UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

APR 25 2013

Ms. Valerie Pompa
Vice President and Manufacturing Manager
Flint Hills Resources Corpus Christi, LLC
P.O. Box 2608
Corpus Christi, TX 78403

RE Completeness Determination for Flint Hills Resources Corpus Christi, LLC
Greenhouse Gas Prevention of Significant Deterioration (PSD) Permit Application
West Refinery Domestic Crude Project, Corpus Christi, Nueces County

Dear Ms. Pompa,

The EPA has reviewed your Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) permit application for Flint Hills Resources Corpus Christi, LLC that was received by the EPA on December 18, 2012, including supporting documentation, and determined that your application is incomplete at this time. A list of the information needed from you so that the EPA can continue its completeness review is enclosed (see Enclosure). Please notify us if a complete response is not possible by May 17, 2013.

The requested information is necessary for EPA 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 EPA 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.

The EPA may not issue a final permit without determining that: 1) there will be no effects on threatened or endangered species or their designated critical habitat, or 2) until it has completed consultation under Section 7(a)(2) of the Endangered Species Act (16 USC § 1536). In addition, the EPA must undergo consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA) (16 USC § 470f). As a reminder, NHPA implementing regulations require that EPA provide information to the public with an opportunity for participation in the Section 106 process. 36 CFR § 800.2(d). We look forward to receiving the Biological Assessment and Cultural Resources Reports that you have agreed to prepare for EPA for our use in complying with these statutes.

If you have any questions regarding the review of you permit application, please contact Melanie Magee of my staff at (214) 665-7161or magee.melanie@epa.gov.

Sincerely yours,

David F. Garcia
Acting Director
Multimedia Planning and
Permitting Division

Enclosure

ENCLOSURE
EPA Information Request
Flint Hills Resources (FHR) Corpus Christi, LLC
West Refinery Domestic Crude Project, Corpus Christi, Nueces County, Texas
Application for Greenhouse Gas Prevention of Significant Deterioration Permit

1. Please provide an additional impacts analysis as required by 40 CFR 52.21(o). Note that the depth of your analysis will generally depend on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation, and visibility in the impact area of your proposed project. In your analysis, please fully document all sources of information, underlying assumptions, and any agreements made as a part of the analysis.

2. The process description should closely follow the process diagram that is provided and identify all emission points and provide the emission point number (EPN) for GHG emission sources. The process flow diagram should include all equipment including non-GHG sources that is an integral part of the process operations. Please supplement the process flow diagrams with the following information:

   A. It is not clear if the following emission units are new, modified or affected (existing non-modified) emission units: Charge Heater (EPN: JJ-2) and XRC RBLR (EPN: JJ-6) found on the CCR/TOL unit process diagram; Charge Heater (EPN: JJ-4) found on NHT Unit process flow diagram; Charge Heater (EPN: KK-3) found on DHT Unit process flow diagram; and Charge Heater (EPN: A-204) found on the Mid Crude process flow diagram. In addition to providing supplemental information for the listed emission sources, please indicate if it is intentional to have identically numbered emission sources for the Charge Heaters (EPN: A-103) found on the West Crude process flow diagram for the Vacuum and Crude Towers. Please provide supplemental notation on the process flow diagram to explain all of the previously mentioned emission sources. Please revise emission calculations, if applicable.
   B. Page 19 of the permit application contains the process description for the Continuous Catalytic Regeneration/Naphtha Hydrotreater (CCR/NHT) Units. The process flow diagrams for these units are found on page 94 and 95. It is not clear how the catalyst used in the process is regenerated from the description given and the process flow diagram. Please provide supplemental process data on the how "spent" catalyst is regenerated to "fresh" catalyst. The process diagram only shows catalyst feed into the CCR Unit. Is the catalyst regeneration process a potential GHG emitting source?
   C. On page 30 of the application, it is stated that the Universal Dow Extraction (UDEX) Unit is an existing unit at the West Refinery and the project will require installation of new equipment piping components. The UDEX fugitive emission source is not included on the UDEX process diagram on page 99 of the application. Please supplement the process flow diagram to include this emission source.
   D. On page 34 of the permit application, the process description for the Utilities Area states that the West Refinery consists of six boilers. There are no proposed physical changes or

changes in method of operation to any of the boilers. However, as a result of the project, there will be an increase in steam demand so the boilers will experience an increase in actual emissions as a result of increased utilization. Because the boilers are affected (existing non-modified) emission units, these actual emissions are included in the PSD applicability assessment. The total emission increases from the six boilers are shown on page 9; line number 3 of Table 2F under one emission point identification number. Also, the process flow diagram on page 101 depicts these six boilers as one emission unit with one emission point identification number. Please provide supplemental information that verifies that these boilers vent to a common stack.

3. On page 67 of the permit application, it states that FHR proposes for BACT the implementation of energy efficient design and operating practices for both the Sat Gas No. 3 and CCR Hot Oil Heaters. The BACT analysis does not appear to compare the selected heater design to other available heaters. Since efficient heater designs can vary among heaters, please provide supplemental data to the BACT analysis that explains if other heaters were evaluated for this project and why they were eliminated. If a more efficient design was evaluated and eliminated, please explain why. Also, please provide supplemental data that explains why the heaters selected are the most efficient for this source.

4. On page 68 of the permit application, the table that summarizes the proposed design and operating attributes to be put to use by the heaters includes, but is not limited to, the following:

   - Install energy efficient burners,
   - Combustion tuning and optimization,
   - Draft/Trim instrumentation and controls,
   - Reduce air leaks - O_2 stack monitors will help identify leaks,
   - Waste heat recovery, and
   - Reduce slagging and fouling of heat transfer surfaces

   Please provide supplemental technical benchmark data that compares the design selections to be employed to a similar or existing source in the industry. If possible, please provide the technical resources used to evaluate the design decisions and to support the assertions made in this section. If technical benchmark data is not available, then please provide information detailing or projecting the potential efficiency gains that are expected utilizing these design strategies. Please include the basis for the rationale and supporting calculations and resources for this information.

5. On page 47 of the permit application, increased GHG emissions are expected from planned maintenance, start up, and shutdown (MSS) activities associated with the construction of the new Sat Gas No. 3 Unit and for new storage tanks, which are not sources of GHG emissions during normal operations, but can emit GHGs during maintenance activities. The fugitive emissions from some MSS activities are routed to a control device which generates GHG emissions from combustion. The MSS activities and the control devices used for each activity is summarized below:

Activity	Control Device Used
Vacuum Truck Loading	Carbon Canister, Engine, Thermal Oxidizer
Tank Degassing	Engine, Thermal Oxidizer
Tank Refilling after Degassing or Product Change	Engine, Thermal Oxidizer

A. It is indicated that GHG emissions are expected from MSS activities associated with the construction of the new Sat Gas No. 3 and for "new" storage tanks. On page 40 of the application it is stated that storage tanks 08FB137, 08FB142, 08FB147, 40FB1010, 40FB1011 are "existing" sources at the West Refinery and there are "no" proposed physical changes or changes in method of operation for the storage tanks. However, as a result of the project, the tanks will experience an increase in actual emissions as a result of increased crude oil throughout. Because of this, the storage tanks are an affected (existing non-modified) source and the changes in actual emissions have been included in the PSD applicability assessment. The table on page 5 and 6 entitled "West Refinery GHG Summary Table" does not identify "new" storage tanks to be constructed for this project. It is not clear which equipment emissions, due to MSS activities, will be directed to the control devices stated in the application. Please provide supplemental information that verifies the new or modified equipment emissions that will be directed to the control devices. Please include information pertaining to the "new" storage tanks that are referenced on page 47. Will the CCR Hot Oil Heater emissions from MSS Activities be directed to a control device?

B. On page 83 of the application, it is stated in the BACT analysis for MSS that the GHG emissions from MSS emissions are the result of maintaining new process vessels and other new equipment. The emissions are dominated by CO_2e emissions from degassing to a control device for VOC and GHG control. The description provided in the table on page 83 indicates that to minimize degassing emissions, liquids will first be pumped to recovery and then the vessel will be depressured and purged to a "flare or flare gas recovery unit." It was previously indicated on page 47 that the control devices utilized for MSS activities consisted of carbon canister, engine and thermal oxidizer. Will the emissions from the MSS activities also be routed to a flare or flare gas recovery unit as well as a carbon canister, engine and thermal oxidizer? Please explain the inconsistency. If a flare or flare gas recovery unit is being used, is it a new, modified or affected (existing non-modified) flare or flare gas recovery unit? If it is a new construction or modified, please provide supplemental technical information for the flare that includes: the destruction and removal efficiency (DRE), how will the flare be controlled to minimize GHG emissions, and what is the proposed compliance strategy for the flare.