**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

August 10, 2018

Ms. Denise Rogers, Compliance Manager
Texas Gulf Terminals Inc.
1401 McKinney, Suite 1500
Houston, TX 77010

RE: New Source Review Air Permit Application Completeness Determination for Texas Gulf Terminals Inc.

Dear Ms. Rogers:

EPA has reviewed your Prevention of Significant Deterioration (PSD) permit application for Texas Gulf Terminals Inc. (TGTI) that was received by the EPA on July 13, 2018. We have determined that your application is technically incomplete at this time. Enclosed with this letter is a list of the information needed or questions where we are requesting a response in order for EPA to continue processing your PSD permit application. Please notify us if a complete response is not possible by August 31, 2018.

The requested information is necessary for us to develop a Statement of Basis and rationale for the terms and conditions to be included in a draft PSD permit. As we develop our preliminary permit decision, it may be necessary for us to request additional clarifying or supporting information.

If you have any questions concerning our questions or the information we are requesting, please feel free to contact myself at (214) 665-6435 or Melanie Magee of my staff at (214) 665-7161.

Sincerely,

8/10/2018

X Jeff Robinson

Jeff Robinson

Signed by: JEFFERY ROBINSON
Jeff Robinson
Air Permits Section Chief

Enclosure

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ENCLOSURE
EPA Region 6 PSD Permit Application Completeness Review Comments for TGTI

General:

1) Please provide additional supporting technical documentation to allow for the verification of the basis for the emission calculations. Specifically, we are requesting data regarding 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 to be used for the export operation.
2) The PSD permit application on page 9-5 states that the SPM buoy will be in compliance with all applicable regulatory requirements in 30 TAC Chapter 101 regarding "emission events and startup/shutdown/maintenance". However, the permit application does not appear to include emission calculations for Maintenance, Startup and Shutdown (MSS) emissions (i.e., pigging. hydrostatic pressure tests on the SPM and hoses, or inspection/replacement of hoses) from the marine loading operation. The startup/shutdown/maintenance emissions need to be authorized in the permit. Typically, EPA will permit or authorize these emissions by either establishing a separate alternative BACT that applies during MSS, or by including the emissions as part of our BACT determination for an individual unit(s) with the expectation that the unit(s) will meet BACT at all times. For the permitting record, please provide additional information regarding the facility's MSS emissions and TGTI's BACT preferences for MSS emissions.
3) The PSD permit application does not provide a compliance monitoring strategy for the proposed marine vessel loading operation BACT. EPA requests that TGTI propose a monitoring, recordkeeping and reporting strategy to ensure enforceability of the proposed BACT pursuant to 40 CFR 52.21(n).
4) On page 9-5 of the PSD permit application, TGTI asserts that the SPM buoy operation will comply with all applicable requirements in 30 TAC 111, Control of Air Pollution from Visible Emissions and Particulate Matter. For the permitting record, please specify, if possible, the specific provisions in 30 TAC 111 that TGTI is proposing to comply with meet and the associated method of compliance and/or monitoring to assure continuous compliance.

BACT Analysis:

5) The 5-Step BACT analysis for VOC emissions from Ship Loading does not propose any Best Management Practices for the SPM buoy system. Starting on page 7-7 of the permit application, a 5-step BACT analysis is provided for the VOC emissions associated with ship loading. 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 as an available control option. 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 the tankers carrying crude oil. This plan is unique to the tanker itself and does not cover any Best Management Practices for the operation and maintenance of a SPM buoy system. Are there any specific operational requirements from MEPC.185(59), MEPC.1/Circ.680, or Regulation 15 of MARPOL that TGTI would recommend for inclusion into the BACT determination to minimize VOC emissions? Also, the Best Management Practices for a SPM buoy system should provide an

effective plan for ship/shore interface, cargo transfer operations (i.e., minimizing gas formation in cargo tanks), maintenance (i.e., pigging if applicable), environmental (i.e., LDAR program), safety and health considerations and emergency preparedness. Specifically, are there any specific management practices at the SPM buoy system that will be undertaken by Texas Gulf itself to minimize VOC emissions?

6) Please provide your calculations for Greenhouse Gas (GHG) emissions from the SPM buoy and marine loading operation based on the gas speciation analysis from the crude/condensate to be exported. If the resulting GHG emissions level is equal to or greater than 75,000 tpy of $CO_2e$, a five-step BACT analysis for GHG emissions associated with marine loading operations will be needed. [40 CFR 52.21(b)(49)(iv)(a)].
7) Table 6-1 on page 6-1 of the PSD permit application includes a VOC annual emission estimate from fugitives but does not appear to include a five-step BACT analysis. The PSD permit application states in Table 7-2 – Summary of Proposed BACT, page 7-13, that TGTI will comply with the VOC management requirements in MEPC.185(59). It is unclear what specific requirements TGTI proposes to follow and how the MEPC.185(59) will demonstrate continuous compliance. Are there any fugitive emissions associated with the SPM or any pipeline components located offshore that could be or should be monitored to minimize emissions? Please consider if a proposed fugitive monitoring program could include monitoring for methane ($CH_4$) and please identify if any of the following technologies will be utilized in your design:
   - 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.

Emission Calculations:

8) The calculations for the hourly and annual VOC emission calculations rely on U.S. EPA AP-42 emission factors, Section 5.2 (7/08), Table 5.2-1, equation 1. The footnote to Table 5.2-1 states that equations 2 and 3 should be used to estimate emissions from marine loading operation of crude oil - not equation 1. Please provide additional information to support the use of equation 1 to determine the Saturation Factor rather than equations 2 and 3.
9) In comparing the calculations for the hourly and annual VOC emission calculations, it is unclear why different condensate physical properties were used in the calculations. For example: Hourly Condensate Vapor MW = 60 lb/lb-mol and the Annual Condensate Loading MW = 62 lb/lb-mol. Differences may also be found in the Maximum True Vapor Pressure (TVP). Please provide any technical details on why different condensate physical properties were used in the calculations.
10) Please provide additional information related to the mixture representation used in the TANKS 4.09d program for condensate and how this information correlates with the HAP speciation profile.