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AIR PERMITS SECTION
EPA-6

May 8, 2013

Ms. Aimee Wilson
Air Permits Section (6PD-R)
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202

Re: Revised Application Pages
Greenhouse Gas Prevention of Significant Deterioration Permit
ONEOK Hydrocarbon, L.P.
Mont Belvieu NGL Fractionation Plant

Dear Ms. Wilson:

On behalf of ONEOK Hydrocarbon, L.P., I am submitting revised application pages for the above-referenced permit application. These revisions are a result of consolidating the emissions from flaring during routine activities and maintenance, startup, and shutdown activities as requested by EPA.

ONEOK is committed to working closely with EPA staff to facilitate the timely review of this application and issuance of a permit. To that end, if you have any questions or need any additional information during the course of your review please do not hesitate to contact Ms. Terrie Blackburn at (918) 561-8052 or by email at Terrie.Blackburn@oneok.com.

Sincerely,

Scott Schingen
Vice President – NGL Fractionation and Storage

Attachment

cc: Ms. Melanie Magee, EPA Region 6, Dallas, w/enclosure

ATTACHMENT

REVISED APPLICATION PAGES

As stated in the cover letter, ONEOK Hydrocarbon, L.P. is submitting these application revisions as a result of consolidating the emissions from flaring during routine activities and maintenance, startup, and shutdown activities as requested by EPA. All application pages affected by this change are included in this attachment.

ATTACHMENT

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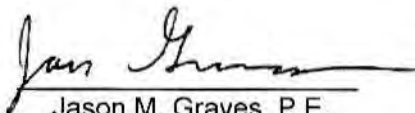
Environmental Protection Agency – Region 6
Greenhouse Gas PSD Permit Application

ONEOK Hydrocarbon, L.P.
Mont Belvieu NGL Fractionation Plant

Mont Belvieu, Chambers County
TCEQ Regulated Entity No. RN106123714
TCEQ Customer No. CN603674086

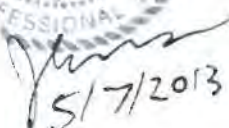
September 2012
Revised: April 2013
Revised: May 2013

Prepared and Approved by:


Jason M. Graves, P.E.

Principal Engineer




5/7/2013

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	September 2012, Revised May 2013	Permit No.:	TBD	Regulated Entity No.:	RN106123714
Area Name:	Mont Belvieu NGL Fractionation Plant			Customer Reference No.:	CN603674086

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
(A) EPN	(B) FIN	(C) Name		(A) Pounds per Hour	(B) TPY
H-04	H-04	Hot Oil Heater 4	CO ₂ e		215,314
H-05	H-05	Hot Oil Heater 5	CO ₂ e		
H-06	H-06	Hot Oil Heater 6	CO ₂ e		
H-04/H-05/H-06	VENTS	Frac-2 Process Vents to Heaters	CO ₂ e		15,000
FL-01	FL-01 and MSS-FL-2	Flaring (Frac-2 Contribution)	CO ₂ e		2,279
CT-04	CT-04	Frac-2 Cooling Tower	CO ₂ e		Work Practice Standard
ENG-05	ENG-05	Frac-2 Emergency Generator	CO ₂ e		43
ENG-06	ENG-06	Frac-2 Firewater Pump	CO ₂ e		
FUG-03	FUG-03	Frac-2 Equipment Leak Fugitives	CO ₂ e		Work Practice Standard
MSS-FUG-2	ATM-MSS-2	MSS-Degassing (Frac-2 Contribution)	CO ₂ e		Work Practice Standard

EPN = Emission Point Number
FIN = Facility Identification Number

TCEQ-10153 (Revised 04/08) Table 1(a)
This form is for use by sources subject to air quality permit requirements and may be revised periodically. (APDG 5178 v5)

ONEOK HYDROCARBON, L.P.
MONT BELVIEU NGL FRACTIONATION PLANT
PERMIT APPLICATION - PLANT EXPANSION

SEPTEMBER 2012
REVISED: MAY 2013

ONEOK Frac-2 Emissions Summary

FIN	EPN	Description	Previously Authorized	Proposed	Increase/(Decrease)	Basis of Change
			(tons/yr)	(tons/yr)	(tons/yr)	
Proposed New Equipment/Emissions						
H-04	H-04	Hot Oil Heater 4	0	215,314	215,314	New Emissions Unit
H-05	H-05	Hot Oil Heater 5	0			New Emissions Unit
H-06	H-06	Hot Oil Heater 6	0			New Emissions Unit
VENTS	H-04/H-05/H-06	Frac-2 Process Vents to Heaters	0	15,000	15,000	New Emissions Unit
FL-01 and MSS-FL-2	FL-01	Flaring (Frac-2 Contribution)	0	2,279	2,279	Modified Emissions Unit
CT-04	CT-04	Frac-2 Cooling Tower	0	0.34	0.34	New Emissions Unit
ENG-05	ENG-05	Frac-2 Emergency Generator	0	8	8	New Emissions Unit
ENG-06	ENG-06	Frac-2 Firewater Pump	0	35	35	New Emissions Unit
FUG-03	FUG-03	Frac-2 Equipment Leak Fugitives	0	10.6	11	New Emissions Unit
ATM-MSS-2	MSS-FUG-2	MSS-Degassing (Frac-2 Contribution)	0	21	21	New Emissions Unit
Total				233,000	233,000	

ATTACHMENT VIII.B

MEASUREMENT OF EMISSIONS

Measuring greenhouse gas emissions will be conducted as required by the issued permit.

The hot oil heaters, which are the primary GHG emissions sources at the site, will be equipped with continuous fuel flow monitors for each fuel stream sent to the heaters. ONEOK proposes to determine actual GHG emissions using continuous fuel flow meters and the factors included in 40 CFR Part 98, Subpart C.

Records of fuel consumption for the emergency diesel engines will be maintained, and are proposed to be used to determine actual GHG emissions based on the factors included in 40 CFR Part 98, Subpart C.

Process vents will be monitored as required by 40 CFR Part 98, Subpart W. This will include measurement of vent gas flow and determination of GHG emissions based on estimated or periodic measurements of vent stream composition.

A similar approach is proposed to measure flare stream flow rates to determine GHG emissions from flares based on the factors included in 40 CFR 98, Subpart W. This will include measurement of flare gas flow and determination of GHG emissions based on estimated or periodic measurements of vent stream composition.

Cooling towers will be checked for leaks periodically using the TCEQ Appendix P air stripping method. The Appendix P air stripping method uses an air stripping column to measure concentration of strippable hydrocarbons in the cooling water stream. A known flow rate of purified air is passed countercurrent through a packed column in contact with a known flow rate of cooling water. The air leaving the stripper is measured for hydrocarbons by using an organic vapor analyzer.

Process fugitives will be monitored using EPA Method 21 based on the 28VHP program with quarterly connector monitoring. Details on the 28VHP program are included in the Best Available Control Technology (BACT) section of this application (Section VIII.C).

BACT review for all non-GHG emissions will be conducted as a part of the minor NSR program application review process.

The following table lists the new and modified sources within the scope of the BACT analysis provided in this application:

Source Category	FIN	EPN	Description	PSD Source Type
Hot Oil Heaters	H-04	H-04	Hot Oil Heater 4	New
	H-05	H-05	Hot Oil Heater 5	New
	H-06	H-06	Hot Oil Heater 6	New
Process Vents	VENTS	H-04/H-05/H-06	Frac-2 Process Vents to Heaters	New
Equipment Leak Fugitives	FUG-03	FUG-03	Frac-2 Equipment Leak Fugitives	New
Cooling Towers	CT-04	CT-04	Frac-2 Cooling Tower	New
Emergency Diesel Engines	ENG-05	ENG-05	Frac-2 Emergency Generator	New
	ENG-06	ENG-06	Frac-2 Firewater Pump	New
Flare – Routine and Maintenance, Startup, and Shutdown Emissions	FL-01 and MSS-FL-2	FL-01	Flaring (Frac-2 Contribution)	Modified
Maintenance, Startup, and Shutdown	ATM-MSS-2	MSS-FUG-2	MSS-Degassing (Frac-2 Contribution)	New

BACT for each affected unit is addressed by source category in the sections that follow, with distinctions made for individual units as needed.

BACT Analysis Methodology

The method used in this analysis follows the guidance on pages 17 to 44 of the EPA document titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (EPA-457/B-11-001, March 2011). In this document, EPA recommends the use of the EPA five-step, top-down process to determine BACT for GHG emissions. The steps in this process are as follows:

- Step 1: Identify all available control technologies.
- Step 2: Eliminate technically infeasible options.
- Step 3: Rank remaining control technologies.
- Step 4: Evaluate most effective controls and document results.
- Step 5: Select the BACT.

Additional description of the methodology for each step is provided below:

Step 1: Identify all available control technologies.

The first step of a top-down analysis is to identify all available control technologies for each emission unit. As explained in the EPA's 1990 Draft New Source Review (NSR) Manual at

Step 5: Select the BACT.

In the fifth step, the most effective control option, based on the impacts quantified in Step 4, is proposed as BACT for the pollutant and emission unit under review. For the flares, ONEOK proposes use of the top two and only remaining options as BACT, which are to implement good combustion practices and flare gas recovery. The proposed form of the emission limitations is summarized in the following table:

Category	Demonstration
Limitations	Greenhouse gas emissions from contributions to the flare from routine emissions from the Frac-2 process unit will be limited to 2,279 tons CO ₂ e per year on a 365-day rolling average, for all non-MSS and non-emergency operations.
Monitoring Requirements	The permittee shall maintain compliance with 40 C.F.R. Part 98, Subpart W, including maintaining records of flow measurements and composition analysis.
Compliance Demonstration	The permittee shall calculate compliance with the 365-day rolling average limitations following the procedures specified in 40 C.F.R. Part 98, Subpart W, with a conversion from metric tons to short tons.

BACT for MSS Emissions

GHG emissions from MSS emissions are the result of degassing process vessels and equipment. The emissions are dominated by carbon dioxide (CO₂) emissions from degassing to the flare, but methane (CH₄), and nitrous oxide (N₂O) are present in substantially smaller amounts. Because emissions are predominantly CO₂, the analysis focuses on mitigating CO₂ emissions, with a BACT limit expressed in terms of CO₂e.

Step 1: Identify all available control technologies.

In reviewing the resources outlined above, the following technology was identified as potentially available for the MSS activities that are part of the Project:

Technology	Description	Availability
Minimize degassing emissions through good operational practices	Minimize degassing emissions by first pumping liquids to recovery, depressuring and purging to flare or flare gas recovery unit, and opening equipment to atmosphere only when the concentration is below 10,000 ppmv where practical.	Available

As shown in the table above, minimizing degassing emissions through good operational practices is considered available.