (e.g., Source Test, Vendor Data or, AP-42 etc.)
	Allowable g/bhp-hr	Pre-Control g/bhp-hr	Post-Control g/bhp-hr	Control Eff (%)	Post-Control lb/hr	
NOx	0.50	0.50	0.50	---	1.52	6.66
NMNEHC**	0.25	0.48	0.25	48.0%	0.76	3.33
VOC***	0.28	0.91	0.28	69.3%	0.85	3.73
CO	0.27	2.43	0.27	89.0%	0.81	3.56
SOx	<0.01	<0.01	<0.01	---	0.01	0.03
PM ₁₀	0.04	0.04	0.04	---	0.11	0.50
PM _{2.5}	0.04	0.04	0.04	---	0.11	0.50
HCHO	0.03	0.43	0.03	93.0%	0.09	0.40
GHG (CO2e)	557	557	557	---	1,695	7,424
Identify Engine(s) on a Flow Chart and Identify the Emissions Points: See Application Supplement						
Remarks: na						

* Based on post-control emissions and 8760 hours. See application instruction for Section H1 and H2.

** NMNEHC is non-methane, non-ethane hydrocarbons excluding HCHO expressed as propane.

*** VOC includes NMNEHC and HCHO.

NOT APPLICABLE

2700-PM-BAQ0205 2/2013
Application

SECTION H2. SIMPLE CYCLE NATURAL GAS TURBINE(S) INFORMATION (Copy this section to describe each additional turbine)						
Turbine ID	Manufacturer	Manufacturer of CO oxidation catalyst	CO oxidation catalyst operating temperature range	°F		
Make	Model & Serial #	Model number of CO oxidation catalyst	Actual gas volume handled (acfm @ °F)			
Date of Manufacture	Capacity (BHP) each	Design maximum temperature	Pressure drop across catalyst bed (if monitored) in inch of H ₂ O			
Capacity MMbtu/Hr	Date Installed	Design gas volume (scfm)	Service life of catalyst			
Describe the warning/alarm system that protects catalyst when operation is not meeting design conditions:						
TURBINE EMISSIONS DATA Turbine ID _____						
Pollutants	Emission Rates and Control Efficiency				Estimated Atmospheric Emissions* TPV	Estimation Basis (e.g., Source Test, Vendor Data or, AP-42 etc.)
	Allowable ppm @ 15% O ₂	Pre-Control ppm @ 15% O ₂	Post-Control ppm @ 15% O ₂	% Efficiency		
NOx						
NMNEHC**						
VOC***						
CO						
SO _x						
PM ₁₀						
PM _{2.5}						
Formaldehyde(HCHO)						
GHG (CO ₂ e)						
Other						
Identify turbine(s) on a flow chart and identify the emission points:						
Remarks:						
*Based on post-control emissions and 8760 hrs. See Application Instruction for Section H1 and H2						
** NMNEHC is non-methane, non-ethane hydrocarbons excluding HCHO expressed as propane;						
*** VOC Includes NMNEHC and HCHO						
Check applicable Federal rules for this turbine:						
<input type="checkbox"/> 40 CFR Part 60, Subpart KKKK <input type="checkbox"/> Other Specify _____						

SECTION H3.
DEHYDRATOR AND ASSOCIATED EQUIPMENT INFORMATION
 (Copy this section to describe each dehydrator.)

Unit ID: DEHY-01 (Dehydrator 01)		Date Installed: na		
Make, Model & Serial No.: Model D-104367 SN EL2G30603-01		Date of Manufacture: na	Manufacturer: na	
Dehydrator Control* Type: na	Control Efficiency (%): na	Control make/model/serial no.: na		
*Also use appropriate form(s) under section H8. to provide further details.				
Annual Average Dehydrator Gas Throughput: 25.0 MMscfd 17,400 scfm		Water Content: na	Wet Gas: Sat. lb H2O/MMscf Dry Gas: 7.0 lb H2O/MMscf	
Annual Average Glycol Circulation Rate: 3.50 gpm	Water Content in Rich Glycol (wt%): 3.85 wt% H2O	Water Content in Lean Glycol (wt%): 1.50 wt% H2O		
Glycol Type: <input type="checkbox"/> Ethylene Glycol (EG) <input type="checkbox"/> Di-Ethylene Glycol (DEG) <input checked="" type="checkbox"/> Tri-Ethylene Glycol (TEG)				
Reboiler Heat Input: 0.25 MMBtu/hr (LHV)		0.28 MMBtu/hr (HHV)		
Check all applicable Federal rules for this unit: <input type="checkbox"/> 40CFR60 Subpart OOOO <input checked="" type="checkbox"/> 40CFR63 Subpart HH <input type="checkbox"/> Other-specify: na				
Emissions Data DEHY-01 (Dehydrator 01)				
Pollutant	Uncontrolled Emissions (lbs/hr)	Controlled Emissions (lbs/hr)	Estimated Atmospheric Emissions (tpy)*	Estimation Basis
VOC	2.27	2.27	9.95	GRI-GLYCalc 4.0
HAPs	0.87	0.87	3.80	GRI-GLYCalc 4.0
NOx	---	---	---	See BLR
SOx	---	---	---	See BLR
CO	---	---	---	See BLR
PM ₁₀	---	---	---	See BLR
PM _{2.5}	---	---	---	See BLR
GHG (CO ₂ e)	2,397	2,397	10,500	40CFR98 - Table A-1
Remarks: Only the Dehydrator 01 (DEHY-01) waste gas emissions are shown above. The total dehydrator emissions includes waste gas from Dehydrator 01 (DEHY-01) plus combustion emissions from the Reboiler 01 (BLR-01).				

*Based on 8,760 hrs.

SECTION H4.
FLASH TANK and/or REGENERATOR INFORMATION
 (Copy this section to describe each additional unit)

Unit ID:	BLR-01 (Reboiler 01)	Unit Make, Model & Serial No.:	na	Tank Capacity (gallons):	na	Tank Contents:	na
Control* Type:	na	Control Efficiency (%):	na	Control make/model/serial no.:	na	Burner Rating (MMBtu/hr):	0.25
*Also use appropriate form(s) under section H8. to provide further details.							
Flash Tank:		Inlet Pressure:	na psig	Inlet Temperature:	na °F		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		Outlet Pressure:	na psig	Outlet Temperature:	na °F		
Check applicable Federal rules:	<input type="checkbox"/> 40CFR60 Subpart KKK	<input type="checkbox"/> 40CFR60 Subpart OOOO	<input checked="" type="checkbox"/> 40CFR63 Subpart HH	<input type="checkbox"/> 40CFR60 Subpart K, Ka or Kb	<input type="checkbox"/>	Other Specify	
Emissions Data BLR-01 (Reboiler 01)							
Pollutant	Pre-Controlled (tpy)	Controlled (tpy)	Estimated Atmospheric Emissions*	Estimation Basis			
VOC	0.01	0.01	0.01	EPA AP-42 Table 1.4-2			
HAPs	<0.01	<0.01	<0.01	EPA AP-42 Table 1.4-3			
NOx	0.12	0.12	0.12	EPA AP-42 Table 1.4-1			
SOx	<0.01	<0.01	<0.01	EPA AP-42 Table 1.4-2			
CO	0.10	0.10	0.10	EPA AP-42 Table 1.4-1			
PM ₁₀	0.01	0.01	0.01	EPA AP-42 Table 1.4-2			
PM _{2.5}	0.01	0.01	0.01	EPA AP-42 Table 1.4-2			
GHG (CO ₂ e)	142	142	142	40CFR98 - Table A-1			
General description and function of the unit:		The Reboiler heats Rich Glycol to drive off water, creating Lean Glycol.					
Remarks:		Only the Reboiler 01 (BLR-01) combustion emissions are shown above. The total dehydrator emissions includes waste gas from Dehydrator 01 (DEHY-01) plus combustion emissions from the Reboiler 01 (BLR-01).					

*Based on 8,760 hrs.

NOT APPLICABLE

2700-PM-BAQ0205 2/2013
Application

SECTION H5. FRACTIONATOR INFORMATION (Copy this section to describe each additional unit)					
Unit ID:		Unit make/ model/serial no.		Control* make/ model/serial no.	
Fractionator:	Inlet Pressure (psig)	Outlet Pressure (psig)	Inlet temperature (°F)	Outlet temperature (°F)	
Control type:			Control Efficiency(%)		Chemical byproducts:
*Also use appropriate form(s) under section H8. to provide further details					
Liquid throughput (gpm):		Rating of heat source (MMBtu/hr)			
Check all applicable Federal rules for this unit		<input type="checkbox"/> 40 CFR Part 60, Subpart OOOO	<input type="checkbox"/> 40 CFR part 63 Subpart HH	<input type="checkbox"/> 40 CFR Part 60, Subpart KKK	<input type="checkbox"/> Other specify
Emissions Data					
Pollutants	Uncontrolled emissions (lbs/hr)	Controlled emissions (lbs/hr)	Estimated Atmospheric Emissions* (TPY)	Emission estimation method	
VOC					
NOx					
CO					
HAPs					
SOx					
GHG (CO ₂ e)					
Others					
Describe the function of this unit, include flow chart including all associated equipment and emission points:					
Remarks:					

*Based on 8760 hrs.

SECTION H6.**CONDENSATE OR MISCELLANEOUS STORAGE TANK INFORMATION**

(Copy this section to describe each dehydrator.)

Unit ID: TKS (Tanks 01 thru 04) (Total)	Capacity: 19,900 gal	Contents: Produced Water		
Max Allowable Working Pressure: Atm psig	Tank Design Pressure: Atm psig			
Tank Content: Produced Water	Vapor Pressure of Contents: < 2.0 psia			
Liquid/Gas Thruput: 517,400 gal/yr	Year(s) tank(s) were placed in service: 06/2011			
Pressure Relief Valve Set Point: 0.06 psig	Vacuum Relief Setting: 0.06 psig			
Control Type*: none	Year(s) tank(s) were placed in service: 06/2011			
*Also use appropriate form(s) under section H8				
Control Efficiency: na %	Tank Thruput: 517,400 gal/yr			
Check all applicable Federal rules:	<input type="checkbox"/> 40CFR60 Subpart OOOO <input type="checkbox"/> 40CFR63 Subpart HH <input type="checkbox"/> 40CFR60 Subpart K,Ka,Kb <input type="checkbox"/> Other-Specify: na			
Emissions Data				
TKS (Tanks 01 thru 04) (Total)				
Pollutant	Uncontrolled Emissions (lbs/hr)	Controlled Emissions (lbs/hr)	Estimated Atmospheric Emissions* (TPY)	Emission estimation method
VOC	0.05	0.05	0.24	EPA-450/3-85-001a
HAPs	0.03	0.03	0.12	EPA-450/3-85-001a
GHG (CO2e)	---	---	---	---
Describe the function of this unit: Storage tanks are used to hold produced water from facility operations				
Remarks: na				

*Based on 8,760 hrs.

NOT APPLICABLE

2700-PM-BAQ0205 2/2013
Application

SECTION H7. STORAGE TANK (Pressure vessel) (Copy this section to describe each additional unit)	
Tank ID:	Maximum Allowable Working Pressure (psig):
Tank capacity (gallons):	Tank Design Pressure (psig):
Tank Content (Natural gas liquids (NGLs), Methyl or Ethyl Mercaptan etc.):	Vapor pressure of the content:
Control Description:	Control Efficiency:
Liquid/Gas Throughput (gallons/year):	Year(s) tank(s) were placed in service:
Liquid/Gas Temp (°F):	Pressure Relief Valve Set Point (psig): Rupture Disk Set Point (psig)
Is this pressure relief valve connected to an overflow storage tank?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is overflow tank connected to an air cleaning device	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, please provide overflow storage tank and air pollution control equipment details as asked on Section H6 for "CONDENSATE OR MISCELLANEOUS STORAGE TANK INFORMATION" and on Section H8 for "AIR POLLUTION CONTROL EQUIPMENT INFORMATION" using extra page. Include flow chart to identify the tank and the control:	
Remarks:	

2700-PM-BAQ020.5 2/2013
Application

SECTION HB. AIR POLLUTION CONTROL EQUIPMENT INFORMATION									
(Copy this section to describe additional air pollution control equipment. Do not include engine or turbine control devices in this section.)									
1. ADSORPTION EQUIPMENT									
Equipment Specifications									
Equipment ID: _____									
Equipment connected to which unit? _____ (Attach schematic diagram)									
Manufacturer: _____		Type (VRU etc.): _____		Make/Model No.: _____					
Design Inlet Volume (SCFM): _____ Adsorbent charge per adsorber vessel and number of adsorber vessels: _____									
Length of Mass Transfer Zone (MTZ), supplied by the manufacturer based upon laboratory data.: _____									
Adsorber diameter (ft.) and area ft ² : _____		Adsorption bed depth (ft.): _____							
Adsorbent information: _____									
Adsorbent type and physical properties: _____									
Working capacity of adsorbent (%): _____									
Operating Parameters									
Inlet volume (SCFM) _____		@ _____ °F		Breakthrough capacity: Lbs. of VOC / 100 lbs. of adsorbent = _____					
Adsorption time per adsorption bed _____		Vapor pressure of VOC(s) at the inlet temperature _____ Pounds of steam to regenerate the carbon adsorber bed (if applicable) _____							
Percent relative saturation of each VOC at the inlet temperature: _____		Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment _____							
Describe the warning/alarm system that protects against operation when unit is not meeting design requirements. _____									
Check all applicable Federal rules for this unit <input type="checkbox"/> 40 CFR Part 60, Subpart OOOO <input type="checkbox"/> 40 CFR part 63 Subpart HH <input type="checkbox"/> Other specify _____									
Emissions Data									
Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)	Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)		
VOC				PM _{2.5}					
HAPs				SOx					
NOx				GHG (CO ₂ e)					
CO				Others					
PM ₁₀									
Remarks: _____									

NOT APPLICABLE

2700-PH-BAQ0205 2/2013
Application

2. OXIDIZER (Incinerator)			
Unit ID	Residence time		
Oxidizer gas flow rate (scfm)	Rated heat input		
Control Type (Catalytic, Thermal etc.)	Manufacturer		
Maximum Control Efficiency	Model No.		
Recommended Range of Operating Temperatures (Max and Min)	Date of Manufacture		
Fuel used	Date Installed		
Describe design features, which will ensure mixing in combustion chamber: _____			
Describe method of preheating incoming gases (if applicable): _____		Describe heat exchanger system used for heat recovery (if applicable): _____	
Catalyst used: _____	Life of catalyst: _____	Expected temperature rise across catalyst (°F): _____	Dimensions of bed (in inches): Height: _____ Diameter or Width: _____ Depth: _____
Are temperature sensing devices being provided to measure the temperature rise across the catalyst? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____			
Describe any temperature sensing and/or recording devices (including specific location of temperature probe in a drawing or sketch. _____			
State pressure drop range across catalytic bed (in. of water).		Describe the method adopted for regeneration or disposal of the used catalyst.	
Describe the warning/alarm system that protects against operation when unit is not meeting design requirements: _____			
Check all applicable Federal rules for this unit <input type="checkbox"/> 40 CFR Part 60, Subpart OOOO <input type="checkbox"/> 40 CFR part 63 Subpart HH <input type="checkbox"/> Other specify _____			
Emissions Data			
Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)
VOC			
HAPs			
NOx			
CO			
PM ₁₀			
PM _{2.5}			
SOx			
GHG (CO ₂ e)			
Others			
Remarks: _____			

NOT APPLICABLE

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Application

3. FLARE					
Equipment Specifications					
Equipment connected to which unit? (Attach schematic diagram)					
Flare ID	Flare Type		Rating (mmBtu/Hr)		
Control Efficiency%	Constant Pilot Light		Yes	No	
Pilot Burner Rating (MMBtu/Hr)			Yes	No	
Check all applicable Federal rules for this unit		40 CFR Part 60, Subpart OOOO		40 CFR §60.18	40 CFR part 63 Subpart HH
					Other specify
Emissions Data					
Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)		
VOC					
NOx					
CO					
HAP's					
SOx					
Total Particulates					
GHG (CO ₂ e)					
Others					
Remarks					

NOT APPLICABLE

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Application

4. VENT CONDENSER			
Equipment Specifications			
Equipment connected to which unit? (Attach schematic diagram)			
Condenser ID:			
Condenser Type:			
Coolant Type:			
Gas inlet & outlet temp °F °F °F Control Efficiency (%)			
Remarks			
Check all applicable Federal rules for this unit		<input type="checkbox"/> 40 CFR part 63 Subpart HH <input type="checkbox"/> Other specify	
Emissions Data			
Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)
VOC			
HAP's			
GHG (CO ₂ e)			
Others			
Remarks			

NOT APPLICABLE

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Application

5. OTHER AIR POLLUTION CONTROL EQUIPMENT			
(Specify)			
Equipment connected to which unit?		(Attach schematic diagram)	
Equipment ID:			
Equipment Type:		Make/Model/Serial no:	
Overall Control Efficiency%			
Remarks:			
List all applicable Federal and State rules for this device			
Emissions Data			
Pollutants	Inlet (TPY)	Outlet (TPY)	Removal Efficiency (%)
VOC			
HAPs			
NOx			
CO			
PM ₁₀			
PM _{2.5}			
SOx			
GHG (CO ₂ e)			
Others			
Remarks:			

SECTION H9.
FUGITIVE EMISSIONS FROM COMPONENT LEAKS
 (Use extra page for each associated source/equipment if needed.)

Associated Source/Equipment:		FUG - Process Piping Fugitives							
Leak Detection Methods Used:		<input checked="" type="checkbox"/> Audible, Visual and Olfactory ("AVO") Inspections	<input checked="" type="checkbox"/> Infrared ("FLIR") Cameras	<input type="checkbox"/> Other Department Approved Leak Detection Monitoring Devices					
Component Type	Count	Leak Emission Factors lb/hr/comp.	Source of Leak Emission Factor	Stream Type Gas or Liquid	Estimated Atmospheric Emissions** (TPY)				
					VOC	Total HAPs	GHG (CO2e)	CH4	n-Hexane, BTEX (Each)
Connectors	1,474	0.00044	EPA Protocol	Gas	0.08	0.02	60	2.85	0.00
Flanges	240	0.00086	EPA Protocol	Gas	0.02	0.01	19	0.90	0.00
Open-ended lines	28	0.00441	EPA Protocol	Gas	0.01	0.00	11	0.54	0.00
Pump Seals	0	0.00529	EPA Protocol	Gas	na	na	na	na	na
Valves	514	0.00992	EPA Protocol	Gas	0.59	0.17	469	22.34	0.03
Other*	60	0.01940	EPA Protocol	Gas	0.14	0.04	107	5.10	0.01
TOTAL	na	na	na	na	0.84	0.24	666	32	0.05

* "Other" equipment types may include compressor seals, relief valves, diaphragms, drains, meters, etc.

Remarks: na

EMISSIONS DATA

FUG - Process Piping Fugitives

Emissions	Estimated Atmospheric Emissions		Emission estimation method
	lb/hr	tpy*	
VOC	0.19	0.84	EPA Protocol
Total HAPs	0.05	0.24	EPA Protocol
GHG (CO2e)	152	666	EPA Protocol
n-Hexane, BTEX (Each)	0.01	0.05	EPA Protocol

Remarks: na

*Based on 8,760 hrs.

SECTION H10. - CRITERIA AIR POLLUTANTS
ESTIMATED ATMOSPHERIC EMISSIONS (TPY)¹ FROM EACH SOURCE² COVERED UNDER THIS GENERAL PERMIT
 (Use extra page as needed and attach all the emission calculations.)

Source	Pollutants																	
	VOC		NOx		CO		HCHO		Total HAPs		PM ₁₀		PM _{2.5}		SO _x		GHG (CO2e)	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CE-01																		
CE-02	0.85	3.73	1.52	6.66	0.81	3.56	0.09	0.40	0.21	0.91	0.11	0.50	0.11	0.50	0.01	0.03	1,695	7,424
CE-03	0.85	3.73	1.52	6.66	0.81	3.56	0.09	0.40	0.21	0.91	0.11	0.50	0.11	0.50	0.01	0.03	1,695	7,424
DEHY-01	2.27	9.95							0.87	3.80							2,397	10,500
BLR-01	<0.01	0.01	0.03	0.12	0.02	0.10	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	33	142
TKS	0.05	0.24							0.03	0.12								
TLO		0.25								0.13								
SSM		1.74								0.51							294	1,287
FUG	0.19	0.84							0.05	0.24							152	666

¹ Based on 8760 hrs.² Include fugitives from component leaks and emissions from all sources located at the facility including reboiler, loading arm, refrigeration equipment, cryogenic/JT unit etc. Include emissions from start-up and shut-down of engines and turbines.

SECTION H11.
TOTAL ESTIMATED ATMOSPHERIC EMISSIONS FROM ALL SOURCES¹ COVERED UNDER THIS GENERAL PERMIT
 (Attach all the emission calculations.)

Pollutants	Estimated Atmospheric Emissions	
	lb/hr	TPY ¹
VOC	4.22	20.48
NOX	3.07	13.44
CO	1.65	7.22
Formaldehyde (HCHO)	0.18	0.80
Total HAPs	1.36	6.60
SOx	0.01	0.06
PM ₁₀	0.23	1.01
PM _{2.5}	0.23	1.01
GHG (CO ₂ e)	6,265	27,443

¹ Based on 8760 hrs. Estimated emissions from all sources located at the facility must also include emissions which are not covered by this General Permit.