

US EPA ARCHIVE DOCUMENT



January 14, 2013

Mr. David F. Garcia  
Acting Director, Multimedia Planning and Permitting Division  
U.S. Environmental Protection Agency Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733

Re: Response to Application Completeness Determination  
Greenhouse Gas Prevention of Significant Deterioration Permit  
ONEOK Hydrocarbon, L.P.  
Mont Belvieu NGL Fractionation Plant

Dear Mr. Garcia:

ONEOK Hydrocarbon, L.P. ("ONEOK") respectfully submits this timely response to the U.S. Environmental Protection Agency ("EPA"), Region 6's application completeness determination letter, dated December 20, 2012. We are also providing additional information related to the requirements of 40 CFR §52.21(o), as we understand such information was requested by EPA. The requested information is provided in the attachment to this letter. Our application is for a Prevention of Significant Deterioration ("PSD") New Source Review permit to authorize greenhouse gas emissions from a proposed expansion of a natural gas liquids (NGL) fractionation facility at an existing ONEOK site in Mont Belvieu, Texas. With this Project (MB3 Facility), ONEOK plans to add an additional 75,000 barrels per day NGL fractionation train to the existing site.

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 ([Terrie.Blackburn@oneok.com](mailto:Terrie.Blackburn@oneok.com)) or Mr. Jason Graves, WAID Engineering at (281) 333-9990 ([JGraves@WAID.com](mailto:JGraves@WAID.com)).

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Schingen", is written over a light blue horizontal line.

Scott Schingen  
Vice President – NGL Fractionation and Storage

Attachment

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

**ATTACHMENT**

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**Response to Completeness Determination**

EPA's December 20, 2012 application completeness determination letter for ONEOK's Green House Gas PSD permit application submitted September 2012, requested an output based or efficiency based limit for the hot oil heaters (e.g., lb or ton CO<sub>2</sub>/barrel processed or Heat Required (MMBtu)). ONEOK proposes the following output based limit for the hot oil heaters:

Emission Unit	Description	Output Based CO <sub>2</sub> Limit
H-04/H-05/H-06	Hot Oil Heaters 4, 5, and 6	14.25 lb CO <sub>2</sub> /bbl of y-grade feed <sup>1</sup>

<sup>1</sup> Combined limit for all three heaters, to be demonstrated on a 365-day rolling average basis, excluding periods of start-up, shutdown, or maintenance.

The proposed limit is based on a direct calculation using the proposed permitted CO<sub>2</sub> emissions rates divided by the represented design capacity for the additional fractionation train as shown in the calculation below.

$$\frac{116.9 \text{ lb CO}_2}{\text{MMBtu}} \times \frac{127 \text{ MMBtu}}{\text{hr per heater}} \times \frac{3 \text{ heaters}}{\text{day}} \times \frac{24 \text{ hrs}}{\text{day}} \times \frac{1}{75,000 \text{ bbl Y-Grade}} = \frac{14.25 \text{ lb CO}_2}{\text{bbl Y-Grade feed}}$$

Although developed based on the parameters represented in the application, ONEOK has validated this limit by conducting a series of process simulations considering variables such as feed composition, unit feed rate, and other equipment operating specifications. The feed composition and processing rate were found to have the greatest impact on the proposed output-based limit. After running 27 process simulation cases, the results of the forecasted output-based limit ranged from 8.20 to 12.60 lb CO<sub>2</sub>/bbl of y-grade feed. Given the limitations of the model and the range of scenarios tested, maintaining the proposed limit based on the permit representations as outlined above was determined to be appropriate, in that it covers the cases we anticipated and provides for a 10-15% margin to cover variance from model to actual performance and/or alternative operating cases that we have not anticipated and modeled to date.

**Supplemental Information for Additional Impacts Analysis**

ONEOK is also providing additional information in response to the impacts analysis requirements of 40 CFR §52.21(o).

40 CFR §52.21(o)(1) "The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value."

Construction and operation of the proposed MB3 Facility will not result in significant impairment to visibility, soils or vegetation. The proposed MB3 Facility is located on a previously disturbed and developed parcel of property in the City of Mont Belvieu. The construction and operation of the proposed MB3 Facility is not expected to result in a significant increase in the need for

ONEOK HYDROCARBON, L.P.  
MONT BELVIEU FRACTIONATION PLANT  
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additional infrastructure or induce the growth of Mont Belvieu that could result in significant impairment to visibility, soils, or vegetation. As noted in the project's air dispersion modeling report, Project emissions of criteria pollutants are protective of the National Ambient Air Quality Standards (NAAQS) and no adverse health effects, odor nuisances, vegetation effects, or materials damage are expected as a result of Project emissions of non-criteria pollutants.

40 CFR §52.21(o)(2) "The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification."

As the Project is not expected to result in a significant increase in the need for additional infrastructure or induce the growth of Mont Belvieu, there should be no significant air quality impact from these activities as a result of the Project.

40 CFR §52.21(o)(3) "*Visibility monitoring.* The Administrator may require monitoring of visibility in any Federal class I area near the proposed new stationary source for major modification for such purposes and by such means as the Administrator deems necessary and appropriate."

The nearest Federal Class I Area is the Caney Creek Wilderness Area in Arkansas, which is located more than 400 kilometers from the proposed MB3 Facility. Therefore, no adverse impacts are expected in a Class I area.