



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1201 ELM STREET, SUITE 500

DALLAS, TEXAS 75270

June 28, 2019

Mr. David Farris
Bluewater Texas Terminal
2331 CityWest Blvd.
Houston, TX 77042

RE: New Source Review Air Permit Application Completeness Determination for Bluewater Texas Terminal LLC

Dear Mr. Farris:

EPA has reviewed your Prevention of Significant Deterioration (PSD) permit application for the Bluewater Texas Terminal LLC (BWTT) project that was received by the EPA on May 31, 2019 and determined that your application is incomplete at this time. Enclosed with this letter is a list of the information needed from you so we can continue our review. Please notify us if a complete response is not possible by July 31, 2019.

The requested information is necessary for us to develop a Statement of Basis and rationale for the terms and conditions for any proposed permit. As we develop our preliminary determination, it may be necessary for us to request additional clarifying or supporting information. If the supporting information substantially changes the original scope of the permit application, an amendment or new application may be required.

As a cooperating federal review agency, EPA will be working with the U.S. Coast Guard (USCG) and the U.S. Maritime Administration (MARAD) to assist in the BWTT Deepwater Port Act (DPA) License Application review and the development of an Environmental Impact Statement (EIS). EPA will rely on the review and concurrences received in the development of the EIS to fulfill other the regulatory obligations such as Endangered Species Act (ESA) (16 USC § 1536) and National Historic Preservation Act (NHPA) (16 USC § 470f).

If you have any questions concerning the review of your application, please feel free to contact myself or Aimee Wilson of my staff at (214) 665-7596.

Sincerely,

6/28/2019

X Jeffrey J. Robinson

Jeffrey Robinson

Signed by: JEFFERY ROBINSON

Jeffery J. Robinson

Branch Chief

Air Permits, Monitoring & Grants Branch

Enclosure

ENCLOSURE

EPA Region 6 PSD Permit Application Completeness Review Comments for BWTT

General:

- 1) Please provide additional supporting technical documentation to allow for the verification of the basis for the emission calculations. Specifically, the true vapor pressure of the crude oil (psia), molecular weight of vapors (lb/lb-mole), material composition data of the associated emissions (speciated) for the crude oil/condensate proposed for the export operation.
- 2) The PSD permit application does not mention if there will be any emissions associated from startup, shutdown and maintenance activities. Does BWTT anticipate Maintenance, Startup and Shutdown (MSS) emissions from the marine loading project. EPA needs to ensure that these emissions are permitted, or they are unauthorized. Typically, EPA will permit these emissions by either establishing a separate alternative BACT that applies during MSS, or we may include the emissions into an emission point as part of our BACT determination for that unit with the expectation that the unit will meet BACT at all times. For the permitting record, please provide additional information regarding the facility's MSS emissions and BWTT's preference on how BACT for MSS emissions should be applied in the permit for the marine loading operation. Please be sure to include information for all operational scenarios detailing the startup and shutdown emissions.
- 3) The PSD permit application does not provide a compliance monitoring strategy for the marine loading operation. EPA requests that BWTT propose a monitoring, recordkeeping and reporting strategy to ensure enforceability of the BACT requirements pursuant to 40 CFR 52.21(n).

BACT Analysis:

- 4) The 5-Step BACT analysis provided does not differentiate between which control technologies will reduce VOC or GHG emissions or both. Please identify the Best Available Control Technology control options for both pollutants. The application lacks a GHG BACT analysis that evaluates GHG specific control technologies. The GHG BACT analysis should focus on those technologies that are specific to reducing GHG emissions. While some VOC control technologies also control GHG emissions, there are some control technologies focused on reducing GHG emissions that are not normally evaluated when performing a VOC BACT analysis. Please update the application to document the GHG specific control technology or operational practices that were considered.
- 5) The 5-Step BACT analysis for VOC and GHG emissions does not include Best Management Practices for the SPM buoy system. Starting on page 4-4 of the permit application, a 5-step BACT analysis is provided for the VOC and GHG emissions associated with the proposed facility. The first step of the analysis is to identify all "available" control options for the emission unit, process or activity. A VOC Management Plan is included in the analysis. However, the VOC Management Plan is a ship-specific management plan that is required by the Regulation 15.6 of the International Convention for the Prevention of Pollution from Ships, Annex VI and is carried on-board tankers carrying crude oil. This plan is unique to the tanker and does not cover any Best Management Practices for the operation and maintenance of a SPM buoy system. The Best Management Practices for a SPM buoy system should include an effective plan for ship/shore interface, cargo transfer operations (i.e., minimizing gas formation in cargo tanks), maintenance (i.e., pigging), environmental (i.e., LDAR program), safety and health considerations and emergency preparedness. Please update the application to document the Best Management Practices for the SPM buoy system.
- 6) The VOC BACT analysis does not appear to include any best management practices to reduce the gas formation in the cargo tanks. The amount and concentration of gas formation depends of several

factors including the True Vapor Pressure (TVP) of the cargo; amount of splashing as the oil enters the tank; time required to load the tank; and, the occurrence of a partial vacuum in the loading line. Please update the application to document the Best Management Practices for controlling VOCs.

- 7) The PSD permit application does not appear to include a VOC annual emission estimate from fugitives nor does it include a five-step BACT analysis. Please provide an estimate of fugitive emissions and a 5-step BACT analysis for fugitive emissions associated with the pipeline and SPM components located in Federal waters. In this analysis, please include an evaluation of technologies considered to reduce fugitive emissions and a basis for elimination, or information detailing why fugitive emissions will not be emitted from this project. Please also include if the proposed fugitive monitoring program will include monitoring for methane (CH₄). The technologies could include, but are not limited to, the following:
 - Installing leakless technology components to eliminate fugitive emission sources;
 - Implementing an alternative monitoring program using a remote sensing technology such as infrared camera monitoring;
 - Designing and constructing facilities with high quality components and materials of construction compatible with the process known as the Enhanced LDAR standards;
 - Monitoring of flanges for leaks;
 - Using a lower leak detection level for components; and
 - Implementing an audio/visual/olfactory (AVO) monitoring program for compounds.
- 8) The BACT analysis should include for the proposed monitoring program a compliance strategy (i.e., frequencies of inspections, maintenance repair strategy, recordkeeping, etc.) Please update the application to include a compliance strategy for the proposed monitoring program.
- 9) The technical infeasibility BACT review discussion in step 2 does not clearly document the technical feasibility difficulties of add on controls based on source-specific design factors and physical, chemical, and engineering principles that preclude the safe and successful use of the control options. Economic, energy, and environmental impacts (step 4 of the BACT analysis) do not influence the removal of a technology during the technical feasibility review in step 2 of the BACT analysis. Please update the application to supplement the technical infeasibility BACT review discussion.

Emission Calculations:

- 10) The application only provides emissions in tons per year. The emissions are estimated using generic values. The emission calculations utilize data from *VOC Emissions from Oil and Condensate Storage Tanks: Final Report. 2009*. BWTT takes the average values from the data in the report to utilize in the emission calculations. This is done without providing a reasoned justification or scientific basis for using this data. In addition, there no basis is given for the assumptions made in using the average values. BWTT estimated emissions on the VOC species present in the 11 samples in the report instead of using the total hydrocarbons (including methane and ethane). The reasoning given was that the methane, ethane, nitrogen, and carbon dioxide in the crude oil would weather out before it is exported. Does BWTT have any data to support this reasoning? BWTT should also provide documentation or reevaluate the H₂S emissions and ensure that the value given is truly representative of the crude oil to be exported. Please provide an hourly emission estimate and calculate emissions based on known values for the crude oil you intend to export for all pollutants. Please use the entire range of speciated values providing a low end and high end value. In addition, will only crude oil be loaded or will condensate also be loaded? Please utilize available speciation data for emission calculations for the specific products being loaded.
- 11) Please provide emission calculations for fugitive emissions for the pipeline and SPM components located in Federal waters.

- 12) If possible, please provide emission calculations for GHG emissions based on source specific data. If using source specific data is not feasible, please provide a detailed reasoning and justification for using the emission factors chosen in the application.

Air Quality Analysis – Please note that EPA is still evaluating the sufficiency of the Air Dispersion Modeling and will contact BWTT air modelers directly with any additional information requests.

- 13) Table 5-1 in the PSD application identifies the maximum impact to land based receptors to be 1.6 ppb. This value is consistent with the results discussed in Appendix B, Ozone Analysis. However, the paragraph below table 5-1 states, “The project impact at the maximally impacted land-based receptor is 1.8 ppb...”. Please verify which is the correct value.
- 14) Section 3.7 of the Air Dispersion Modeling Report indicates that the receptor grid data was developed based on each of the single point mooring systems being surrounded by a circular “safety zone” and an additional circular “area to be avoided” making a composite circular boundary with radius of 1,350 meters around each of the central buoys. Please provide additional information regarding the difference between these areas, including what if any access the public may have within the areas. This information is necessary to determine if the ambient air has been appropriately represented within the modeling analysis.
- 15) Section 3.8 of the Air Dispersion Modeling Report states that due to missing dew point temperatures within the buoy data, the relative humidity values used in the meteorological data input file were obtained from the NSRDB website. Please provide additional information regarding the nature of data available from the NSRDB website. This information is necessary to determine if the NSRDB data is appropriate for use in an air dispersion modeling analysis. Also, please indicate why the SPM locations were chosen for data retrieval from the database instead of the location of meteorological stations from which the other meteorological parameters were taken.
- 16) Please provide additional information to justify the use of 2013 met data from Buoy 42019 instead of from station PTAT2, which was used for 2014-2016 data, when Table 3-4 of the Air Dispersion Modeling Report indicates that the data completeness was the same for both locations. Please also provide information on whether there was consideration to utilize met data from one meteorological station for all 5 years and using data substitution from a nearby meteorological station only for missing data.
- 17) Section 5.2.3 of the PSD Application and 5.4 of the Air Dispersion Modeling Report indicated that the modeled impacts are acceptable even though the 1-hour ESL values for Crude Oil Vapor (<1% Benzene) are exceeded because the magnitude of exceedance falls within the acceptable range of 10 times the ESL over industrial waters. Please provide additional information regarding where the predicted exceedances occur that demonstrates that all modeled exceedances occur at locations that meet the definition of “industrial waters” as defined in the TCEQ’s guidelines references in the PSD application. This information may include, but is not limited to, a plot showing the receptor locations with model predicted exceedances of the ESLs along with information to support a determination that the locations would be considered industrial waters.
- 18) The current State Health Effects Analysis only evaluates impacts for Crude Oil Vapors (<1% Benzene). Once the speciation data requested in Item 10 (above), has been obtained please update the analysis to address each of the speciated constituents that have corresponding ESL values.