Preliminary Determination Summary
Blanchard Refining Company LLC
Permit Numbers 47256, N258, PSDTX402M4, and GHGPSDTX166

I. Applicant

Blanchard Refining Company LLC
PO Box 401
Texas City, TX 77592-0401

II. Project Location

Blanchard Refining Galveston Bay Refinery
2401 5th Ave S
Galveston County
Texas City, Texas 77590

III. Project Description

The existing refinery refines crude oil using various distillation and sulfur removal processes into products such as gasoline, furnace oil, jet fuel, kerosene, petrochemicals, solvents, and blend stocks for liquid fuels. These products are temporarily stored in existing storage tanks at the GBR tank farm prior to being shipped from the site via pipeline or marine vessels.

1. Revamp of the Pipestills 3B (PS3B), a thermal distillation process. PS3B is currently authorized in permit No. 19599 and is being moved to this permit.
2. Revamp of the Resid Hydrotreating Unit (RHU). The RHU is designed to convert resid into products and feedstocks for various process units and consists of a make-up hydrogen system, reactor trains, catalyst handling section, fractionation section, and a vapor recovery unit. The RHU Revamp will improve reliability, increase diesel and gas oil yields, and increase the charge rate by approximately 17 million barrel per day (MBPD).
3. Construct a new 130 MBPD Diesel Hydrotreater (DHT) Unit. The DHT will reduce the sulfur content of the distillate streams and produce ultra-low sulfur diesel (ULSD).
4. Modify the sulfur recovery unit (SRU) to improve sulfur recovery and reduce emissions.
5. Install new cooling tower CT-SRU to serve the DHT and SRU.
6. Make improvements to the Alky2 Butane Splitters which are used to separate the mixed butane streams produced in various process units at GBR.
7. Install a new Butane Defluorinator to remove organic fluorides from mixed butane streams.
8. Authorize additional piping and fugitive components associated with the new construction.
9. Authorize maintenance, start-up, and shutdown activities for new equipment.

IV. Emissions

Total allowable emissions of regulated pollutants for all permitted facilities are summarized below. Emissions increases that will occur at the major stationary source as a result of the project are summarized in Section V of this document, relating to Federal Applicability.

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	2199.92
NO_x	2749.05
SO_2	5520.10
CO	3667.71
PM	10.25
PM_{10}	432.70
$PM_{2.5}$	404.79
H_2S	22.29
NH_3	53.97
CO_2	711944
CH_4	22.5
CO_2 Equivalents (CO2e)	713360

CO2e - carbon dioxide equivalents based on global warming potentials of CH_4 = 25, N_2O = 298, SF6=22,800.

This is a flexible permit and these numbers represent the allowable emission rates for all units, including the proposed facilities and MSS. The only new allowable emissions are PM and GHGs.

V. Federal Applicability

Galveston County, which is classified as a moderate nonattainment area for ozone under the 8-hour standard.

The project is located at a major emitting facility (potential to emit in excess of 100 tons per year [tpy] for a named source [Petroleum Refinery]). The facility is in Per the table below, the project emissions increase for VOC (Ozone [O3] precursor), CO, SO_2, PM_{10}, $PM_{2.5}$, and H_2S exceed the respective netting significance levels as well as the net project emissions increases for all pollutants. Thus, the project is subject to PSD review for those pollutants.

The following chart illustrates the annual project emissions for each pollutant, if netting was triggered, and whether each pollutant triggers PSD or Nonattainment (NA) review.

Pollutant	Project Increase (tpy) [1]	NA Netting Trigger (tpy)	PSD Netting Trigger (tpy)	Netting Required Y/N	Net Emission Change (tpy) [2]	Major Mod Trigger (tpy)	PSD Triggered Y/N	NA Triggered Y/N
VOC [3]	108.64	40	40	Y	108.64	40	N	Y
NOx [3, 4]	151.30	40	40	Y	-74.05	40	N	N
SO_2 [4]	160.35	100	100	Y	367.33	100	Y	N
CO	517.16	40	40	Y	1,306.10	40	Y	N
PM	46.61	25	25	Y	162.46	25	Y	N
PM_{10}	46.61	15	15	Y	150.43	15	Y	N
$PM_{2.5}$	46.54	10	10	Y	181.13	10	Y	N
H_2S	0.36	10	10	N	---	10	N	N

1 Project Increases: Comparison of Baseline Actual to PTE (or Projected Actual) Increases only

2 Net Emissions: Baseline Actual to PTE (or Projected Actual) for the project currently under review, Baseline Actual to PTE for all other increases and decreases within netting window.

3 Ozone precursor. Either pollutant precursor can trigger BACT/LAER and impacts analysis, as applicable.

4 $PM_{2.5}$ precursor. Not used to trigger $PM_{2.5}$ BACT/LAER or impacts analysis at this time.

The proposed project triggers PSD review for non-GHG NSR regulated pollutants. As shown in the table below, because the project increase is more than 75,000 tpy of CO2e, PSD review is triggered for GHG emissions.

Pollutant	**Project Emissions (tpy)**	**Major Source or Major Mod Trigger Level (tpy)**	**PSD Triggered Y/N**
CO2e	851,305	75,000	Y

VI. Control Technology Review

Best available control technology (BACT) review and lowest achievable emission rate (LAER) review, as applicable, were conducted for the affected facilities using information from the RACT/BACT/LAER Clearinghouse (RBLC) and on-going permitting in Texas. This project triggered NNSR review for VOCs so LAER is applied to affected facilities. PSD BACT is applied for all other affected pollutants which include CO, SO_2, PM, PM_{10}, and $PM_{2.5}$, and state BACT for NO_X, H_2S, and NH_3.

Heaters

DHT-101B Stripper Reboiler (80 MMBTU/hr) and DHT-201B Reactor Charge Heater (115 MMBTU/hr) - Annual and hourly average NO_X emission factors are based on best performing SCR for process heaters (0.01 lb/million British thermal unit [MMBtu]). CO annual average will be 25 parts per million by volume (ppmv) @ 3% O_2. Ammonia (NH3) annual average emission factors for new heaters are based on a SCR ammonia slip of 10 ppmdv at 3% O2. Particulates will be emitted at a rate of 0.01 lb/MMBtu and VOCs at a rate of 0.003 lb/MMBtu. GHG emissions will be limited through the use of refinery fuel gas, good combustion practices, and the implementation of design and operational efficiency measures, including air pre-heat. A review of the RBLC Database and current TCEQ BACT indicates that this meets the level of control authorized in recently issued permits. BACT is satisfied. For SO_2 and MSS from heaters see discussions below.

Modified RHU-502B Fractionation Heater (126 MMBtu/hr) - Annual and hourly average emission factors for NO_X are based on 0.035 lb/MMBtu based on the use of Ultra Low-NO_X Burners (ULNB). CO annual average will be 50 ppmv @ 3% O_2. CO hourly average will be 100 ppmv @ 3% $O_{2.}$ Particulates will be emitted at a rate of 0.01 lb/MMBtu and VOCs at a rate of 0.003 lb/MMBtu. GHG emissions will be limited through the use of refinery fuel gas, good combustion practices, and the implementation of design and operational efficiency measures, including air pre-heat.A review of the RBLC Database and current TCEQ BACT indicates that this meets the level of control authorized in recently issued permits. BACT is satisfied. For SO_2 and MSS from heaters see discussions below.

Modified Coker Furnace (115 MMBtu/hr) - Annual average emission factors for NO_X are based on 0.04 lb/MMBtu based on the use of Ultra Low-NO_X Burners (ULNB). CO emissions are based on 50 ppmv @ 3% O2 annual average. Particulates will be emitted at a rate of 0.01 lb/MMBtu and VOCs at a rate of 0.003 lb/MMBtu. GHG emissions will be limited through the use of refinery fuel gas, good combustion practices, and the implementation of design and operational efficiency measures, including air pre-heat.A review of the RBLC Database and current TCEQ BACT indicates that this meets the level of control authorized in recently issued permits. BACT/LAER is satisfied. For SO_2 and MSS from heaters see discussions below.

SO_2 emissions from heaters - SO_2 will be controlled by limiting H_2S and non-H_2S total reduces sulfur (TRS) from the fuel gas system by the use of an amine treating unit (to remove H_2S) and a coker vapor recovery system (to remove non-H_2S TRS). A review of the RBLC Database and current TCEQ BACT indicates that this meets the level of control authorized in recently issued permits. BACT/LAER is satisfied.

Heater MSS - During MSS Heaters will emit NOx of .04 lb/MMBtu for the DHT Reactor Charge Heaters (EPNs DHT-A and DHT-B) and 0.06 lb/MMBtu for the DHT stripper Reboiler based on the use of Ultra Low-NOX Burners (ULNB's) with air preheat. CO for all heaters during MSS will be 400 ppmv. There are no NH_3 emissions during MSS since SCRs are not operating. All other pollutants are the same as routine. A review of the RBLC Database and current TCEQ BACT indicates that this meets the level of control authorized in recently issued permits. BACT/LAER is satisfied.

Heater GHG – All heaters will meet BACT for GHG emissions through the use of low carbon refinery fuel gas as a fuel, the use of good combustion practices, and the implementation of design and operational efficiency measures. BACT is satisfied.

Cooling Towers

SRU Cooling Tower - This is a new cooling tower that will be non-contact design and VOC in the water will be monitored monthly in accordance with Appendix P testing. To limit particulate emissions the cooling tower will be equipped with drift eliminators with a maximum drift of 0.0005%. BACT/LAER is satisfied.

Alky2 and CFHU – these are both existing cooling towers being modified with this project. Both have non-contact design and VOC in the water will be monitored monthly in accordance with Appendix P testing. To limit particulate emissions the cooling towers are equipped with drift eliminators with a maximum drift of 0.001%. BACT/LAER is satisfied.

SRU Incinerator

The sulfur recovery rate will be limited to 1,462.5 long tons per day (LTPD) which is equal to 75% of the SRU's total 1,950 LTPD capacity. The minimum recovery rate is 99.8%. All emissions from the sulfur pits, storage, and loading operations will be collected and routed either back to the SRU or the SRU Tail Gas Incinerator (TGI). The in-stack concentration of SO_2 from the tail gas incinerator will be limited to 250 ppm or less. The TGI will operate with no less than 99.9 % efficiency in disposing of the acid gas waste streams. BACT/LAER is satisfied.

Fugitives

Per the nonattainment permit fugitive components must be monitored per the 28 LAER fugitive monitoring program which requires all fugitive components to be monitored with a leak definition of 500 parts per million by volume (ppmv). However, Blanchard is proposing to utilize low emitting valve technology for valves in gas and light liquid service and monitor these valves and the associated connectors with a leak definition of 100 ppmv (28 RAH) as opposed to 500 ppmv required by 28 LAER. Based on this leak definition, a 99% control efficiency is appropriate for both the valves and connectors. This determination is based upon a review of the results of bagging studies conducted by the EPA, which related control efficiency to leak definition. Keeping leaks in the 0 to 100 ppmv range resulted in 99% control. All new project fugitive components will be monitored per the 28RAH and 28 LAER fugitive monitoring programs. BACT/LAER is satisfied.

Storage Tank

DHT Feed Tank (EPN 280-1005) – The tank will store distillate with a true vapor pressure less than 0.1 psia. Minimum LAER is the use of a white painted or aluminum fixed roof tank with submerged fill. The DHT Tank will exceed LAER and be an external floating roof (EFR) tank with a primary mechanical shoe seal and a secondary rim mounted seal. Periodically for MSS the tank roof will be landed for inspection and cleaning. The process will start by continuously draining the tank once the roof has landed until empty, degassing the landed roof vapor space to control within 24 hours after landing the roof, using forced ventilation during cleaning and sludge removal, and controlled tank refilling until the roof is re-floated. Control devices used in MSS achieve control or destruction of at least 98% and include the Refinery Flares, EPNs 311, 321, 331, 400, or temporary control devices, EPNs TEMP1 or TEMP2. BACT/LAER is satisfied.

Additional MSS
Besides activities described above for heater and tanks MSS will also be performed periodically on vessels and piping components. All vessels and piping components will be drained of liquid prior to opening and the vapor spaces degassed to control when containing VOC vapor pressure of 0.5 psia or greater. BACT/LAER is satisfied.

VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable as supplemented by the ADMT, for all review types and pollutants. The results are summarized below.

A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results for SO_2, PM_{10}, $PM_{2.5}$ (NAAQS and Increment), and CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

The justification for selecting the EPA's interim 1-hr SO_2 De Minimis level was based on the assumptions underlying EPA's development of the 1-hr SO_2 De Minimis level. As explained in EPA guidance memoranda[1] , the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr SO_2 NAAQS.

The 24-hr $PM_{2.5}$ De Minimis level is the EPA recommended De Minimis level. The use of the EPA recommended De Minimis level is sufficient to conclude that a proposed source will not cause or contribute to a violation of the 24-hr $PM_{2.5}$ NAAQS or 24-hr $PM_{2.5}$ PSD increment based on the analyses documented in EPA guidance and policy memorandums[2].

The applicant provided an evaluation of ambient $PM_{2.5}$ monitoring data, consistent with EPA guidance for $PM_{2.5}$[3], for using the annual $PM_{2.5}$ De Minimis level in the NAAQS analysis. If monitoring data show that the difference between the annual

[1] www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[2] www.epa.gov/nsr/significant-impact-levels-ozone-and-fine-particles
[3] ww.epa.gov/ttn/scram/guidance/guide/Guidance_for_PM25_Permit_ Modeling.pdf

$PM_{2.5}$ NAAQS and the monitored annual $PM_{2.5}$ background concentrations in the area is greater than the annual $PM_{2.5}$ De Minimis level, then the proposed project with predicted impacts below the De Minimis level would not cause or contribute to a violation of the annual $PM_{2.5}$ NAAQS and does not require a full impacts analysis. See the discussion below in the air quality monitoring section for additional information on the evaluation of ambient $PM_{2.5}$ monitoring data.

The applicant also provided an evaluation of ambient $PM_{2.5}$ monitoring data for using the annual $PM_{2.5}$ De Minimis level in the PSD Increment analysis. If the difference between the $PM_{2.5}$ increment and the change in ambient monitored $PM_{2.5}$ background concentrations in the area is greater than the $PM_{2.5}$ De Minimis level, then the use of the De Minimis level is reasonable. See the discussion below in the Increment Analysis section for additional information on the evaluation of the ambient $PM_{2.5}$ monitoring data.

While the De Minimis levels for both the NAAQS and increment are identical for $PM_{2.5}$ in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for $PM_{2.5}$ are statistically-based, but the corresponding increments are exceedance-based.

Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms Per Cubic Meter (µg/m^3)

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
SO_2	1-hr	7.7	7.8
SO_2	3-hr	7.7	25
SO_2	24-hr	3.8	5
SO_2	Annual	0.99	1
PM_{10}	24-hr	0.99	5
PM_{10}	Annual	0.27	1
$PM_{2.5}$ (NAAQS)	24-hr	0.99	1.2
$PM_{2.5}$ (NAAQS)	Annual	0.27	0.3
$PM_{2.5}$ (Increment)	24-hr	0.99	1.2
$PM_{2.5}$ (Increment)	Annual	0.27	0.3
CO	1-hr	39	2000
CO	8-hr	33	500

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The applicant provided an evaluation of secondary $PM_{2.5}$ impacts as part of the PSD AQA. The applicant evaluated the project emissions of $PM_{2.5}$ precursor emissions (NO_x and SO_2). The project has a proposed increase of NO_x emissions less than 40 tons per year (tpy) and a proposed increase of SO_2 emissions greater than 40 tpy.

The applicant reviewed $PM_{2.5}$ speciation data from the Houston Deer Park #2 monitor (EPA AIRS monitor 482011039). Over a three-year period (2013-2015), the percentage of sulfate to the total 24-hr $PM_{2.5}$ concentration is 19.1 percent; the percentage of sulfate to the total annual $PM_{2.5}$ concentration is 20.6 percent. Given that the proposed SO_2 emissions are a small fraction of the SO_2 emissions in the air shed (5.8%), and that the ambient monitoring data show relatively small fractions of sulfate, secondary $PM_{2.5}$ formation from the proposed SO_2 emissions would be expected to be considerably smaller than the monitored concentration of sulfates. The monitoring information supports the applicant's conclusion that secondary $PM_{2.5}$ formation from the project emissions would not be expected to cause a NAAQS or Increment violation.

In addition to applicant's evaluation of secondary $PM_{2.5}$ impacts, the ADMT also evaluated secondary $PM_{2.5}$ impacts based on a Tier 1 demonstration. This approach is consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the ADMT used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the 1000 tpy Harris County source, the ADMT estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.145 $\mu g/m^3$ and 0.006 $\mu g/m^3$, respectively. When these estimates are added to the total concentrations listed in Table 1 above, the results are less than the De Minimis levels.

Based on the analyses mentioned above, secondary formation of $PM_{2.5}$ from the project emissions would not be expected to cause or contribute to a NAAQS or Increment violation.

B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that SO_2, PM_{10}, and CO are below their respective monitoring significance levels.

Table 2. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Significance ($\mu g/m^3$)
SO_2	24-hr	3.8	13

Pollutant	Averaging Time	GLCmax (µg/m³)	Significance (µg/m³)
PM_{10}	24-hr	0.99	10
CO	8-hr	33	575

The GLCmax are the maximum predicted concentration associated with one year of meteorological data.

The applicant evaluated ambient $PM_{2.5}$ monitoring data to satisfy the requirements for the pre-application air quality analysis.

Background concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 481671034 located at 9511 Avenue V ½, Galveston, Galveston County. The applicant used the three-year average of the annual 98th percentile of the 24-hour values from 2015-2017 for the 24-hr value (20 µg/m^3). For the annual value, the applicant used the three-year average of the annual averages (6.7 µg/m^3). To support the use of this monitor as part of the PSD Increment evaluation, the applicant reviewed on site monitoring data and concluded that the ambient monitored concentrations at the site are comparable to monitor 481671034.

C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate that SO_2, PM_{10}, $PM_{2.5}$, and CO are less than the respective de minimis concentrations and no further analysis is required.

Blanchard Refining Company LLC is located in Galveston County which is part of the Houston-Galveston-Brazoria ozone non-attainment area. Therefore, an ozone analysis is not required as part of the AQA.

D. Increment Analysis

The De Minimis analysis modeling results indicate that SO_2, PM_{10}, $PM_{2.5}$, and CO are less than the respective De Minimis concentrations and no further analysis is required.

The applicant used representative monitoring data to justify using the annual $PM_{2.5}$ De Minimis level for the PSD Increment analysis. Ambient concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 481671034 located at 9511 Avenue V ½, Galveston, Galveston County. The applicant evaluated the difference in ambient concentrations for the time period between the most recent complete year and the major source baseline date (2010-2017). A comparison of the annual monitored concentrations for 2010 and 2017 show a change in ambient concentrations of -2.4 µg/m^3. When the change in ambient concentrations is subtracted from the applicable increment (4 µg/m^3), the difference is greater than the annual De Minimis level. Therefore, the use of the annual $PM_{2.5}$ De Minimis level is reasonable.

E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed site to determine if emissions could adversely affect a Class I area. The nearest Class I area, Caney Creek Wilderness, is located approximately 560 kilometers (km) from the proposed site.

The predicted concentrations of PM_{10}, $PM_{2.5}$, NO_2, and SO_2 for all averaging times are less than the de minimis level along the fence line. Caney Creek Wilderness is an additional 560 km from the location where the predicted concentrations of PM_{10}, $PM_{2.5}$, NO_2, and SO_2 for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Caney Creek Wilderness Class I area.

F. Minor Source NSR and Air Toxics Review

Table 3. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
SO_2	1-hr	7.7	14.3
H_2S	1-hr	1.6	2

Table 4. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
NO_2	1-hr	3.9	7.5
NO_2	Annual	0.16	1

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The justification for selecting the EPA's interim 1-hr NO_2 De Minimis level was based on the assumptions underlying EPA's development of the 1-hr NO_2 De

Minimis level. As explained in EPA guidance memoranda[4], the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO_2 NAAQS.

Table 5. Generic Modeling Results

Source ID	Averaging Time	GLCmax (μg/m³/ lb/hr)
F70COKER	1-hr	1.90
F70COKER	Annual	0.22
F40PS3B	1-hr	2.93
F40PS3B	Annual	0.48
F480RHU	1-hr	5.76
F480RHU	Annual	0.39
F470CFHU	1-hr	7.04
F470CFHU	Annual	0.48
F390DDU1	1-hr	18.06
F390DDU1	Annual	1.83
F393DDU3	1-hr	16.99
F393DDU3	Annual	1.48
DHTFUG	1-hr	51.77
DHTFUG	Annual	6.46
T1005	1-hr	5.92
T1005	Annual	0.45
F380SRU	1-hr	24.63
F380SRU	Annual	4.48
F50PS3A	1-hr	3.09
F50PS3A	Annual	0.59
TDOCK	1-hr	8.41
TDOCK	Annual	1.27

[4] www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf

Source ID	Averaging Time	GLCmax (µg/m^3/ lb/hr)
F489ALK2	1-hr	4.53
F489ALK2	Annual	0.43
F56_1	1-hr	26.75
F56_1	Annual	5.47
F56_2	1-hr	36.96
F56_2	Annual	7.71
F56_3	1-hr	11.77
F56_3	Annual	2.51
F56_4	1-hr	18.81
F56_4	Annual	3.52
F54_1	1-hr	24.20
F54_1	Annual	5.24
F54_2	1-hr	21.43
F54_2	Annual	3.78
F54_3	1-hr	33.91
F54_3	Annual	4.00
F48BPALK	1-hr	13.78
F48BPALK	Annual	2.52
SRUCTC1	1-hr	21.42
SRUCTC1	Annual	0.47
SRUCTC2	1-hr	47.02
SRUCTC2	Annual	0.47
411_CTC1	1-hr	6.01
411_CTC1	Annual	0.38
411_CTC2	1-hr	5.99
411_CTC2	Annual	0.37

Source ID	Averaging Time	GLCmax (µg/m^3/ lb/hr)
411_CTC3	1-hr	5.95
411_CTC3	Annual	0.36
411_CTC4	1-hr	5.88
411_CTC4	Annual	0.35
411_CTC5	1-hr	5.80
411_CTC5	Annual	0.34
411_CTC6	1-hr	6.00
411_CTC6	Annual	0.35
CFHUCTC1	1-hr	2.74
CFHUCTC1	Annual	0.13
CFHUCTC2	1-hr	2.78
CFHUCTC2	Annual	0.13
CFHUCTC3	1-hr	2.81
CFHUCTC3	Annual	0.13
CFHUCTC4	1-hr	2.84
CFHUCTC4	Annual	0.12
F280_1	1-hr	29.28
F280_1	Annual	6.03
F280_2	1-hr	8.02
F280_2	Annual	1.52
F280_3	1-hr	24.30
F280_3	Annual	5.19
F280_4	1-hr	10.60
F280_4	Annual	1.85
DHT201B	1-hr	0.51
DHT201B	Annual	0.04

Source ID	Averaging Time	GLCmax (µg/m³/ lb/hr)
DHT101B	1-hr	0.55
DHT101B	Annual	0.05

G. Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs, including no PSD increment. The global climate-change inducing effects of GHG emissions, according to the “Endangerment and Cause or Contribute Finding”, are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [EPA’s PSD and Title V Permitting Guidance for GHGs at 48]. Thus, EPA has concluded in other GHG PSD permitting actions it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis would provide no meaningful data and has not required the applicant to perform one. As stated in the preamble to TCEQ’s adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state's traditional minor and major NSR permits program per 30 TAC Chapter 116.

VIII. Offsets

The site is located in Galveston County which is classified as a moderate nonattainment area for ozone under the 8-hour standard. Prior to the commencement of operation, the permit holder must offset the project VOC emission increase for facilities authorized by this permit through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H. The permit holder will use 125 tons per year (tpy) of credits to offset 108.64 tpy of VOC project emission increase for the facilities authorized by this permit at a ratio of 1.15 to 1.0.

IX. Alternative Site Analysis and Compliance Certification

The proposed project will take place in the existing Galveston Bay Refinery. Impacts on the environment will be minimized through the use of existing refinery infrastructure. Impact on the area due to significant industrial or commercial growth are not anticipated.

X. Conclusion

The applicant has demonstrated that the project will comply with all applicable rules, regulations, and requirements of the Texas and Federal Clean Air Acts, including requirements for Nonattainment New Source Review and Prevention of Significant Deterioration New Source Review. The proposed facilities and controls represent LAER and BACT for the proposed facility. Modeling analysis indicates that the proposed project will not violate NAAQS or any PSD increment, nor have any adverse impacts on the public health, soils, vegetation, or Class I or II areas. The Executive Director preliminarily recommends issuance of permit Nos. 47256, N258, PSDTX402M4, and GHGPSDTX166.