Texas Commission on Environmental Quality
INTEROFFICE MEMORANDUM

TO: Office of Chief Clerk DATE: April 17, 2023

FROM: Amanda Kraynok
Staff Attorney
Environmental Law Division

SUBJECT: Transmittal of Documents of Administrative Record

Applicant:	Valero Refining-Texas, L.P. Valero Corpus Christi West Plant
Proposed Permit	Nos. 38754, GHGPSDTX211, and PSDTX324M15
Program:	Air
Docket Nos.:	TCEQ Docket No. 2023-0203-AIR SOAH Docket No. 582-23-14975

In a permit hearing, the record in a contested case includes copies of the public notices relating to the permit application, as well as affidavits of public notices that are filed by the applicant directly with the Office of the Chief Clerk (OCC). In addition, the record includes the documents listed below that are provided to the OCC by the Executive Director's staff. 30 TEX. ADMIN CODE § 80.118.

This transmittal serves to also request that the OCC transmit the attached items, together with (a) the public notice documents (including notice of hearing), and (b) where available for direct referral cases only, the Executive Director's Response to Comments to the State Office of Administrative Hearings.

Documents with this transmittal are indicated below:

- The final draft permits, including any special conditions or provisions
- Maximum Allowable Emission Rate Table (MAERT)
- The summary of the technical review of the permit application
- The modeling audit memoranda
- The compliance summary of the applicant
- The Executive Director's Preliminary Decision and the Executive Director's Decision on the Permit Application, if applicable.
- The Final Decision Letter
- The List of Actions from the Commissioner's Integrated Database (CID)
- Any agency document determined by the Executive Director to be necessary to reflect the administrative and technical review of the application. The following documents are included:
    - The Executive Director's Response to Comments.
    - Map of hearing requestors prepared by the Executive Director

State of Texas
County of Travis

MAR 20 2023

I hereby certify this is a true and correct copy of a Texas Commission on Environmental Quality (TCEQ) document, which is filed in the Records of the Commission.
Given under my hand and the seal of office.

Veronica Barnes, Custodian of Records
Texas Commission on Environmental Quality

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
Valero Refining-Texas, L.P.
Authorizing the Construction and Operation of
Valero Corpus Christi Refinery West Plant
Located at **Corpus Christi, Nueces County, Texas**
Latitude 27.820555 Longitude -97.488333

Permits: 38754, PSDTX324M15 and GHGPSDTX211

Amendment Date: _____

Expiration Date: January 22, 2024

Erin E. Chancellor
For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)] [1]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] [1]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. [1]

[1] Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
$\mu g/m^3$ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = sulfuric acid
HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H_2O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m^3 = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen
NSPS = New Source Performance Standards

PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO_2 = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions. **(TBD)**.

Throughput Limitations

2. Tank truck loading operations are limited to the following liquids and maximum loading rates: **(12/19)**

Chemical	Hourly Rate (gal/hr)
Kerosene	30,000
Diesel	60,000
Gasoline	98,000
Residual Oils	31,920

3. Marine loading shall comply with the following:

   A. Marine loading with emissions that are controlled with the marine vapor recovery unit (VRU) shall be limited to a maximum of 35,000 bbl/hr. The liquids that are loaded at this rate and controlled with the VRU at this facility are limited to gasoline, natural gasoline, naphtha, cat gasoline, alkylate, and reformate.

   The BT concentrate, mixed xylenes, heartcut, and toluene concentrate may also be loaded into marine vessels with emissions controlled by the VRU, at a rate not to exceed 5,000 bbl/hr. Only one of these products may be loaded at a time.

   B. Marine loading with uncontrolled vapor emissions shall be limited to the following services at the indicated rates:

Liquid	Barge bbl/hr	Ship bbl/hr
Diesel*	8,500	12,500
Kerosene*	5,000	12,500
Gas Oil	6,000	20,000
ATB	6,000	20,000
VTB	6,000	20,000
Slurry	6,000	0
Bunker	6,000	20,000

*Diesel and kerosene shall not be loaded onto ships and barges concurrently.

Loading Controls

4. Operation without visible liquid leaks or spills shall be maintained at all loading or unloading facilities regardless of vapor pressure. This does not apply to momentary dripping associated with the initial connection or disconnection of fittings. Sustained dripping from fittings during loading or unloading operations is not permitted. Any liquid spill that occurs during loading or unloading activities shall be cleaned up immediately to minimize air emissions.

5. Emissions resulting from the tank truck loading of gasoline shall be routed to the Vapor Combustor (Emission Point No. [EPN] TRUCKCOMB) for final abatement. The volatile organic compounds (VOC) emissions from EPN TRUCKCOMB shall not exceed 10 milligrams per liter of gasoline loaded. The vapor combustor combustion temperature shall be maintained at or above 1400˚F (based on a five-minute averaging period) when loading vapors are routed to it. This temperature shall be recorded during loading operations and the records maintained on-site. The vapor combustor operating temperature may be lowered if it has been tested at the lower temperature in accordance with Special Condition (SC) No. 39 to demonstrate compliance with this emission limit. Records associated with this permit condition shall be kept for at least five years. The Vapor Combustion Unit (EPN TRUCKCOMB) shall comply with the following. **(12/19)**

   A. The vapor combustor shall be operated with no visible emissions and have a constant pilot flame during all times waste gas could be directed to it. The temperature of the combustion chamber shall be continuously monitored when loading vapors are routed to it. The time, date, and duration of any drop of temperature below 1400°F shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated or have a calibration check performed at a frequency in accordance with, the manufacturer's specifications.

   B. Pilot and make-up fuel for the vapor combustor shall be pipeline-quality, sweet natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet.

   C. The control device shall not have a bypass. If there is a bypass for the control device, comply with either of the following requirements:

      (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or

      (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.

      A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service.

6. All tank trucks loading gasoline at this facility shall be leak-tight tested a minimum of once a year using the method described in the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subparts A and R, National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). **(12/19)**

7. All tank truck loading of residual oils, kerosene and diesel shall be conducted using a submerged fill pipe or using a discharge point no higher than 6 in. above the bottom of the cargo tank. **(12/19)**

8. The marine VRU shall limit VOC emissions from EPN VRU to 5 mg/l of liquid loaded.

9. All marine loading emissions of liquids with vapor pressures greater than 0.5 pound per square inch, absolute (psia) must be vented to the VRU.

10. A vacuum of at least one-inch water column shall be established downstream of the dock pressure control valve prior to commencing marine loading. A vacuum shall also be established on the barge or ship being loaded if possible. The vacuum shall be maintained during loading and monitored continually or an alarm activated if the vacuum is not maintained.

11. The VRU VOC concentration as measured by the continuous emission monitor specified in SC No. 40 shall not exceed 7,621 parts per million (ppm) over any one-hour period while the marine loading emissions are being vented. If the reading exceeds this limit, marine loading shall be suspended, the Texas Commission on Environmental Quality (TCEQ) Corpus Christi Regional Office notified, and the cause determined and corrected before loading resumes. **(TBD)**

Combustion Controls

12. Flares shall be designed and operated in accordance with the following requirements: **(01/21)**

    A. The flare system(s) shall be designed such that the combined vent gas, assist air, and/or total steam to each flare meets the 40 CFR § 63.670 specifications for minimum combustion zone net heating value and maximum tip velocity at all times that emissions may be directed to the flare for more than 15 minutes. Flared gas actual exit velocity, vent gas net heating value, and flared gas combustion zone net heating value shall be determined in accordance with 40 CFR §63.670(k), §63.670(l), and §63.670(m) on a 15-minute block average and recorded at least once every 15 minutes.

    If the flare actively receives perimeter assist air, it shall be operated to meet the 40 CFR §63.670 specifications for minimum net heating value dilution parameters.

    B. The flare(s) shall be operated with pilot flame(s) present at all times vent gas may be directed to the flare(s). The pilot flame(s) shall be continuously monitored by a thermocouple, infrared monitor, or ultraviolet monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

    C. Flares shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours, demonstrated and recorded per the requirements of §63.670(h).

    D. The permit holder shall install flow monitors that continuously measure, calculate and record the total volumetric vent stream flow rate (including waste gas, purge gas, supplemental gas, and sweep gas), and shall install a monitoring system capable of determining the concentration of individual components in the flare vent gas or the net heating value of the flare vent gas. The flow monitor sensor and analyzer sample points shall be installed in the vent stream such that the total vent stream to the flare is measured and analyzed.

If one or more gas streams that combine to comprise the total flare vent gas flow are monitored separately for net heating value and flow, the 15-minute block average net heating value shall be determined separately for each measurement location and a flow-weighted average of the gas stream net heating values shall be used to determine the 15-minute block average net heating value of the cumulative flare vent gas.

If assist air or assist steam is used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the total volumetric flow rate of assist air and/or assist steam used with the flare.

If pre-mix assist air and/or perimeter assist are used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of separately measuring, calculating, and recording the volumetric flow rate of premix assist air and/or perimeter assist air used with the flare. Continuously monitoring fan speed or power and using fan curves is an acceptable method for continuously monitoring assist air flow rates.

Perimeter assist air includes all air assist except premix assist air. Premix assist air includes any air intentionally entrained in center steam.

Assist air includes premix assist air and perimeter assist air, but does not include the surrounding ambient air.

The monitors shall be calibrated or have a calibration check performed as specified in Table 13 of the appendix to 40 CFR 63, Part CC to meet the following accuracy specifications: the vent flow monitor shall be ±20 percent of flow rate at velocities ranging from 0.03 to 0.3 meters per second (0.1 to 1 feet per second) ±5 percent of flow rate at velocities greater than 0.3 meters per second (1 feet per second), all other gas flow monitors shall be ±5 percent over the normal range of flow measured or 280 liters per minute (10 cubic feet per minute) whichever is greater, temperature monitor shall be ±1 percent over the normal range of temperature measured, expressed in degrees Celsius (C), or 2.8 degrees C, whichever is greater, and pressure monitor shall be ±5 percent over the normal operating range or 0.12 kilopascals (0.5 inches of water column), whichever is greater. For purposes of this permit, a calibration check means, at a minimum, using a second device or method to verify that the monitor is accurate as specified in the permit.

Calorimeters shall have an accuracy of at least ±2% of span and be calibrated, installed, operated, and maintained in accordance with manufacturer recommendations and as specified in Table 13 of the appendix to 40 CFR 63, Part CC, to continuously measure and record the net heating value of the vent gas sent to the flare, in British thermal units/standard cubic foot of the gas.

For determination of net heating value by gas chromatograph, the minimum accuracy shall be as specified in Performance Specification 9 of Part 60, appendix B. Composition monitoring instruments shall be calibrated, installed, operated, and maintained in accordance with manufacturer recommendations and as specified in 40 CFR §63.671(e) and Table 13 of 40 CFR Pt. 63, Subpart CC. Individual component properties specified in Table 12 of Subpart CC shall apply to net heating value calculations.

E. Quality assured (or valid) data must be generated during periods that flare is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the flare operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

F. Hourly mass emission rates shall be determined and recorded using the monitoring data collected pursuant to paragraph D of this Special Condition and the emission factors specified in the permit application PI-1 dated March 31, 2011.

G. The Acid Gas Flare (EPN 135) is not authorized for routine emissions or for planned maintenance, startup, and shutdown (MSS) emissions.

13. The American Petroleum Institute (API) Separator Combustor shall achieve at least 98 percent destruction efficiency. The vapor combustor combustion temperature shall be maintained at or above 1600˚F (based on a five-minute averaging period) when the separator is in service. This temperature shall be recorded and the records maintained on-site. The vapor combustor operating temperature may be lowered if it has been tested at the lower temperature in accordance with SC No. 38 to demonstrate compliance with this emission limit. Records associated with this permit condition shall be kept for five years.

A back-up carbon adsorption system (CAS) is a means of control equivalent to the API Separator Combustor for compliance with the preceding paragraph of this special condition. When used as back-up control, the CAS shall meet the following requirements:

A. The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.

B. The CAS shall be sampled downstream on the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC. The sampling frequency may be extended using either of the following methods:

(1) The CAS systems equipped with an upstream liquid scrubber may be sampled once every 12 hours of CAS run time to determine breakthrough.

(2) Sampling frequency may be extended to up to 30 percent of the minimum potential saturation time for a new can of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.

(3) The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of a MSS waste gas stream. The past experience must be with the same VOC, type of facility, and MSS activity. The basis for the sampling frequency shall be recorded. If breakthrough is monitored on the initial sample of the upstream can when the polishing can is put in place, a permit deviation shall be recorded.

C. The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 52. **(02/18)**

D. Breakthrough is defined as the highest measured VOC or benzene concentration at or exceeding 100 ppmv or 5 ppmv, respectively, above background. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within twenty-four hours. In lieu of replacing canisters, the flow of waste gas may be discontinued until the canisters are switched. Sufficient new activated carbon canisters shall be available to replace spent carbon canisters such that replacements can be done in the above specified time frame.

E. Records of CAS monitoring shall include the following:

(1) Sample time and date.

(2) Monitoring results (ppmv).

(3) Canister replacement log.

F. Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.

G. Liquid scrubbers may be used upstream of carbon canisters to enhance VOC capture provided such systems are closed systems and the spent absorbing solution is discharged into a closed container, vessel, or system.

14. No visible emissions are allowed from the heaters.

15. The permittee shall operate a continuous hydrogen sulfide (H_2S) monitoring instrument in the fuel feed line header for all fired units with a firing rate greater than 40 MMBtu/hr to continuously monitor a representative sample of fuel gas for H_2S content. The instrument shall be installed and operated according to the specifications set out in 40 CFR § 60.105. These gases shall have a maximum H_2S concentration of 0.054 grain per dry standard cubic foot (dscf) on an hourly average. The Vacuum Unit Heater (EPN 74) may also be fired with vacuum off-gas having a maximum H_2S concentration of 0.10 grain/dscf on an hourly average. **(TBD)**

The following units with a firing rate greater than 40 MMBtu/hr are subject to this condition: EPNs 1, 74, 114, 115, 118, 153, 30-B-04, 117, 162, 150, 152, 172, 49-H-90, and 195.

16. Heater, boiler, and reboiler emissions of ammonia (NH_3), carbon monoxide (CO), hydrogen sulfide (H_2S), nitrogen oxide (NO_x), Particulate matter (PM), PM ≤ 10 microns diameter (PM_{10}), PM ≤ 2.5 microns diameter ($PM_{2.5}$), and volatile organic compounds (VOC) shall meet the following specifications: **(TBD)**

EPN	Facility	NO_x 1-hr block average (lb/MMBtu)	NO_x 3-hr block average (lb/MMBtu)	NO_x daily 365 rolling average (lb/MMBtu)	NO_x Compliance Method
162	38-H-01/02/03	0.06	--	0.060	CEMS
1	Crude Heater	0.06	--	0.060	CEMS
74	Vacuum Unit Heater	0.06	0.060	--	stack test
150	47-H-01/02/03/04	0.06	0.060	--	stack test
152	49-H-01/02/03/04	0.07	--	0.070	CEMS
153	Boiler 30-B-02	--	--	0.080	CEMS
172	RSU Heater	0.06	0.060	--	stack test
49-H-90	C7 Splitter Reboiler	0.04	--	0.040	CEMS
114	Desalter Heater	0.040	0.040	--	stack test
115	12-H-01A/B	0.06	0.060	--	stack test
116	HDS Heavy Oil Preheater	0.12	--	--	

EPN	Facility	NO_x 1-hr block average (lb/MMBtu)	NO_x 3-hr block average (lb/MMBtu)	NO_x daily 365 rolling average (lb/MMBtu)	NO_x Compliance Method
117	Alky Fract Reboiler	0.036	--	0.036	CEMS
118	13-H-01A/B/C	0.06	--	0.060	CEMS
119	Sulften Heater	0.12	--	--	
120	Butamer Heater	0.12	--	--	
195	GD Charge Heater	0.035	--	0.035	CEMS
30-B-04	Boiler 30-B-04	0.015	--	0.015	CEMS
30-B-05	Boiler 30-B-05	0.015	--	0.015	CEMS

EPN	Facility	CO 1-hr block average
162	38-H-01/02/03	0.05 lb/MMBtu
1	Crude Heater	0.05 lb/MMBtu
74	Vacuum Unit Heater	0.05 lb/MMBtu
150	47-H-01/02/03/04	0.03 lb/MMBtu
152	49-H-01/02/03/04	0.03 lb/MMBtu
153	Boiler 30-B-02	--
172	RSU Heater	0.05 lb/MMBtu
49-H-90	C7 Splitter Reboiler	0.05 lb/MMBtu
114	Desalter Heater	0.037 lb/MMBtu
115	12-H-01A/B	0.05 lb/MMBtu
116	HDS Heavy Oil Preheater	0.016 lb/MMBtu
117	Alky Fract Reboiler	0.016 lb/MMBtu
118	13-H-01A/B/C	0.05 lb/MMBtu
119	Sulften Heater	0.016 lb/MMBtu
120	Butamer Heater	0.016 lb/MMBtu
195	GD Charge Heater	100 ppmv (3% O_2)
30-B-04	Boiler 30-B-04	50 ppmv (3% O_2)
30-B-05	Boiler 30-B-05	50 ppmv (3% O_2)

EPN	Facility	VOC lb/MMBtu	$PM/PM_{10}/PM_{2.5}$ lb/MMBtu
30-B-04	Boiler 30-B-04	0.0053	0.0075

EPN	Facility	VOC lb/MMBtu	$PM/PM_{10}/PM_{2.5}$ lb/MMBtu
119	Sulften Heater	0.0053	0.0075
30-B-05	Boiler 30-B-05	0.0053	0.0075

EPN	Facility	H_2S in fuel gas lb/MMBtu	NH_3 lb/MMBtu
30-B-04	Boiler 30-B-04	87 ppmv	10 ppmv
119	Sulften Heater	87 ppmv	10 ppmv
30-B-05	Boiler 30-B-05	87 ppmv	10 ppmv

During reduced-load operations for heaters or boilers equipped with CO CEMS, the emission limitations in the above table for CO shall not apply. Reduced-load operation means the operation of a heater or boiler at a firing rate of no greater than 50% of the maximum rated heat duty of the heater or boiler and not during planned MSS. The time and duration of each of each heater or boiler non-routine operation shall be recorded. Additionally, during each non-routine operation the rates of CO shall be calculated from a boiler or heater's CEMS data to demonstrate that MAERT emission limits are not exceeded. Records shall be maintained at the plant site for a period of five years. **(04/22)**

17. Heaters and boilers are prohibited from burning or combusting fuel oil. For purposes of this paragraph, fuel oil is predominately in the liquid phase at the point of combustion with a sulfur content of greater than 0.05% by weight. **(08/16)**

18. Upon request by the Executive Director of the TCEQ, the EPA, or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.

19. The Desalter Heater (EPN 114) shall comply with the following: **(04/22)**

    A. The desalter heater shall only be fired with natural gas and fuel gas and the firing rate shall not exceed 99 MMBtu/hr on an annual basis (12-month rolling period) and short-term basis.

    B. The natural gas and fuel gas shall be sampled every 6 months to determine the net heating value. Test results from the fuel supplier may be used to satisfy this requirement.

    C. The permit holder shall install and operate a fuel flow meter to measure the gas fuel usage for the desalter heater. The monitored data shall be reduced to an hourly average flow rate at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent.

    D. Quality assured (or valid) data must be generated when the desalter heater is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the desalter heater operated over the previous

rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Sulfur Recovery Units (SRUs) and HOC Scrubber

20. The coke burn-off non-sulfate particulate matter (PM) emissions may not exceed 0.57 pound per 1,000 pounds of coke burn-off. The HOC scrubber sulfuric acid mist (a subset of total PM) emissions shall not exceed 0.35 pound per 1,000 pounds of coke burn-off. **(TBD)**

    Particulate emissions from the HOC shall not exceed one (1) pound per 1,000 pounds of coke burned (front half only according to Method 5B or 5F, as appropriate), measured as a one-hour average over three performance test runs.

    The coke burn-off rate shall be calculated using Equation 6 from 40 CFR § 60.104a(d)(4)(iii).

21. The pH of the HOC scrubber circulating caustic solution shall be continually monitored and be maintained at a level between 6.0 and 9.0 by the addition of fresh caustic solution as required. The pH shall be recorded at least hourly, and the records maintained at the plant site for a period of five years. These records shall be made available for inspection by the Executive Director of the TCEQ or his designated representative.

22. The minimum sulfur recovery efficiency for the SRU/Sulften and SRU/Scot shall be 99.8 percent. The sulfur recovery efficiency shall be determined by calculation as follows: **(01/21)**

    Efficiency = (S recovered)*(100) / (S acid gas)

    Where:

    Efficiency = sulfur recovery efficiency, percent

    S recovered = (S acid gas - S stack), pounds per hour (lb/hr)

    S acid gas = sulfur in acid gas stream, lb/hr

    S stack = sulfur in incinerator stack, lb/hr

    The sulfur recovery efficiency shall be demonstrated for each calendar day (24-hour period) by a mass balance calculation using data obtained from the incinerator stack sulfur dioxide monitor and sulfur production records. Records and copies of the compliance calculations shall be maintained.

23. Acid gas must be routed to a properly operating SRU train. All SRU trains shall normally be operated when acid gas is being produced to maintain the maximum redundant sulfur capacity. The TCEQ Regional Office shall be notified within 72 hours if any SRU train is not fully operational. The notification shall include a description of the problem, the estimated loss of capacity, actions required to correct the problem, and when the line is expected to be fully operational.

    In the event that the Sulften/Scot unit is not operating properly, immediate steps shall be taken to correct the improper operation and shift the acid gas feeds to another fully operational SRU.

24. The Scot tail gas incinerator shall be operated with no less than 3.0 percent oxygen (O_2) in the incinerator stack and at no less than 1500˚F incinerator firebox exit temperature. The incinerator shall achieve a minimum H_2S destruction efficiency of 99.9 percent or 5 parts per million by volume

(ppmv) (corrected to 3 percent excess O_2) reduced sulfur compound exit concentration. If stack testing indicates that a higher temperature or O_2 concentration is necessary to obtain a minimum H_2S destruction efficiency of 99.9 percent or 5 ppmv (corrected to 3 percent excess O_2) reduced sulfur compound exit concentration, then the temperature and O_2 maintained during the stack test will become the new minimum operating limits. The O_2 and temperature requirements do not apply when performing a stack test on the incinerator in accordance with SC No. 39. The permit holder may request that the operating limits be relaxed with a permit alteration request should stack testing indicate the required emissions control is obtained at the proposed limits.

25. In order to control opacity from the stack of EPN 121, the permittee shall maintain the liquid to the filtering modules at a pressure greater than 45 pounds per square inch (psi) and the flue gas pressure drop across the filtering modules and the cyclolabs at no less than 5 inches of water. Liquid pressure and pressure drop shall be continuously recorded and maintained at the plant site for a period of five years. These records shall be made available for inspection by the Executive Director of the TCEQ or his designated representative. **(TBD)**

    The opacity of emissions from the Caustic Scrubber Stack (EPN 121) shall not exceed 20 percent averaged over a six-minute period as determined by a trained observer. Visual emissions observations shall be made quarterly using Method 22. If visual emissions are observed, the permit holder shall measure the visual emissions using Method 9.

Control Requirements

26. The Oleflex and Naphtha Continuous Catalyst Regenerator (CCR) scrubber liquids shall be sampled at least twice daily (once per shift) for caustic inventory. The pH of the scrubbing liquids in the Oleflex CCR caustic scrubber shall be maintained at 8 pH units or greater. The caustic concentration of the Naphtha Reformer CCR shall be maintained greater than 0.41 weight percent sodium hydroxide (measured as total alkalinity). **(11/20)**

27. The caustic absorber circulation rate for the Naphtha CCR shall be a minimum of 368 gpm. The circulation rate shall be recorded at least hourly, and the records maintained at the plant site for a period of five years. These records shall be made available for inspection by the Executive Director of the TCEQ or his designated representative.

28. Storage tanks are subject to the following requirements. The control requirements specified in paragraphs A through D of this condition shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.50 psia at the maximum feed temperature or 95˚F, whichever is greater, or (2) to storage tanks smaller than 25,000 gallons.

    A. An internal floating deck or roof or equivalent control shall be installed in all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.

    B. An open-top tank containing a floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.

C. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and seal gap measurements as specified in 40 CFR § 60.113b, Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989), to verify fitting and seal integrity. Records shall be maintained of the dates seals were inspected and seal gap measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.

D. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.

E. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum. Storage tanks must be equipped with permanent submerged fill pipes.

F. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12-month period. The record shall include tank identification number, control method used, tank capacity in barrels, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions for tanks shall be calculated using the TCEQ publication titled “Technical Guidance Package for Chemical Sources - Storage Tanks.”

G. Floating roof tanks 23, 26, and 164 shall be equipped with a Pole Sleeve System or equivalent as required by the Storage Tank Emission Reduction Partnership Program (STERPP) Agreement with U.S. EPA, dated May 23, 2001, as listed in Appendix I and Annex A of that agreement. Storage Tank 164 was owned by the Valero Bill Greehey Refinery – West Plant at the time of STERPP Agreement execution and is currently owned by NuStar Energy LP (a non-affiliated company).

29. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable rates table. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

30. All cooling towers except for the Propylene cooling tower (EPN HOC-PP-CT) shall comply with the requirements of paragraphs A-D, and the Propylene cooling tower (EPN HOC-PP-CT) shall comply with the requirements of paragraph E: **(TBD)**

A. The cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.

B. Cooling water VOC concentrations above 0.08 ppmw indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

C. Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.80 ppmw. The VOC concentrations above 0.80 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.

D. Cooling water shall be sampled once a week for total dissolved solids (TDS) and once a day for conductivity. Dissolved solids in the cooling water drift are considered to be emitted as total particulate matter (PM) / PM equal to or less than 10 microns in diameter (PM_{10}) / PM equal to or less than 2.5 microns in diameter ($PM_{2.5}$). The data shall result from collection of water samples from the cooling tower feed water and represent the water being cooled in the tower. Water samples should be capped upon collection, and transferred to a laboratory area for analysis. The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, and SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. The analysis method for Conductivity shall be ASTM D1125-95A and SM2510 B. Use of an alternative method shall be approved by the TCEQ Regional Director prior to its implementation.

E. The Propylene cooling tower (EPN HOC-PP-CT) shall be operated and monitored in accordance with the following:

(1) The VOC associated with the Propylene cooling tower (EPN HOC-PP-CT) water shall be monitored monthly with an air stripping system meeting the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or an approved equivalent sampling method. The results of the monitoring, cooling water flow rate and maintenance activities on the cooling water system shall be recorded. The monitoring results and cooling water hourly mass flow rate shall be used to determine cooling tower hourly VOC emissions. The rolling 12 month cooling water emission rate shall be recorded on a monthly basis and be determined by summing the VOC emissions between VOC monitoring periods over the rolling 12 month period. The emissions between VOC monitoring periods shall be obtained by multiplying the total cooling water mass flow between cooling water monitoring periods by the higher of the two VOC monitored results.

(2) Each cooling tower shall be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less. Drifts eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.

(3) Total dissolved solids (TDS) shall not exceed 6,000 parts per million by weight (ppmw). Dissolved solids in the cooling water drift are considered to be emitted as PM, PM_{10}, and $PM_{2.5}$ as represented in the permit application calculations.

(4) Cooling water shall be sampled at least once per week for TDS.

(5) Cooling water sampling shall be representative of the cooling tower feed water and shall be conducted using approved methods.

(a) The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, and SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. Water samples should be capped upon collection, and transferred to a laboratory area for analysis.

(b) Alternate sampling and analysis methods may be used to comply with (5)(a) with written approval from the TCEQ Regional Director. If approved by the TCEQ Regional Director, the permit holder shall submit a permit application to

incorporate the alternative sampling and analysis method into the permit within 2 months of the date of written approval.

(c) Records of all instrument calibrations and test results and process measurements used for the emission calculations shall be retained.

(6) Emission rates of PM, PM_{10} and $PM_{2.5}$ shall be calculated using the measured TDS, the design drift rate and the daily maximum and average actual cooling water circulation rate for the short term and annual average rates. Alternately, the design maximum circulation rate may be used for all calculations. Emission records shall be updated monthly.

Fugitive Emissions Control

31. Piping, Valves, Flanges, Pumps, and Compressors in VOC Service - Intensive Directed Maintenance - 28 VHP

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment.

A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68˚F or (2) the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

(1) piping and instrumentation diagram (PID);
(2) a written or electronic database or electronic file;
(3) color coding;
(4) a form of weatherproof identification; or
(5) designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), API, American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe-to-monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe-to-monitor times. A difficult-to-monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the

new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period: the line or valve must have a cap, blind flange, plug, or second valve installed; or the permit holder shall verify that there is no leakage from the open-ended line or valve. The open-ended line or valve shall be monitored on a weekly basis in accordance with the applicable permit condition for fugitive emission monitoring, except that a leak is defined as any VOC reading greater than background. Leaks must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. The results of this weekly check and any corrective actions taken shall be recorded.

F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed weekly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs are being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher

pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained.

I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 through 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.

Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standards (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

32. Pump and compressor seals shall be monitored for fugitive leakage monthly rather than quarterly as specified by SC No. 31. The leak definitions, recordkeeping, and corrective actions of those conditions still apply to these components.

33. In addition to the weekly physical inspection required by Item E of SC No. 31, all accessible valve connectors in gas or vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items F through J of SC No. 31.

In lieu of the monitoring frequency specified in the above paragraph, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of connectors leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in the paragraph.

The percent of connectors leaking used in paragraph B shall be determined using the following formula:

(Cl + Cs) x 100/Ct = Cp

Where:

Cl = the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe-to-monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

Process Piping, Valves, Pumps, and Compressors in H_2S and Hydrogen Fluoride (HF) Service.

34. This condition shall apply to all process streams with greater than 2 weight percent H_2S and all process streams with greater than 0.5 weight percent HF.

A. Audio, olfactory, and visual checks for H_2S and HF leaks within the operating area shall be made once a shift. **(04/22)**

B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:

(1) Isolate the leak.

(2) Commence repair or replacement of the leaking component.

(3) If immediate repair is not possible, a leak collection or containment system will be used to prevent or minimize the leak or the facility shall be shutdown in an orderly manner until repair or replacement can be made. Containment can include adjustment of bolts, fittings, packing glands, and pump or compressor seals to contain the leak.

Records shall be maintained of all inspections, leaks noted, repairs, and replacements made. These records shall be maintained at the plant site for a period of five years and shall be made immediately available at the request of TCEQ personnel.

Wastewater Collection and Treatment

35. The wastewater collection and treatment system shall comply with the requirements of this permit and with the requirements for wastewater systems in 40 CFR Part 60, Subparts A and QQQ, except as described in the following sentence. Components for which construction, modification, or reconstruction has not commenced after May 4, 1987, in the process units that follow, shall comply with the requirements of this permit and with the requirements of applicable State regulations, but are exempt from 40 CFR Part 60, Subparts A and QQQ.

Process Unit	
Heavy Oil Cracker	Vacuum Unit
HDS Unit	HF Alky Unit
SMR Unit	Boilerhouse
Crude Unit	SWS/Amine
SRU/Sulften	Tank Farm

36. The wastewater collection systems which are routed to a control device shall comply with the following requirements: **(TBD)**

A. Process wastewater drains shall be equipped with water seals or equivalent. Lift stations (with the exception of the HOC Gas Plant lift station), manholes, junction boxes, any other wastewater collection system components, conveyance, storage, and treatment system to the biological treatment unit shall be equipped with a closed vent system that routes all organic vapors to an API Separator Combustor or a back-up CAS. The HOC Gas Plant lift station shall be routed to the CAS (EPN CAS-HOCPP).

B. Water seals shall be checked by visual or physical inspection quarterly for indications of low water levels or other conditions that would reduce the effectiveness of water seal controls. Water seals shall be restored as necessary within 24 hours. Records shall be maintained of these inspections and of corrective actions taken.

C. The HOC Gas Plant lift station shall vent through a CAS (EPN CAS-HOCPP) consisting of at least two activated carbon canisters that are connected in series.

(1) The CAS shall be sampled every two weeks or at 30 percent of the minimum potential saturation time, whichever is soonest, to determine breakthrough of volatile organic compounds (VOC). The sampling point shall be at the outlet of the initial canister but before the inlet to the second or final polishing canister. Sampling shall be done during routine operation of the lift station when wastewater is being generated by process units.

(2) The VOC sampling and analysis shall be performed using an instrument with a flame ionization detector (FID), or a TCEQ-approved alternative detector. The instrument/FID must meet all requirements specified in Section 8.1 of EPA Method 21

(40 CFR 60, Appendix A). Sampling and analysis for VOC breakthrough shall be performed as follows:

(a) Immediately prior to performing sampling, the instrument/FID shall be calibrated with zero and span calibration gas mixtures. Zero gas shall be certified to contain less than 0.1 ppmv total hydrocarbons. Span calibration gas shall be methane at a concentration within ± 10 percent of 5 ppmv, and certified by the manufacturer to be ± 2 percent accurate. Calibration error for the zero and span calibration gas checks must be less than ± 5 percent of the span calibration gas value before sampling may be conducted.

(b) The sampling point shall be at the outlet of the initial canister but before the inlet to the second or final polishing canister. Sample ports or connections must be designed such that air leakage into the sample port does not occur during sampling.

(c) During sampling, data recording shall not begin until after two times the instrument response time. The VOC concentration shall be monitored for at least 5 minutes, recording 1-minute averages, during the maximum flow rate from the lift station.

(3) Breakthrough shall be defined as the highest 1 minute average measured VOC concentration at or exceeding 100 ppmv or benzene concentration at or exceeding 5 ppmv. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within 24 hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.

(4) Records of the CAS monitoring maintained at the plant site, shall include (but are not limited to) the following:

(a) Sample time and date.

(b) Monitoring results (ppmv).

(c) Corrective action taken including the time and date of that action.

(d) Process operations occurring at the time of sampling.

(5) Alternate monitoring or sampling requirements that are equivalent or better may be approved by the TCEQ Regional Manager. Alternate requirements must be approved in writing before they can be used for compliance purposes.

37. The daily wastewater flow into the wastewater treatment plant shall be monitored and recorded. The rolling 12-month wastewater flow shall be totaled on a monthly basis.

38. The minimum mixed liquor total suspended solids (MLSS) concentration in the aeration basins on a daily average basis shall not be less than 2000 mg/L. The MLSS concentration is the arithmetic average of all samples collected during the 24-hour period. The MLSS concentrations shall be monitored and recorded daily using Method 160.2 (Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 or Method 2540D (Standard Methods of the Examination of Water and Wastewater, 18th Edition, American Public Health Association).

Compliance Testing

39. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from all heaters and boilers with firing rates greater than 40 MMBtu/hr, Scot Tail Gas Incinerator (EPN 121 or 121a), Sulften Tail Gas Incinerator (EPN 121 or 121a), Caustic Scrubber (EPN 121), Marine Loading VRU (EPN VRU), and Vapor Combustors (EPNs TRUCKCOMB and 124), to demonstrate compliance with the maximum allowable emissions rate table (MAERT). Sampling shall be performed upstream and downstream of the SMR condensate stripper vent condenser to demonstrate compliance with SC No. 46. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods. **(TBD)**

    Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

    A. The appropriate TCEQ Regional Office shall be notified not less than 30 days prior to sampling.

        The notice shall include:

        (1) Proposed date for pretest meeting.

        (2) Date sampling will occur.

        (3) Name of firm conducting sampling.

        (4) Type of sampling equipment to be used.

        (5) Method or procedure to be used in sampling.

        (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

        (7) Procedure/parameters to be used to determine worst case emissions, such as production rate, to set operating parameters and limits to be monitored during the sampling period.

        The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports.

    B. Air contaminants to be tested from sources:

        (1) Air contaminants emitted from the heaters and boilers to be tested for include (but are not limited to) NO_x and CO.

        (2) Air contaminants emitted from the caustic scrubber to be tested for include (but are not limited to) sulfur dioxide (SO_2), NO_x, PM (both front and back-half of the sampling train), sulfuric acid, and CO. Stack testing of the Belco Scrubber (EPN 121) shall be accomplished by temporarily routing the Sulften and Scot Tail gas to EPN 121a.

(3) Air contaminants emitted from the Sulften and Scot tail gas incinerators to be tested for include (but are not limited to) SO_2, NO_x, CO, PM (both front and back half of the sampling train), and total reduced sulfur.

(4) Air contaminants emitted from the vapor combustors to be tested for include (but are not limited to) VOC, NO_x, and CO.

(5) Air contaminants to be tested for the SMR condensate stripper vent condenser include methanol.

C. Requests for additional time to perform sampling shall be submitted to the TCEQ Corpus Christi Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval. Sampling of air contaminants shall occur as follows:

(1) Air contaminants monitored with a CEMS as specified under SC No. 40 shall be sampled to support CEMS operation as required by that condition.

(2) Sampling of air contaminants not monitored by CEMS under SC No. 40 shall occur as follows:

(a) Within 180 days of the issuance of this permit unless the emission point had been sampled within the last 5 years.

(b) Each emission point shall be sampled within 60 days of achieving maximum operation, not to exceed 180 days after initial operation, if new burners have been installed or if an operational change has been made allowing emissions to increase more than 10 percent greater than determined by the last stack sample.

(c) Each emission point shall be sampled as may be required by the Executive Director of the TCEQ.

D. The facility shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if an operating parameter as determined in the previous paragraph is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the Region.

E. One copy of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached conditions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Corpus Christi Regional Office.

Continuous Determination of Compliance

40. The holder of this permit shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of VOC from the marine VRU; CO, NO_x, and O_2 from the heaters and boilers with firing rates greater than 100 MMBtu/hr; SO_2 and O_2 from the SRU/Sulften Tail Gas Incinerator (exhausts to EPN 121 or 121a); SO_2 and O_2 from the SRU/Scot Tail Gas Incinerator (exhausts to EPN 121 or 121a), and NO_x, CO, O_2, and SO_2 from the Caustic Scrubber (exhausts to EPN 121). The monitoring system shall meet the following section of Requirements for CEMS. **(02/18)**

Requirements for CEMS

A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 7, 40 CFR Part 60, Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

(1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

(2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of NSPS or NESHAPS, in which case zero and span shall be done daily without exception.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

C. The monitoring data shall be reduced to hourly average concentrations at least once weekly, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in pounds/hr at least once every week and cumulative tons per year (TPY) on a 12-month rolling average at least once every month.

D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or his designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. All cylinder gas audit exceedances of ±15 percent accuracy and any CEMS downtime associated with emissions from EPNs 121 and 121a shall be reported to the appropriate TCEQ Regional Director within three days of any downtime, and necessary corrective action shall be taken. If the CEMS downtime for a specific emission point occurs when emissions are not being routed to that stack, that time period shall not be considered reportable CEMS downtime for the purposes of this special condition. Exceedances at other emission points shall be reported in Semiannual Excess Emission Reports. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

F. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

G. Quality-assured (or valid) data must be generated when each emitting facility is operating, except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted, provided that it does not exceed 5 percent of the time (in minutes) that the facility operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

H. This paragraph applies to the NO_x, SO_2, and O_2 CEMS on the Caustic Scrubber (exhausts to EPN 121) and to the heaters and boilers in listed in SC No. 16 with NO_x CEMS. In addition to the requirements of SC No. 40.A-G., the CEMS shall be installed, certified, calibrated, maintained and operated in accordance with the provisions of 40 CFR §60.13 which are applicable only to CEMs (excluding those provisions applicable only to continuous opacity monitoring systems) and Part 60, Appendices A and F, and the applicable performance specification test of 40 CFR Part 60, Appendix B. With respect to 40 CFR Part 60 Appendix F, in lieu of the requirements of 40 CFR Part 60, Appendix F §§5.1.1, 5.1.3 and 5.1.4, the source must conduct either a RAA or a RATA on each CEMS at least once every three (3) years. The source must also conduct CGA each calendar quarter during which a RAA or a RATA is not performed. **(02/18)**

41. Pollutant concentrations at the outlet from the Caustic Scrubber (exhausts to EPN 121) shall not exceed the following values at dry conditions, zero percent O_2:

Pollutant	Maximum Allowable	Averaging Period
SO_2	50 ppm	1.0 hour
SO_2	50 ppm	7-day rolling average **(04/16)**
SO_2	25 ppm	365-day rolling average **(04/16)**
CO	500 ppm	1.0 hour
NO_x	150 ppm	1.0 hour

Pollutant concentrations at the outlet from the SCOT Stack (EPN 121a) shall not exceed the following values at dry conditions, zero percent O_2:

Pollutant	Maximum Allowable	Averaging Period
SO_2	250 ppm	1.0 hour
CO	332 ppm	1.0 hour
NO_x	50 ppm	1.0 hour

42. The continuous monitoring data will be used to determine violations of the limitations in this permit. For purposes of enforcement, the following averaging periods shall be utilized unless otherwise specified in this permit with respect to a specific emission point and pollutant:

Pollutant	Averaging Period
SO_2	1.0 hour
CO	1.0 hour
H_2S	1.0 hour
Opacity	6.0 minutes
NO_x	1.0 hour

HF Control Measures

43. The HF detection paint shall be used on all potential fugitive sources and possible leak sites. Locations with HF detection paint shall be inspected every shift during the audio, visual, and olfactory checks required by SC No. 34. If leaks are detected, corrective action shall be taken immediately as described in SC No. 34. If there is a problem with HF sensitive paint availability, the holder of this permit shall notify the TCEQ Corpus Christi Regional Office and request additional time for painting or request alternate leak detection methods pending availability of the HF sensitive paint.

44. In the event of an HF release which may have the potential for off-site impacts, the holder of this permit shall implement the procedures outlined in the emergency response plans.

45. There shall be no overhead work in the HF process unit where equipment is being lifted over unprotected vessels or lines without first completing a safe work checklist in accordance with Occupational Safety and Health Administration Process Safety Management rules. The safe work checklist shall be used to ensure that every effort is made to minimize the potential for an accident that would result in loss of integrity of HF-containing equipment.

    The holder of this permit is required to notify the TCEQ Corpus Christi Regional Office no less than eight hours prior to conducting work over unprotected vessels or lines containing more than 5 percent by weight HF.

Miscellaneous

46. The SMR stripper vent condenser shall collect 98 percent of the methanol in the stripper vent on an hourly averaging period. The stripper exhaust gas temperature shall be maintained below that maintained during the most recent stack sample following the initial stack test.

    The condenser exhaust gas temperature shall be continuously monitored and recorded when the stripper is operating. The temperature measurement device shall reduce the temperature readings to an averaging period of six minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5˚C.

47. Flares: BUP Flare, Main Flare and Ground Flare shall be operated in accordance with the New Source Performance Standards for Petroleum Refineries, 40 CFR Part 60 Subpart Ja. **(04/16)**

48. After December 31, 2008 the maximum allowable emission limit of NO_x from the West Plant Heavy Oil Cracker (HOC) (EPN 121) shall not exceed 37 ppmv (dry, zero percent O_2 basis) on a 365-day rolling average and shall not exceed 74 ppmv (dry, zero percent O_2 basis) on a 7-day rolling average. **(04/16)**

Maintenance, Startup, and Shutdown

49. Planned startup and shutdown emissions due to the activities identified in SC No. 50 are authorized from facilities and emission points identified in Attachment 1, Boiler 30-B-03 (EPN: 163) in Permit 20740, the Xylene Splitter Reboiler Heater 49-H-91 (EPN: 49-H-91) in Permit 20992, emission points identified in SC No. 16 in Permit 106965, and emission points identified in SC No. 25 in Permit 109543, provided the facility and emissions are compliant with the routine emission caps and SC No. 60 of this permit. **(02/14)**

50. This permit authorizes the emissions for the planned MSS activities summarized in the MSS Activity Summary (Attachment 4) attached to this permit. This permit also authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, facilities used for painting or abrasive blasting, portable control devices identified in SC No. 61, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities listed in Attachment 1, and (c) does not operate as a replacement for an existing authorized facility.

    Attachment 2 identifies the inherently low emitting MSS activities that may be performed at the refinery. Emissions from activities identified in Attachment 2 shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment 2 must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

    Routine maintenance activities, as identified in Attachment 3 may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment 3 shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachments 2 or 3 and the emissions associated with it shall be recorded and include at least the following information: **(04/22)**

A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;

B. the type of planned MSS activity and the reason for the planned activity;

C. the common name or the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

D. the date and time on which the MSS activity occurred;

E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. A sum of all hourly MSS emissions shall be kept during all times when MSS activities are occurring to demonstrate that the MAERT hourly MSS Cap is not exceeded.

51. Process units and facilities, with the exception of those identified in SC Nos. 54 (related to Floating Roof Tanks), 55 (related to Fixed Roof Tanks), 57 (related to frac or temporary tanks), and activities listed in Attachment 2, shall operate in accordance with the following requirements during MSS.

A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC true vapor pressure (TVP) less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition without depressuring or degassing to a control device. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.

B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC TVP is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.

C. All liquids from process equipment shall be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids with a VOC partial pressure greater than or equal to 0.044 psia at 68°F shall be drained into a closed vessel or to a controlled oily water system, unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid shall be covered or transferred to a covered vessel within one hour of being drained. After draining is complete, empty open pans may remain in use for housekeeping reasons to collect incidental drips.

D. If the VOC TVP is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent

allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.

The following requirements do not apply to fugitive components, pumps, compressors.

(1) For MSS activities identified in Attachment 3, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and establish isolation of the work area, until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.

(2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (PFD's, P&ID's, or Turnaround and Inspection [T&I] plans may be used to demonstrate compliance with the requirement). Documented refinery procedures used to deinventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above. If the process equipment is purged with a gas, purge gas must have passed through the control device or controlled recovery system for a sufficient period of time in accordance with the applicable site operating procedures before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of SC No. 52. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than or equal to 10,000 ppmv or 10 percent of the LEL.

(3) Alternatively, the process equipment may filled with a liquid with a VOC vapor pressure less than 0.147 psi while venting to control. If it can be verified that the liquid filled the entire process equipment or vessel, no sampling is necessary. If not, the VOC concentration shall be verified to be less than 10,000 ppmv or 10 percent of the LEL using an instrument meeting the requirements of SC No. 52 while purging to control immediately after draining the liquid from the system. The locations and/or identifiers where the liquid enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (PFDs, P&IDs, or T&I plans may be used to demonstrate compliance with the requirement).

E. Equipment containing materials with VOC TVP greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:

(1) It is not technically practicable to depressurize or degas, as applicable, into the process.

(2) There is not an available connection to a plant control system (flare).

(3) There is no more than 50 lb of air contaminants to be vented to atmosphere during each shutdown or startup of a piece of equipment, as applicable.

All instances of venting directly to atmosphere per SC No. 51.D must be documented when occurring as part of any MSS activity. The emissions associated with venting without control

must be included in the work order, shift logs, or equivalent for those planned MSS activities identified in Attachment 3. **(02/18)**

52. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

A. The VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR Part 60, Appendix A) with the following exceptions:

(1) The instrument shall be calibrated within 24 hours of use with a calibration gas. The calibration gas used and its concentration, and the vapor to be sampled and its approximate response factor (RF), shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

(2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes and the greatest VOC concentration recorded. This VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

(3) If a TVA-1000 series FID analyzer calibrated with methane is used to determine the VOC concentration, a measured concentration of 34,000 ppmv may be considered equivalent to 10,000 ppmv as VOC.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

(1) The air contaminant concentration measured is less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration defined in (3), the concentration measured is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector.

(1) The detector shall be calibrated monthly with a certified pentane gas standard at 25 percent of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same certified gas standard used for calibration. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 25 percent of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95 percent of that for pentane.

D. For measuring benzene breakthrough on Carbon Adsorption Systems in SC No. 61.A.(4), a portable gas chromatograph using a flame ionization detector or photo ionization detector may be used. Alternatively a photo-ionization detector equipped with a benzene separation tube consistent with manufacturer requirements may be used. The monitor shall have the sensitivity and specificity to quantify low level benzene concentrations. The monitor device shall be calibrated within 24 hours of use with a certified calibration gas containing ~5 ppm benzene. Records of the calibration date/time and calibration result shall be maintained.

53. If the removal of a component for repair or replacement results in an open ended line or valve, the open ended line is exempt from any New Source Review (NSR) permit condition requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

A. a cap, blind flange, plug, or second valve must be installed on the line or valve, or demonstrate that the line, valve, component, etc, has been double blocked from the process; or

B. the permit holder shall verify that there is no leakage from the open-ended line or valve. The open-ended line or valve shall be monitored on a weekly basis in accordance with the applicable NSR permit condition for fugitive emission monitoring except that a leak is defined as any VOC reading greater than background. Leaks must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. The results of this weekly check and any corrective actions taken shall be recorded.

54. This permit authorizes emissions from the storage tanks identified in Attachment 1 during planned floating roof landings. Tank floating roofs may only be landed for changes of tank service or tank inspection/maintenance as identified in the permit application, except when the VOC vapors below the floating roof are routed to a control device or a controlled recovery system while the roof is landed. Tank change of service includes landings to accommodate seasonal RVP spec changes and landings to correct off-spec material that cannot be blended into finished product tanks. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The following requirements apply to tank roof landings.

A. The tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank has been drained to the maximum extent practicable without entering the tank. Liquid level may be maintained steady for a period of up to two hours if necessary to allow for valve lineups and pump changes necessary to drain the tank. This

requirement does not apply where the vapor under a floating roof is routed to control during this process.

B. If the VOC TVP of the liquid previously stored in the tank is greater than 0.50 psi at 95°F tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC TVP of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:

(1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.

(2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.

(3) A volume equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The volume measurement shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in SC No. 52.

(4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.

(5) If ventilation is to be maintained with emission control, the VOC concentration shall be recorded once an hour.

(6) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC TVP of the remaining liquid in the tank is less than 0.15 psia.

C. The tank shall not be opened except as necessary to set up for degassing and cleaning, or ventilated without control, until either all standing liquid has been removed from the tank or the liquid in the tank has a VOC TVP less than 0.02 psia. These criteria may be demonstrated in any one of the following ways.

(1) Low VOC TVP liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC TVP of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC TVP may be estimated based on this information and engineering calculations.

(2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:

(a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR Part 435 Subpart A Appendix 1.

(b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

(c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in MSS SC No. 52.

(3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

D. Tanks shall be refilled as rapidly as practicable until the roof is off its legs unless the vapor space is routed to control during refilling except as required by SC No. 69.

E. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:

(1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;

(2) the reason for the tank roof landing;

(3) for the purpose of estimating emissions, the date and time of each of the following events:

(a) the roof was initially landed,

(b) all liquid was pumped from the tank to the extent practical,

(c) start and completion of controlled degassing, and total volumetric flow,

(d) all standing liquid was removed from the tank or any transfers of low VOC TVP liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC TVP to <0.02 psi,

(e) if there is liquid in the tank, VOC TVP of liquid, start and completion of uncontrolled degassing, and total volumetric flow,

(f) refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

(g) tank roof off supporting legs, floating on liquid;

(4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events (c) and (g) with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 “Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids” dated November 2006 and the permit application.

55. Fixed-roof storage tanks shall not be ventilated without control, until either all standing liquid has been removed from the tank or the liquid in the tank has a VOC TVP less than 0.02 psia. This shall

be verified and documented through one of the criteria identified in MSS SC No. 52.C. Storage tanks manways may be opened without emission controls when there is standing liquid with a VOC TVP greater than 0.02 psia as necessary to set up for degassing and cleaning. One manway may be opened to provide access to the tank when necessary to allow access to remove or de-volatilize the remaining liquid. The emission control system shall meet the requirements of SC Nos. 54.B.(1) through 54.B.(5) and records maintained per SC No. 54.E.(3)c through 54.E.(3)e, and 54.E.(4). Low vapor pressure liquid may be added to and removed from the tank as necessary to lower the vapor pressure of the liquid mixture remaining in the tank to less than 0.02 psia.

56. The following requirements apply to vacuum and air mover truck operations at this site:

A. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC TVP greater than 0.50 psi at 95F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.

B. Equip fill line intake with a “duckbill” or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.

(1) Prior to initial use, identify any liquid in the truck. Record the liquid level and document that the VOC TVP is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC TVP is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system.

(2) For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a “duckbill” or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.

(3) If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and as required by SC No. 61, measured using an instrument meeting the requirements of MSS SC No. 52.

(4) The volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.

D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12 month vacuum truck emissions shall also be determined on a monthly basis.

E. If the VOC TVP of all the liquids vacuumed into the truck is less than 0.10 psi, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in the permit application. The recordkeeping requirements in SC Nos. 56.A through 56.D do not apply.

57. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

    A. Except for labels, logos, etc. not to exceed 15 percent of the tank/vessel total surface area, the exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled. This requirement also does not apply to frac tanks which are heated for the purpose of mixing liquids with VOC TVP less than 0.10 psi at 95°F. **(03/16)**

    B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.

    C. These requirements do not apply to vessels storing less than 25 barrels of liquid that are closed such that the vessel does not vent to atmosphere.

    D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC TVP at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources Storage Tanks."

    E. If the tank/vessel is used to store liquid with VOC TVP less than 0.10 psi at 95F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application.

58. The term "true vapor pressure (TVP)" is used in lieu of the term "partial pressure" in this permit.

59. The MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit.

60. All permanent facilities must comply with all operating requirements, limits, and representations in the permits identified in Attachment 1 during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for emissions from routine emission points are identified below:

    A. Heaters, boilers, and furnaces are exempt from NO_x and CO operating requirements identified in other special conditions this permit during planned startup and shutdown if the following criteria are satisfied. This exemption does not include NO_x 365-day rolling average limits. **(08/16)**

        (1) The routine maximum allowable emission caps are not exceeded.

        (2) Except as noted in SC 60 A(4) below the startup period does not exceed 8 hours in duration and the firing rate does not exceed 75 percent of the design firing rate. The time it takes to complete the shutdown does not exceed 4 hours.

        (3) Control devices are started and operating properly when venting a waste gas stream.

(4) Startup times exceeding 8 hours for specific facilities are allowed as identified below: **(04/22)**

Heater, Boiler, or Furnace FIN	EPN	Maximum Hours Allowed for Startup of each FIN
12-H01A and 12-H01B	115A and 115B	48
13-H-01A, 13-H-01B, and 13-H-01C	118	28
31-H-01	117	12
38-H-01, 38-H-02,38-H-03	162	45
47-H-03 and 47-H-04	150	10
48-H-01	151	12
49-H-01, 49-H-02, 49-H-03, 49-H-04	152	16
52-H-01	195	24

B. The limits identified below apply to the operations of the specified facilities during startup and shutdown. All other routine operating limitations apply during planned startup and shutdown.

(1) The HOC startup period shall not exceed 86 hours and the hourly average CO concentration during this period shall not exceed 1200 ppmvd corrected to zero percent O_2. All HOC emissions during startup are in the MSS emission caps.

(2) The sulfur recovery requirements and SRU tail gas incinerator sulfur dioxide concentration limits in SC Nos. 22 and 41 do not apply during SRU startup. Operation in the hot standby mode shall be minimized. The SRU tailgas incinerator shall be operated in accordance with SC No. 24 during this period. A SRU incinerator shall not operate in this mode for more than 72 hours in any rolling 12 month period.

(3) Paragraph (2) of this condition does not apply when SRU vent gasses from a TGI are routed through the HOC caustic scrubber prior to being discharged to the atmosphere. This paragraph applies instead. The HOC caustic scrubber shall be monitored with a SO_2 CEMS.

C. A record shall be maintained indicating that the start and end times for each of the activities identified above occur and documentation that the requirements for each have been satisfied.

61. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating refinery process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Carbon Adsorption System (CAS).

(1) The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.

(2) The CAS shall be sampled downstream on the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC. The sampling frequency may be extended using either of the following methods:

(a) The CAS systems equipped with an upstream liquid scrubber may be sampled once every 12 hours of CAS run time to determine breakthrough.

(b) Sampling frequency may be extended to up to 30 percent of the minimum potential saturation time for a new can of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.

(c) The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of a MSS waste gas stream. The past experience must be with the same VOC, type of facility, and MSS activity. The basis for the sampling frequency shall be recorded. If breakthrough is monitored on the initial sample of the upstream can when the polishing can is put in place, a permit deviation shall be recorded.

(3) The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 52.

(4) Breakthrough is defined as the highest measured VOC or benzene concentration at or exceeding 100 ppmv or 5 ppmv, respectively, above background. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within twenty-four hours. In lieu of replacing canisters, the flow of waste gas may be discontinued until the canisters are switched. Sufficient new activated carbon canisters shall be available to replace spent carbon canisters such that replacements can be done in the above specified time frame.

(5) Records of CAS monitoring shall include the following:

(a) Sample time and date.

(b) Monitoring results (ppmv).

(c) Canister replacement log.

(6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.

(7) Liquid scrubbers may be used upstream of carbon canisters to enhance VOC capture provided such systems are closed systems and the spent absorbing solution is discharged into a closed container, vessel, or system.

B. Thermal Oxidizer and Vapor Combustion Units (VCUs) **(04/22)**

(1) The thermal oxidizer or VCU six minute average firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.

(2) The thermal oxidizer or VCU exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer or VCU. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency. Temperature measurements recorded in continuous strip charts may be used to meet the requirements of this section.

The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5ºC.

(3) As an alternative to 61.B.(1) of this condition, the thermal oxidizer or VCU may be tested to confirm a minimum 99 wt percent destruction efficiency. The results of the test will be used to determine the minimum operating temperature and residence time. Stack Test must have been performed within the last 12 months. Stack VOC concentrations and flow rates shall be measured in accordance with applicable United States Environmental Protection Agency (EPA) Reference Methods. A copy of the test report shall be maintained with the thermal oxidizer or VCU and a summary of the testing results shall be included with the emission calculations.

(4) As an alternative to 61.B.(1)-(2) of this condition, the thermal oxidizer or VCU may be equipped with continuous VOC monitors (inlet and outlet). The VOC monitors shall be calibrated and maintained according to SC No. 52, except 52.C. In order to demonstrate compliance with this requirement, inlet VOC and outlet VOC concentrations and flows shall be measured at least every 15 minutes and this information used to determine inlet and outlet VOC mass rates on an hourly basis to confirm a minimum of 99 percent destruction efficiency or an exhaust concentration not greater than 20 ppmv.

C. Internal Combustion Engine.

(1) The internal combustion engine shall have a VOC destruction efficiency of at least 99 percent.

(2) The engine must have been stack tested with butane to confirm the required destruction efficiency within the past 12 months. VOC shall be measured in accordance with the applicable United States EPA Reference Method during the stack test and the exhaust flow rate may be determined from measured fuel flow rate and measured oxygen concentration. A copy of the stack test report shall be maintained with the engine. There shall also be documentation of acceptable VOC emissions following each occurrence of engine maintenance which may reasonably be expected to increase emissions including oxygen sensor replacement and catalyst cleaning or replacement. Stain tube indicators specifically designed to measure VOC concentration shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable VOC analyzers meeting the requirements of SC No. 52 are also acceptable for this documentation.

(3) The engine shall be operated with an oxygen sensor-based air-to-fuel ratio (AFR) controller. Documentation for each AFR controller that the, manufacturer's, or supplier's recommended maintenance has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers shall be maintained with the engine. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation.

D. The plant flare system

(1) The heating value and velocity requirements in 40 CFR 60.18 shall be satisfied during operations authorized by this permit.

(2) The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermal couple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

(3) Each flare shall be equipped with one of the following:

(a) Operation and maintenance of a flare gas recovery system.

(b) A continuous flow monitor and composition analyzer that provides a record of the flare gas flow and composition of either the total VOC or heating value of the flare gas.

The flow monitor and analyzer sample point shall be installed as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition shall be recorded each hour. The flow monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor must be calibrated to manufacturer's specifications; the temperature monitor must be calibrated to within ± 2.0 percent at absolute temperature; the pressure monitor must be calibrated to within ± 5.0 mmHg.

i. If VOC monitoring is chosen: Calibration of the analyzer shall follow the procedures and requirements of Section 10.0 of 40 CFR Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000, (65 FR 61744), except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The on-line analyzer system must be capable of measuring constituents sufficient to determine the net heating value of the gas combusted in the flare to within 5.0%, or be calibrated with certified standards of the top two constituents affecting net heating value, whichever is more stringent and the ranges of calibration standards may be based on the typical concentrations observed rather than the full potential range of concentrations. The calibration gases used for calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR § 60.18(f)(3) as amended through October 17, 2000, (65 FR 61744).

ii. If heating value is chosen: The calorimeter shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations, to continuously measure and record the net heating value of the gas sent to the flare, in British thermal units/standard cubic foot of the gas.

E. Single Carbon Adsorption or Scrubber System

A single liquid scrubbing or single carbon canister adsorption system may be used as a sole control device if the requirements below are satisfied.

(1) The exhaust to atmosphere shall be continuously monitored with a CEM. The VOC concentration shall be recorded at least once every 15 minutes when waste gas is directed to the CAS or scrubber.

(2) The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 52 except 52.C.

(3) An alarm shall be installed such that an operator is alerted when outlet VOC concentration exceeds 100 ppmv above background. The MSS activity shall be stopped as soon as possible when the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded.

F. A closed loop refrigerated vapor recovery system

(1) The vapor recovery system shall be installed on the facility to be degassed using good engineering practice to ensure air contaminants are flushed from the facility through the refrigerated vapor condensers and back to the facility being degassed. The vapor recovery system and facility being degassed shall be enclosed except as necessary to insure structural integrity (such as roof vents on a floating roof tank).

(2) VOC concentration in vapor being circulated by the system shall be sampled and recorded at least once every 4 hours at the inlet of the condenser unit with an instrument meeting the requirements of SC No. 52.

(3) The quantity of liquid recovered from the tank vapors and the tank pressure shall be monitored and recorded each hour. The liquid recovered must increase with each reading and the tank pressure shall not exceed one inch water pressure while the system is operating.

G. Other control devices approved by the TCEQ through a permit amendment application or a pollution control permit application.

62. The following requirements apply to capture systems for the plant flare system.

A. Each capture system for the plant flare system shall comply with one of the following:

(1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or

(2) verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21 once a year. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

B. The control device shall not have a bypass.

C. If any of the inspections under A of this condition is not satisfactory, the permit holder shall promptly take necessary corrective action. Records shall be maintained documenting the performance and results of the inspections required in this condition.

63. If spray guns are used to apply paint, they shall be airless, high volume low pressure (HVLP), or have the same or higher transfer efficiency as airless or HVLP spray guns.

64. Emissions from all painting activities, except for minor painting identified in Attachment 2 to this permit, at this site must satisfy the criteria below. New compounds may also be added through the use of the procedure below.

    A. Short-term (pounds per hour [lb/hr]) and annual (TPY) emissions shall be determined for each chemical in the paint as documented in the permit application. The calculated emission rate shall not exceed the maximum allowable emissions rate at any emission point.

    B. The Effect Screening Level (ESL) for the material shall be obtained from the current TCEQ ESL list or by written request to the TCEQ Toxicology Division.

    C. The total painting emissions of any compound must satisfy one of the following conditions:

        (1) The total emission rate is less than 0.1 lb/hr and the ESL greater than or equal to 2 $\mu g/m^3$; or

        (2) The emission rate of the compound in pounds per hour is less than the ESL for the compound divided by 171.5 (ER<ESL/171.5).

    D. The permit holder shall maintain records of the information below and the demonstrations in steps A though C above. The following documentation is required for each compound:

        (1) Chemical name(s), composition, and chemical abstract registry number if available.

        (2) Material Safety Data Sheet.

        (3) Maximum concentration of the chemical in weight percent

        (4) Paint usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated.

65. No visible emissions shall leave the property due to painting or abrasive blasting.

66. Black Beauty and Garnet Sand may be used for abrasive blasting. The permit holder may also use blast media that meet the criteria below:

    A. The media shall not contain asbestos or greater than 1.0 weight percent crystalline silica.

    B. The weight fraction of any metal in the blast media with a short term ESL less than 50 micrograms per cubic meter as identified in the most recently published TCEQ ESL list shall not exceed the ESLmetal/1000.

    C. The MSDS for each media used shall be maintained on site.

    D. Blasting media usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated.

67. Planned maintenance activities must be conducted in a manner consistent with good practice for minimizing emissions, including the use of air pollution control equipment, practices and processes. All reasonable and practical efforts to comply with SC Nos. 49 through 66, 68, and 69 must be used when conducting the planned maintenance activity, until the commission determines that the efforts are unreasonable or impractical, or that the activity is an unplanned maintenance activity.

68. Slab cleaning activities are limited to water washing small pieces of process equipment, empty vacuum trucks, and empty portable frac containers. Records shall be maintained of the number of items cleaned each day and the emissions determined each month based on the number of items

cleaned as estimated in the permit amendment application, PI-1 dated December 21, 2006. The permit holder may assume that all vacuum trucks and frac tanks used on the site as recorded in SC Nos. 56 and 57 are cleaned in lieu of maintaining cleaning records for those items.

69. The following requirements ensure satisfactory impacts off-site during MSS.

A. A maximum of 3 frac or temporary storage tanks or vessels may be filled with naphtha during any one hour period.

B. Emissions from refilling tanks with a landed roofs with a liquid with a vapor pressure greater than 0.50 psia shall be routed to a control device meeting the requirements of SC No. 61 unless the tank has been cleaned and degassed.

C. While filling a tank with a landed roof with a liquid with vapor pressure greater than 0.50 psia without emission control, no other tanks with landed roofs may be degassed or filled with that type of liquid.

D. If a cleaned and degassed tank with a landed roof has been refilled with a liquid with vapor pressure greater than 0.50 psia without emission control in the past 12 months, emissions from refilling the tank with a landed roof shall be routed to a control device meeting the requirements of SC No. 61 if the liquid has a vapor pressure greater than 0.50 psia.

70. Records shall be maintained in accordance with SC No. 50 for planned MSS on the Air Liquide Large Industries SMR (Permit 34245, RN103120929). Total waste gas directed to the Valero flares during these operations shall not exceed the total identified in the permit amendment application, PI-1 dated September 23, 2014. **(03/16)**

71. The following steps shall take place before the catalyst is removed from the HDS unit for transfer to the catalyst pad. The reactor shall be cooled prior to opening and the catalyst shall be flushed with gas oil followed by hydrogen recycle gas circulation. The catalyst shall then be neutralized with a demineralized water and soda ash solution.

72. Each of the following EPNs may not exceed the hours of MSS operation per calendar year shown in the table. **(03/16)**

Emission Point Number	Hours of MSS operation per calendar year
30-B-04MSS	36
16-P-11	52
16-P-12	52
16-P-13	52
16-P-14	52

Permit References

73. The permit holder shall maintain a copy of the effective permit at the site together with complete copies of all confidential documents that are referenced in the above permit conditions as attachments. The permit and attachments shall be made available to TCEQ personnel at the site upon request.

Emission Cap Compliance Recordkeeping

74. Recordkeeping programs for those facilities authorized by the permit shall be established and maintained such that the ability to demonstrate compliance with all authorized emission caps and individual emission rate limits (short-term and annual) is ensured. Records of all compliance testing, CEMS/PEMS results, and process parameters necessary to demonstrate compliance with the emission rate caps shall be maintained on-site for a period of five years.

Emissions calculations for verifying compliance with the emission caps shall be performed at least once every quarter to demonstrate compliance with the annual rolling average requirement. The holder of this permit shall maintain all records necessary to demonstrate compliance with the short-term (lb/hr) and annual TPY emissions cap and provide such demonstration of compliance to the TCEQ Corpus Christi Regional Office upon request.

The emissions shall be determined using the following techniques: **(02/18)**

Fugitive	Component counts using the emission factors and method specified in the permit application.
Cooling Towers	Measured strippable VOC concentration as specified in SC No. 30 and the cooling tower circulation rate.
Tanks	As specified in SC No. 28.
Heaters/Boilers	If a CEMS is installed, as specified in SC No. 40. If stack tested per SC No. 39, using the most recent stack test result and recorded firing rate for the period. If no sampling is required, using the emission factor in the permit application and the recorded firing rate for the period.
Loading	Fugitive emissions from loading operations shall be calculated using: (a) AP 42 loading equation listed in Chapter 5.2 and (b) the TCEQ publication titled "Technical Guidance for Chemical Sources Loading Operations." Emissions from control devices shall be determined using the emission factor (in mg/l) determined through testing and the volume loaded. The manufacturer's guaranteed emission factor may be used if the most recent stack testing has verified that factor.
SRU/HOC	If a CEMS is installed, as specified in SC No. 40.
Scrubber	If stack tested per SC No. 38, using the most recent stack test result and recorded operating rate for the period. If no sampling is required, using the emission factor in the flexible permit application and the average value of the appropriate operating parameter for the period.
Diesel Engines	Emissions calculated based on hours of operation and emission factors listed on Table D-1 in the confidential section of the permit amendment application dated November 16, 2004.

These and all other records required by any previous condition of this permit shall be made available to the TCEQ Executive Director or his representative upon request.

Federal Applicability

75. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for the following: **(TBD**)

    A. Petroleum Refineries in 40 CFR Part 60, Subparts A , J, and Ja as follows: **(04/16)**

        (1) All heaters and boilers – Subpart J, except as noted below;

        (2) Desalter Heater (EPN 114), Heater 31-H-01 (EPN: 117), Boiler 30-B-04 (EPN: 30-04), and Boiler 30-B-05 (EPN 30-B-05) – Subpart Ja

        (3) HOC – Subpart J

        (4) HOC – Subpart Ja (upon startup of the HOC Reconfiguration Project (Project 333877)

        (5) SRU's – Subpart J

        (6) BUP Flare, Main Flare, and Ground Flare – Subpart Ja

    B. Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978, in 40 CFR Part 60, Subparts A and K.

    C. Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984, in 40 CFR Part 60, Subparts A and Ka.

    D. Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, in 40 CFR Part 60, Subparts A and Kb.

    E. Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006, in 40 CFR Part 60, Subparts A and VV.

    F. Bulk Gasoline Terminals in 40 CFR Part 60, Subparts A and XX.

    G. Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or Before November 7, 2006, in 40 CFR Part 60, Subparts A and GGG.

    H. The VOC Emissions from SOCMI Distillation Operations in 40 CFR Part 60, Subparts A and NNN.

    I. The VOC Emissions from Petroleum Refinery Wastewater Systems in 40 CFR Part 60, Subparts A and QQQ.

    J. The VOC Emissions from SOCMI Reactor Processes in 40 CFR Part 60, Subparts A and RRR.

76. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants (NESHAPS) promulgated for the following:

    A. Asbestos in 40 CFR Part 63, Subparts A and M.

    B. Benzene Waste Operations in 40 CFR Part 63, Subparts A and FF.

77. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories promulgated for the following:

    A. Marine Tank Vessel Loading Operations in 40 CFR Part 63, Subparts A and Y.

    B. Hazardous Air Pollutants from Petroleum Refineries in 40 CFR Part 63, Subparts A and CC.

    C. Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units in 40 CFR Part 63, Subparts A and UUU.

    D. Industrial, Commercial, and Institutional Boilers and Process Heaters in 40 CFR Part 63, Subparts A and DDDDD. **(02/18)**

    E. Hazardous Air Pollutants: Site Remediation in 40 CFR Part 63, Subparts A and GGGGG.

Referenced Permit by Rule Authorizations

78. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all inclusive and can be altered without modifications to this permit. **(04/22)**

Authorization	Source or Activity
PBR No. 155846	Control of liquid petroleum gas (LPG) unloading with a portable vapor combustion unit.

Sour Water Storage Tanks

79. The sour water storage tanks shall be subject to the following conditions: **(TBD)**

    A. The sour water storage tank system shall be maintained by either of the following methods:

        (1) A minimum sour water retention time of 2.0 days in conjunction with a hydrocarbon detection and flow diversion system designed to prevent hydrocarbon carryover to the SRUs by routing sour waters with unacceptable levels of hydrocarbons to the tanks listed in A of this condition. Retention time shall be calculated and recorded daily using the daily average combined tank volume of all sour water tanks and the daily average combined feed rates to the sour water strippers.

        (2) A minimum sour water retention time of 3.0 days

    B. If acid gas flaring takes place that might be traced to hydrocarbon carryover from the sour water system, the operator shall engage a third-party consultant to complete a Root Cause Failure Analysis (RCFA) within 90 days after the acid gas flaring event in question. The Beaumont Regional Office shall be supplied with a copy of the RFCA within 10 days of it being completed. If the RCFA determines that the acid gas flaring event can be traced to sour water system hydrocarbon carryover that is partially or totally caused by inadequate retention or hold up times, the holder of this permit shall implement one of the following options within 60 days after completion of the RFCA:

(1) The holder of this permit shall submit design information and a proposed implementation schedule to the TCEQ Office of Permitting and Registration for three days of sour water retention and hold up time based on maximum expected feed rates to the sour water strippers, or

(2) Design information and implementation schedule of a proposed alternative other than increased sour water retention time.

C. For periods of planned maintenance activity for the sour water tank, the sour water stripper surge system shall have a reduced minimum on-line retention time of one and a half days based on the sour water flow rate into the tanks. Records of these periods and the corresponding maintenance activity must be maintained and made available upon request.

Greenhouse Gas Emissions

80. Permit holders must keep records sufficient to demonstrate compliance with 30 Texas Administrative Code § 116.164. If construction, a physical change or a change in method of operation results in Prevention of Significant Deterioration (PSD) review for criteria pollutants, records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction, a physical change or a change in method of operation does not require authorization under 30 TAC §116.164(a). If there is construction, a physical change or change in the method of operation that will result in a net emission increase of 75,000 tpy or more CO_{2e} and PSD review is triggered for criteria pollutants, greenhouse gas emissions are subject to PSD review. **(TBD)**

81. Monitoring, quality assurance/quality control requirements, emission calculation methodologies, record keeping, and reporting requirements related to Greenhouse Gas (GHG) emissions shall adhere to the applicable requirements in 40 CFR Part 98 and in this permit. **(TBD)**

82. Beginning after the start-up of the new and modified sources associated with the HOC Reconfiguration Project (TCEQ Project 333877), modification and construction, the permittee shall calculate the CO_{2e} emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1. This condition applies to the following EPNs: 121 (HOC contribution only), FUG-CAP (new components added for Project 333877), and 30-B0-05. **(TBD)**

83. Records of emissions of GHG, and how they were determined, in compliance with Special Condition Nos. 80, 81, and 82 must be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. **(TBD)**

84. Operational and Monitoring requirements for Boiler 30-B-05. **(TBD)**

A. Boiler 30-B-05 shall be operated with a net thermal efficiency of no less than 78 percent on a 12-month rolling average, excluding periods of maintenance, startup and shutdown. This shall be ensured by using the following good combustion practices: operating the boiler at an optimum air-fuel ratio, limiting the boiler's operating temperature to the extent practicable, and reducing heat loss through the use of insulating materials where feasible.

B. Thermal efficiency shall be calculated and recorded at least monthly using equation G-1 from American Petroleum Institute (API) method 560 (4th ed. or later), Annex G using monitoring data collected as required under this permit, other quality-assured data, and engineering judgment.

If the maximum range between twelve or more consecutive monthly efficiency calculations does not exceed 5 percentage points, and each calculation demonstrates compliance with the minimum efficiency requirements of this paragraph, the permit holder may elect to reduce the frequency of performing the calculation to quarterly (skipping up to two monthly calculations); provided, however, that:

(1) In case a quarterly efficiency calculation yields an efficiency value outside of the maximum range specified in this previous paragraph, monthly efficiency calculations shall be resumed.

(2) In case a quarterly efficiency calculation shows non-compliance with the minimum efficiency requirement of this paragraph, the permit holder shall assume that a condition of non-compliance occurred during each month of the previous quarter where a calculation was skipped.

Date: TBD

Attachment 1

Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

Permit Emission Points by Type

Category	EPN	Description
Fired Units	1	Crude Heater
	16-P-04	Diesel Pump
	16-P-07	Diesel Pump
	16-P-11	Diesel Pump
	16-P-12	Diesel Pump
	16-P-13	Diesel Pump
	16-P-14	Diesel Pump
	49-H-90	C7 Splitter Reboiler
	74	Vacuum Unit Heater
	83-P-136A	Diesel Pump
	83-P-136B	Diesel Pump
	114	Desalter Heater
	115	HDS Charge Heaters
	116	HDS Heavy Oil Preheater
	117	Alky Fract Reboiler
	118	Hydrogen Reformer Heater
	119	Sulften Heater
	120	Butamer Heater
	121	HOC (incinerator and scrubber stack)
	121a	SRU Bypass Stack
	124	API Separator Combustor
	131	Crude Preflash Heater
	132	Crude Stabilizer Heater
	150	HCU Heater
	151	NHT Heater
	152	CRU Heaters
	153	Boiler 30-B-02
	162	Oleflex Heaters

Category	EPN	Description
	172	RSU Heater
	30-B-04	Boiler 30-B-04
	30-B-04MSS	Boiler 30-B-04MSS
	195	GD Charge Heater
	900	Crude Charge Heater (Permit No. 106965)
	TRUCKCOMB	Truck Loading Combustor
	30-B-05	Boiler 30-B-05
Flares	126	Main Flare
	127	MTBE Flare
	135	Acid Gas Flare (Pilots Only)
	158	Ground Flare
Tanks	69	Tank No. 9
	83-TK-26	Tank No. 26
	83-TK-155	Tank No. 155
	83-TK-159	Tank No. 159
	83-TK-160	Tank No. 160
	83-TK-162	Tank No. 162
	187	Tank No. 25 (Sour Water Tank)
	902	Tank No. 165 (Permit No. 106965)
Fugitive	1F	Crude Unit
	2F	Vacuum Unit
	4F	LEU
	07F	BUP Flare
	08F	08 FLR/Day Tanks
	11F	Desalter Unit
	12F	HDS Unit
	13F	SMR
	18F	HRLEU Unit
	20F	LRU
	21/22F	HOC Unit

Category	EPN	Description
	30F	Boilerhouse
	31F	HF Alkylation Unit
	36F	Butamer Unit
	37F	MTBE
	38F	Oleflex
	41F	SRU Unit
	42F	SWS
	46-24F	SULF/SEU
	47F	HCU
	47PSAF	PSA
	48F	NHT
	49F	CRU
	52F	Gasoline Desulfurization
	54F	SHU
	83F	WWT
	175	49-RSU/XFU
	201	Railcar Unloading
	DOCKS	Docks
	LPGSTGF	LPG Storage
	MVRUF	MVRU
	TERM-F	Terminals
	TRKRACKFUG	Truck Rack
	903	Crude Unit Fugitives (Permit No. 106965)
	904	Crude Unit BWS Fugitives (Permit No. 106965)
	908	Crude Storage Fugitives (Permit No. 109543)
	##F	Selective Hydrogenation Unit
	##F	LPG Gas Plant
	##F	Boiler 30-B-05
Loading	31	Barge Loading (Heavy Oil)
	SHIP FUG	Ship Dock Fugitives

Category	EPN	Description
	TRUCKFUG	Truck Loading
	VRU	Marine loading VRU
	907	Crude Loading Fugitives (Permit No. 109543)
	909	Crude Loading Vapor Combustor (Permit No. 109543)
Other	1CT	CU/VRU Cooling Tower
	01-01	Crude/Vac Pump Alley
	01-02	North of Vac Unit
	01-03	North of Vac Unit
	50-01	East of Tank 62
	52-01	NW of GDU MCC
	70-01	East of Tank 55
	70-02	NW of Tank 106
	70-03	West of Tank 94
	72-01	East of Tank 111
	73-01	North of Tank 152
	73-01	Between TK 8 & TK 164
	83-01	WWT-Hydroblast Pad
	01-04	NW of Vac Unit
	03-01	North of tanks 156/161
	11-01	Desalter Pump Alley
	21BH	Magnacat Unit
	41-01	North of 43-TK-08
	41-02	West of 41-V-05
	49-01	NW of XFU
	49-02	North of NHT
	49-03	NHT Pump Alley
	83-02	WWT-Desalter Lift
	83-03	WWT-East of KOH Trtr
	83-04	WWT- NE of Tank 159

Category	EPN	Description
	83-05	WWT-North Lift
	83-06	WWT-North of V-68
	83-07	WWT-South of V-55
	83-09	WWT-BSRP
	83-10	WWT-83-V-99
	83-12	WWT-83-V-28
	83-TK-23	Equalization Tank
	83-TK-27	Bio Oxidation Tank
	83-V-58	Tank No. 58
	83-V-59	Tank No. 59
	83-V-97	Tank No. 97
	98-02	WP MSAT Rail Rack
	122	HOC Cooling Tower
	123	ALKY Cooling Tower
	124a	API Sep Back Up
	155	CCU CCR
	901	Crude Unit Cooling Tower (Permit No. 106965)
	168	Oleflex CCR
	AE-49601A/B	Analyzer Vent AE-49601A/B
	167-CT	BUP Cooling Tower
	AE-49900A/B	Analyzer Vent AE-49900A/B
	AE-49901A/B	Analyzer Vent AE-49901A/B
	V-201	WP MSAT Rail Rack
	WWTP-AERB	Aeration Basin
	WWTP-CLRF	Clarifier
	WWTP-OWS	WW Collection System
	WWTP-SLB	Salin Basin
	HOC-PP-CT	Cooling Tower -Propylene Project
	XX-01	HOC PP Gas Plant CAS

Date: TBD

Attachment 2

Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

Inherently Low Emitting Activities

	Emissions				
Activity	**VOC**	**NO_x**	**CO**	**PM**	**H_2S/SO_2**
Catalyst activation/deactivation	x				
Management of sludge from pits, ponds, sumps, and water conveyances	x				
Aerosol Cans	x				
Calibration of analytical equipment and process instrumentation	x	x	x		x
Carbon canister replacement	x				
Catalyst charging/handling				x	
Instrumentation/analyzer maintenance	x				
Meter proving	x				
Replacement of analyzer filters and screens	x				
Maintenance on water treatment systems (cooling, boiler, potable)	x				
Soap and other aqueous based cleaners	x				
Cleaning sight glasses	x				
Aerosol and miscellaneous chemical usage	x				

Date: January 22, 2016

Attachment 3

Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

Routine Maintenance Activities

Pump repair/replacement

Fugitive component (valve, pipe, flange) repair/replacement

Compressor repair/replacement

Heat exchanger repair/replacement

Vessel repair/replacement

Date: January 22, 2014

Attachment 4

Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

MSS Activity Summary

Facilities	Description	Emissions Activity	EPN
all process units and tanks	shutdown/depressurize/ drain/startup (includes SRU shutdowns, FCCU startups and Air Liquide MSS activities)	Vent to control	MSS Turnaround (MSS-TA) Routine MSS (MSS-MA)
all process units and tanks	process unit purgegas/drain/startup (except FCCU and SRU)	Vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
Vacuum Trucks	removal and transfer of process and/or waste liquids	Vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
Process units and tanks	Painting	Vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
Process units and tanks	Miscellaneous chemical usage	Vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
FRAC tanks	Temporary storage of process liquids and/or waste liquids	Vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
Cleaning Slab	Washing of portable or mobile MSS or process equipment	vent to atmosphere	MSS-TA Uncontrolled MSS-MA Uncontrolled
Process units and tanks	Abrasive blasting	Vent to atmosphere	MSS-TA Uncontrolled
HDS	Remove spent catalyst, store on pad prior to transfer	Vent to atmosphere	MSS-TA Uncontrolled
Boiler 30-B-04	Startup and shutdown	Vent to atmosphere	30-B-04 MSS
Firewater Pump Engines	Test runs	Vent to atmosphere	16-P-11, 16-P-12, 16-P-13, and 16-P-14

Date: TBD

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 38754 and PSDTX324M15

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS Caps	MSS Caps	CO	2,085.19	128.91
		H_2S	10.59	0.22
		NH_3	4.41	0.17
		NO_x	356.84	27.19
		PM	79.52	3.76
		PM_{10}	79.52	2.92
		$PM_{2.5}$	79.52	2.92
		SO_2	996.29	338.89
		VOC	578.44	70.04
		Exempt Solvents	1.76	0.60
1	Heater - Crude Heater (01-H-01)	CO	8.10	20.13
		NH_3	0.05	0.17
		NO_x	9.72	19.24
		PM	1.21	4.00
		PM_{10}	1.21	4.00
		$PM_{2.5}$	1.21	4.00
		SO_2	2.50	5.71
		VOC	0.87	2.90
131	Heater - Crude Preflash (01-H-02)	CO	0.62	2.71
		NH_3	<0.01	0.02
		NO_x	1.77	6.29
		PM	0.13	0.49
		PM_{10}	0.13	0.49
		$PM_{2.5}$	0.13	0.49

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO_2	0.27	0.64
		VOC	0.10	0.35
132	Heater - Crude Stabilizer (01-H-03)	CO	0.17	0.72
		NH_3	<0.01	<0.01
		NO_x	0.48	2.06
		PM	0.04	0.15
		PM_{10}	0.04	0.15
		$PM_{2.5}$	0.04	0.15
		SO_2	0.07	0.22
		VOC	0.03	0.11
74	Vacuum Heater	CO	4.99	16.77
		NH_3	0.03	0.14
		NO_x	5.98	26.21
		PM	0.74	3.26
		PM_{10}	0.74	3.26
		$PM_{2.5}$	0.74	3.26
		SO_2	1.37	4.13
		VOC	0.54	2.36
114	Heater - Desalter Heater (11-H 01)	CO	3.54	15.52
		CO	3.54	15.52
		NH_3	0.03	0.14
		NO_x	3.96	17.34
		PM	0.74	3.23
		PM_{10}	0.74	3.23
		$PM_{2.5}$	0.74	3.23
		SO_2	1.52	4.60
		VOC	0.53	2.34

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		H_2S	0.02	0.05
115	HDS Heaters	CO	8.08	32.91
		NH_3	0.05	0.22
		NO_x	9.70	42.07
		PM	1.20	5.22
		PM_{10}	1.20	5.22
		$PM_{2.5}$	1.20	5.22
		SO_2	2.49	7.45
		VOC	0.87	3.78
115	HDS Heaters	CO	8.08	32.91
		NH_3	0.05	0.22
		NO_x	9.70	42.07
		PM	1.20	5.22
		PM_{10}	1.20	5.22
		$PM_{2.5}$	1.20	5.22
		SO_2	2.49	7.45
		VOC	0.87	3.78
116	Heater - HDS Pre-Heater (12-H-02)	CO	0.31	1.10
		NH_3	<0.01	0.02
		NO_x	2.36	8.28
		PM	0.15	0.51
		PM_{10}	0.15	0.51
		$PM_{2.5}$	0.15	0.51
		SO_2	0.30	0.73
		VOC	0.11	0.37
118	Hydrogen Reformer Heater	CO	58.51	220.73
		NH_3	0.37	1.52

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		NO_x	70.21	284.40
		PM	8.72	35.80
		PM_{10}	8.72	35.80
		$PM_{2.5}$	8.72	35.80
		SO_2	44.53	122.64
		VOC	9.95	25.91
153	Heater - HR Boiler (30-B-02)	CO	8.46	28.94
		NH_3	0.09	0.33
		NO_x	22.56	82.34
		PM	2.10	5.51
		PM_{10}	2.10	5.51
		$PM_{2.5}$	2.10	5.51
		SO_2	4.34	10.66
		VOC	1.52	3.99
30-B-04	Boiler 30-B-04	CO	19.84	48.14
		NH_3	2.41	5.86
		NO_x	8.25	20.02
		PM	4.10	9.95
		PM_{10}	4.10	9.95
		$PM_{2.5}$	4.10	9.95
		SO_2	8.65	14.47
		VOC	2.97	7.20
30-B-04MSS	Boiler 30-B-04	CO	198.55	3.57
		NO_x	55.00	0.99
117	Heater - Alky Frac. Reb. (31-H-01)	CO	2.51	8.83
		NH_3	0.05	0.17
		NO_x	5.64	19.86

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	1.17	4.11
		PM_{10}	1.17	4.11
		$PM_{2.5}$	1.17	4.11
		SO_2	2.41	5.86
		VOC	0.85	2.97
120	Heater - Butamer Heater (36-H-01)	CO	0.27	0.98
		NH_3	<0.01	0.02
		NO_x	2.00	4.30
		PM	0.12	0.26
		PM_{10}	0.12	0.26
		$PM_{2.5}$	0.12	0.26
		SO_2	0.26	0.41
		VOC	0.09	0.19
162	Oleflex Heater	CO	19.45	69.49
		NH_3	0.12	0.49
		NO_x	23.34	65.75
		PM	2.90	11.62
		PM_{10}	2.90	11.62
		$PM_{2.5}$	2.90	11.62
		SO_2	5.99	16.57
		VOC	2.10	8.41
119	Heater - Sulften Heater (46-H-01)	CO	0.35	1.49
		NH_3	0.01	0.03
		NO_x	2.62	5.21
		PM	0.16	0.32
		PM_{10}	0.16	0.32
		$PM_{2.5}$	0.16	0.32

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO_2	0.34	0.63
		VOC	0.12	0.24
150	HCU Heater	CO	6.10	24.38
		NH_3	0.06	0.26
		NO_x	12.19	48.76
		PM	1.51	6.06
		PM_{10}	1.51	6.06
		$PM_{2.5}$	1.51	6.06
		SO_2	3.13	8.63
		VOC	1.10	4.38
151	Heater - NHU Heater (48-H-01)	CO	3.05	6.68
		NH_3	0.01	0.05
		NO_x	3.90	17.08
		PM	0.29	1.27
		PM_{10}	0.29	1.27
		$PM_{2.5}$	0.29	1.27
		SO_2	0.60	1.81
		VOC	0.21	0.92
152	CRU Heater	CO	16.85	57.02
		NH_3	0.18	0.60
		NO_x	39.31	133.06
		PM	4.18	14.16
		PM_{10}	4.18	14.16
		$PM_{2.5}$	4.18	14.16
		SO_2	9.80	22.69
		VOC	3.03	10.25
172	Heater - RSU Heater (49-H-71)	CO	3.30	12.72

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		NH_3	0.02	0.08
		NO_x	3.96	15.26
		PM	0.49	1.90
		PM_{10}	0.49	1.90
		$PM_{2.5}$	0.49	1.90
		SO_2	1.02	2.70
		VOC	0.36	1.37
49-H-90	Heater - C7 Splitter Reb. (49-H-90)	CO	5.32	16.82
		NH_3	0.03	0.13
		NO_x	4.25	15.46
		PM	0.79	3.01
		PM_{10}	0.79	3.01
		$PM_{2.5}$	0.79	3.01
		SO_2	1.64	4.29
		VOC	0.57	2.18
195	Heater - GDU Charge Heater (52-H-01)	CO	13.65	34.29
		NH_3	0.05	0.20
		NO_x	5.80	14.69
		PM	1.23	4.61
		PM_{10}	1.23	4.61
		$PM_{2.5}$	1.23	4.61
		SO_2	2.55	6.57
		VOC	0.89	3.34
1F	Crude Unit	VOC	See Subcap	See Subcap
2F	Vacuum Unit	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
4F	LEU Unit	VOC	See Subcap	See Subcap

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
11F	Desalter Unit	VOC	See Subcap	See Subcap
12F	HDS Unit	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
13F	H_2 Reformer	VOC	See Subcap	See Subcap
18F	LEU -2	VOC	See Subcap	See Subcap
20F	LRU	VOC	See Subcap	See Subcap
21/22F	HOC	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
30F	Boiler House	VOC	See Subcap	See Subcap
07F	#07 BUP Flare	VOC	See Subcap	See Subcap
31F	Alky Unit	H_2S	See Subcap	See Subcap
		HF	0.52	2.30
		VOC	See Subcap	See Subcap
36F	Butamer Unit	VOC	See Subcap	See Subcap
37F	Iso-Octene	VOC	See Subcap	See Subcap
38F	Oleflex Unit	VOC	See Subcap	See Subcap
46-24F	SULF-10 Fugitives (5)	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
41F	SRU Unit Fugitives (5)	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
47F	HCU Unit	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
47PSA	PSA Unit	VOC	See Subcap	See Subcap
48F	NHT Unit	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
49F	CRU Unit	VOC	See Subcap	See Subcap
175	XFU/RFU/C7Split Unit	VOC	See Subcap	See Subcap

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
52F	GDU Unit	VOC	See Subcap	See Subcap
DOCKS	DK-Docks	VOC	See Subcap	See Subcap
08F	#08FLR/Day Tanks	VOC	See Subcap	See Subcap
LPG STGF	LPG STORAGE	VOC	See Subcap	See Subcap
MVRUF	MVRU	VOC	See Subcap	See Subcap
TERM-F	#TM-Terminal	VOC	See Subcap	See Subcap
TRKRACKFUG	TRUCK RACK (5)	VOC	See Subcap	See Subcap
83F	Wastewater Treatment Plant	VOC	See Subcap	See Subcap
54F	Selective Hydrogenation Unit	VOC	See Subcap	See Subcap
42F	Sour Water Stripper	H_2S	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
##F	Selective Hydrogenation Unit (5)	VOC	See Subcap	See Subcap
##F	LPG Gas Plant (5)	VOC	See Subcap	See Subcap
##F	Boiler 30-B-05 (5)	VOC	See Subcap	See Subcap
168	Oleflex CCR	Cl_2	<0.01	0.04
		H_2SO_4	<0.01	0.01
		HCl	0.06	0.28
		SO_2	0.04	0.19
69	Tank - 9	VOC	3.10	0.49
122	Cooling Tower - HOC	PM	3.54	13.17
		PM_{10}	3.36	12.52
		$PM_{2.5}$	0.53	1.96
		VOC	5.67	21.09
123	Cooling Tower - Alky	PM	0.71	2.00
		PM_{10}	0.70	1.98
		$PM_{2.5}$	0.19	0.55
		VOC	1.26	3.55

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
167-CT	Cooling Tower - BUP	PM	4.52	19.26
		PM_{10}	4.30	18.33
		$PM_{2.5}$	0.67	2.88
		VOC	1.47	6.27
1CT	Cooling Tower - Crude	PM	0.34	1.13
		PM_{10}	0.34	1.11
		$PM_{2.5}$	0.06	0.21
		VOC	0.17	0.55
16-P-04	Engine - 16-P-04	CO	2.20	0.06
		NO_x	8.00	0.21
		PM	0.73	0.02
		PM_{10}	0.73	0.02
		$PM_{2.5}$	0.73	0.02
		SO_2	0.68	0.02
		VOC	0.83	0.02
16-P-07	Engine - 16-P-07	CO	2.67	0.04
		NO_x	9.69	0.15
		PM	0.88	0.01
		PM_{10}	0.88	0.01
		$PM_{2.5}$	0.88	0.01
		SO_2	0.82	0.01
		VOC	1.01	0.02
16-P-11	Engine - 16-P-11	CO	0.80	0.02
		NO_x	3.32	0.09
		PM	0.11	<0.01
		PM_{10}	0.11	<0.01
		$PM_{2.5}$	0.11	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO_2	0.10	<0.01
		VOC	0.12	<0.01
16-P-12	Engine - 16-P-12	CO	0.80	0.02
		NO_x	3.32	0.09
		PM	0.11	<0.01
		PM_{10}	0.11	<0.01
		$PM_{2.5}$	0.11	<0.01
		SO_2	0.10	<0.01
		VOC	0.12	<0.01
16-P-13	Engine - 16-P-13	CO	0.80	0.02
		NO_x	3.32	0.09
		PM	0.11	<0.01
		PM_{10}	0.11	<0.01
		$PM_{2.5}$	0.11	<0.01
		SO_2	0.10	<0.01
		VOC	0.12	<0.01
16-P-14	Engine - 16-P-14	CO	0.80	0.02
		NO_x	3.32	0.09
		PM	0.11	<0.01
		PM_{10}	0.11	<0.01
		$PM_{2.5}$	0.11	<0.01
		SO_2	0.10	<0.01
		VOC	0.12	<0.01
126	Main Flare	CO	See Subcap	See Subcap
		H_2S	See Subcap	See Subcap
		NO_x	See Subcap	See Subcap
		SO_2	See Subcap	See Subcap

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		VOC	See Subcap	See Subcap
158	Ground Flare	CO	See Subcap	See Subcap
		H_2S	See Subcap	See Subcap
		NO_x	See Subcap	See Subcap
		SO_2	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
127	BUP Flare	CO	See Subcap	See Subcap
		H_2S	See Subcap	See Subcap
		NO_x	See Subcap	See Subcap
		SO_2	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
135	Acid Gas Flare (pilot only)	CO	See Subcap	See Subcap
		H_2S	See Subcap	See Subcap
		NO_x	See Subcap	See Subcap
		SO_2	See Subcap	See Subcap
		VOC	See Subcap	See Subcap
Various	Flares Subcap	CO	113.27	121.03
		H_2S	0.04	0.11
		NO_x	23.04	20.77
		SO_2	3.55	10.43
		VOC	291.17	63.51
31	Loading - Heavy Oil	VOC	14.96	4.72
SHIP FUG	Loading - Ships Fugitives (5)	VOC	237.46	91.74
VRU	Loading - MVRU	VOC	61.33	23.13
TRUCKFUG	Loading - Truck Fugitives (5)	VOC	11.86	15.87
TRUCKCOMB	Loading - Truck Combustor	CO	15.28	22.76
		NO_x	7.64	11.38

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO_2	0.02	0.03
		VOC	8.18	13.61
		PM	0.23	0.34
		PM_{10}	0.23	0.34
		$PM_{2.5}$	0.23	0.34
AE-49601A/B	AE-49601A/B Analyzer Vent	VOC	0.01	0.01
AE-49900A/B	AE-49900A/B Analyzer Vent	VOC	0.01	0.01
AE-49901A/B	AE-49901A/B Analyzer Vent	VOC	0.01	0.01
121 (6)	HOC Belco Scrubber	CO	958.40	1559.15
		HCN	80.47	320.40
		H_2SO_4	49.00	199.30
		NO_x	384.12	473.81
		PM	140.00	569.40
		PM_{10}	140.00	569.40
		$PM_{2.5}$	140.00	569.40
		SO_2	223.08	437.03
		VOC	30.42	123.79
		H_2S	<0.01	<0.01
		NH_3	4.84	17.88
121 (6)	SRU Incinerators Cap	CO	220.75	678.85
		H_2S	5.82	18.73
		NO_x	54.64	239.31
		PM	24.72	98.38
		PM_{10}	24.72	98.38
		$PM_{2.5}$	24.72	98.38
		SO_2	191.32	837.99
		VOC	0.96	3.46

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
121 (6)	Temporary SRU Stack	CO	10.04	7.23
		H_2S	0.047	0.03
		NO_x	1.233	0.72
		PM	1.205	0.87
		PM_{10}	1.205	0.87
		$PM_{2.5}$	1.205	0.87
		SO_2	13.816	9.95
FUG-CAP	Fugitives Subcap (5)	VOC	112.45	492.32
		H_2S	0.59	2.58
		NH_3	0.01	0.06
155	CRU CCR	HCl	0.07	0.29
118	SMR Condenser Vent	VOC	3.64	15.94
21 BH	MAGNACAT Unit	PM	0.18	0.60
		PM_{10}	0.18	0.60
		$PM_{2.5}$	0.18	0.60
187	Tank 25	H_2S	0.02	0.04
		NH_3	<0.01	<0.01
		VOC	1.43	5.33
83-P-136A	Engine 83-P-136A-EN	CO	2.48	0.06
		NO_x	7.43	0.19
		PM	0.38	<0.01
		PM_{10}	0.38	<0.01
		$PM_{2.5}$	0.38	<0.01
		SO_2	0.88	0.02
		VOC	7.43	0.19
83-P-136B	Engine 83-P-136B-EN	CO	2.48	0.06
		NO_x	7.43	0.19

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.38	<0.01
		PM_{10}	0.38	<0.01
		$PM_{2.5}$	0.38	<0.01
		SO_2	0.88	0.02
		VOC	7.43	0.19
WWTP-OWS	WW collection system	VOC	8.62	37.77
83-TK-26	Tank 26	VOC	0.12	0.45
83-TK-159	Tank 159	VOC	0.15	0.39
83-TK-160	Tank 160	VOC	0.15	0.39
83-V-97	Tank 97	VOC	0.18	0.40
83-V-58	Tank 58	VOC	0.11	0.44
83-V-59	Tank 59	VOC	0.11	0.44
83-TK-162	Tank 162	VOC	0.39	1.77
83-TK-155	Tank 155	VOC	0.39	1.77
124	API/DGF Combustor	CO	1.65	7.22
		NO_x	0.45	1.76
		SO_2	0.03	0.13
		VOC	2.94	12.88
83-TK-23	Equalization Tank	VOC	0.81	3.51
83-TK27	Bio Oxidation Reactor Tank	VOC	0.51	2.22
WWTP-AERB	Aeration Basin	VOC	0.25	1.09
WWTP-CLRF	Clarifier	VOC	<0.01	0.04
WWTP-SLB	Saline Basin	VOC	<0.01	<0.01
01-01	Crude/Vacuum Unit Pump Alley	VOC	<0.01	0.02
01-02	North Side of Vacuum Unit	VOC	<0.01	0.02
01-03	North Side of Vacuum Unit	VOC	<0.01	0.02
01-04	Northwest Side of Vacuum Unit - Main Sump	VOC	<0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
03-01	N of Tanks 156/161	VOC	0.02	0.08
98-02	WP MSAT Rail Rack	VOC	0.02	0.08
11-01	Desalter Pump Alley	VOC	<0.01	0.02
41-01	North of 43-TK-08 (Amine Tank)	VOC	<0.01	0.02
41-02	W of 41-V-05 (Acid Gas K.O. Drum)	VOC	<0.01	0.02
49-01	Northwest of XFU	VOC	<0.01	0.02
49-02	North Side of NHT (Unit 48)	VOC	<0.01	0.02
49-03	NHT (Unit 48) Pump Alley	VOC	<0.01	0.02
50-01	East of Tank 62	VOC	<0.01	0.02
52-01	NW of GDU MCC Room	VOC	<0.01	0.02
70-01	East of Tank 55	VOC	<0.01	0.02
70-02	Northwest of Tank 106	VOC	<0.01	0.02
70-03	West of Tank 94 (S&D Main Sump)	VOC	<0.01	0.03
72-01	East of Tank 111	VOC	<0.01	0.02
73-01	North of Tank 152 (Terminal 2A)	VOC	<0.01	0.02
73-02	Between TK 8 & TK 164 (Terminal 2)	VOC	<0.01	0.02
83-01	WWT (Hydroblast Pad)	VOC	0.02	0.07
83-02	WWT (Desalter Lift Station)	VOC	0.01	0.05
83-03	WWT (East of KOH Treater)	VOC	0.02	0.07
83-04	WWT (Northeast of Tank 159)	VOC	<0.01	0.02
83-05	WWT (North Lift Station)	VOC	<0.01	0.03
83-06	WWT (North of V-68)	VOC	<0.01	0.02
83-07	WWT (South of V-55)	VOC	<0.01	0.02
83-09	WWT (BSRP)	VOC	<0.01	0.02
83-10	WWT 83-V-99 (Diversion Box)	VOC	0.02	0.07
83-12	WWT 83-V-28 (SE of Catalyst Pad)	VOC	0.02	0.07

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
V-201	WP MSAT Rail Rack	VOC	0.51	2.23
124a	WP WWT API Combustor Backup	VOC	0.02	0.08
16-V-11	FWP 16-P-11 Diesel Tank	VOC	0.03	<0.01
16-V-12	FWP 16-P-12 Diesel Tank	VOC	0.03	<0.01
16-V-13	FWP 16-P-13 Diesel Tank	VOC	0.03	<0.01
16-V-14	FWP 16-P-14 Diesel Tank	VOC	0.03	<0.01
FWP-FUG	Firewater Pump Engine Fugitives	VOC	0.06	0.26
30-B-05	Boiler 30-B-05	CO	33.48	70.84
		NH_3	2.18	8.68
		NO_x	7.16	30.14
		PM	3.56	14.16
		PM_{10}	3.56	14.16
		$PM_{2.5}$	3.56	14.16
		SO_2	11.56	38.06
		H_2S	<0.01	<0.01
		VOC	2.81	11.30
30-B-05	Boiler 30-B-05 (MSS)	NO_x	71.61	--
HOC-PP-CT	Cooling Tower-Propylene Project	PM	0.78	3.42
		PM_{10}	0.18	0.81
		$PM_{2.5}$	<0.01	0.01
		VOC	1.09	4.78
XX-01	HOC PP Gas Plant CAS	VOC	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) Cl_2 - chlorine
CO - carbon monoxide
HCN - hydrogen cyanide
HF - hydrogen fluoride
H_2S - hydrogen sulfide
H_2SO_4 - sulfuric acid
MSS - Maintenance, Startup and Shutdown
NH_3 - ammonia
NO_x - total oxides of nitrogen
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: TBD

Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX211

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates
			TPY (4)
121	HOC Belco Scrubber	CO_2 (5)	2,451,673.00
		CH_4 (5)	72.08
		N_2O (5)	14.42
		CO_2e	2,457,772.00
Various (FUG-CAP)	Fugitives Subcap	CH_4 (5)	3.59
		CO_2e	90.00
30-B-05	Boiler 30-B-05	CO_2 (5)	222,364.00
		CH_4 (5)	4.19
		N_2O (5)	0.42
		CO_2e	22,594.00

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) CO_2 - carbon dioxide
N_2O - nitrous oxide
CH_4 - methane
CO_2e - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015): CO_2 (1), N_2O (298), CH_4(25)
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.
(5) Emission rate is given for informational purposes only and does not constitute enforceable limit.

Date: TBD

Permit Amendment
Source Analysis & Technical Review

Company	**Valero Refining-Texas LP**	Permit Numbers	**38754, PSDTX324M15, and GHGPSDTX211**
City	**Corpus Christi**	Project Number	**333877**
County	**Nueces**	Regulated Entity Number	**RN100214386**
Project Type	**Amendment**	Customer Reference Number	**CN600127468**
Project Reviewer	**Cara Hill**	Received Date	**September 30, 2021**
Site Name	**Valero Corpus Christi Refinery West Plant**		

Project Overview

Valero Refining Texas, LP (Valero) operates the Bill Greehey Refineries located in Corpus Christi, Nueces County. The Bill Greehey Refineries consist of two plants, the West Plant and the East Plant. Operation of the West Plant is currently authorized under Permit Nos. 38754, PSDTX324M14, and various Permit by Rule (PBR) and Standard Permit authorizations. Valero plans to undertake changes to the West Plant Heavy Oil Cracker (HOC). This project ("HOC Reconfiguration Project") will necessitate certain operational changes at other existing process units and will entail the construction of a new utility steam boiler, a new cooling tower, a new gas plant, a new sour water stripper, a new liquefied petroleum gas (LPG) Merox Treating Unit, a new Selective Hydrogenation Unit (SHU), a new C3/C4 Splitter Tower, and two new butane/butylene bullet tanks. Maintenance, startup and shutdown (MSS) activities for all process units at the West Plant are currently authorized by permit.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)*
VOC	1,023.71	1,076.74	53.03	110.70
PM	832.06	840.90	8.84	241.70
PM_{10}	827.71	836.57	8.86	239.10
$PM_{2.5}$	757.11	807.41	50.30	238.30
NO_X	1,604.21	1,641.33	37.12	298.80
CO	2,982.70	3,183.10	200.40	413.30
SO_2	1,557.20	1,596.95	39.75	447.70
H_2S	21.70	21.79	0.09	0.06
NH3	10.63	37.25	26.62	N/A
Exempt Solvents	0.60	0.60	0.00	N/A
HF	2.29	2.29	0.00	N/A
Cl_2	0.04	0.04	0.00	N/A
H_2SO_4	214.63	199.31	-15.32	168.60

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)*
HCl	0.57	0.57	0.00	N/A
HCN	320.40	320.40	0.00	N/A
CO_2	0.00	2,674,037.00	2,674,037.00	N/A
CH_4	0.00	79.86	79.86	N/A
N_2O	0.00	14.84	14.84	N/A
CO_{2e}	0.00	2,680,456.00	2,680,456.00	1,110,869.00

*Project increases are calculated using the actual-to-potential applicability test and include modified and affected sources. Baseline actual emissions of new units are assumed to be zero.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	November 15, 2021
Site rating & classification:	3.21 / Satisfactory
Company rating & classification:	4.14 / Satisfactory
Has the permit changed on the basis of the compliance history or rating?	No
Did the Regional Office have any comments? If so, explain.	No

Public Notice Information

Requirement	Date
Legislator letters mailed	10/5/2021
Date 1st notice published	10/14/2021
Publication Name: *Caller Times*	
Pollutants: ammonia, carbon monoxide, hydrogen sulfide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, and greenhouse gases	
Date 1st notice Alternate Language published	10/15/2021
Publication Name (Alternate Language): *Tejano Y Grupero News*	
1st public notice tearsheet(s) received	10/20/2021, 11/03/2021
1st public notice affidavit(s) received	10/20/2021, 11/03/2021
1st public notice certification of sign posting/application availability received	11/19/2021
SB709 Notification mailed	11/22/2021 (re-notice 5/9/2022)
Date 2nd notice published	

Requirement	Date
Publication Name:	
Pollutants:	
Date 2nd notice published (Alternate Language)	
Publication Name (Alternate Language):	
2nd public notice tearsheet(s) received	
2nd public notice affidavit(s) received	
2nd public notice certification of sign posting/application availability received	

Public Interest

Number of comments received	1
Number of meeting requests received	1
Number of hearing requests received	1
Date meeting held	
Date response to comments filed with OCC	
Date of SOAH hearing	

Federal Rules Applicability

Requirement	
Subject to NSPS?	**Yes**
Subparts **A, J, Ja, K, Ka, Kb, VV, XX, GGG, NNN, QQQ, & RRR**	
Subject to NESHAP?	**Yes**
Subparts **A, M, & FF**	
Subject to NESHAP (MACT) for source categories?	**Yes**
Subparts **A, F, G, H, Y, CC, QQQ, UUU, DDDDD, & GGGGG**	

Nonattainment review applicability:
The refinery is located in Nueces County, which is classified as attainment for all criteria pollutants. Nonattainment review is not applicable.

PSD review applicability:
The refinery is located in Nueces County, which is classified as attainment for all criteria pollutants. The refinery is a named source, and as a potential to emit (PTE) in excess of 100 tpy for at least one pollutant. Project increases are calculated using the actual-to-potential applicability test and include modified and affected sources. A full discussion of the affected sources is contained in the application. Baseline actual emissions of new units are assumed to be zero. PSD review applies to the following pollutants for which the PTE exceeds an applicable significance threshold (40 CFR § 52.21(b)(23)(i)): VOC, NO_X, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, and H_2SO_4. The refinery has a PTE in excess of 100 tpy (mass basis) and 75,000 tpy GHG (CO_{2e} basis) for GHG. GHG are therefore subject to regulation (40 CFR § 52.21(b)(49)(iv)).

Title V Applicability - 30 TAC Chapter 122 Rules

Requirement
Title V applicability: The site is subject to the Title V program because it is a major source. The facility currently operates under Site Operating Permit No. O-1458.
Periodic Monitoring (PM) applicability: Periodic Monitoring is applicable because the site is a major source. The following provisions for monitoring are being included in the special conditions: • Continuous monitoring for CO and NO_X for the boiler, • Flow rate and BTU content monitoring of the waste gas stream to the flares, • Implementation of the 28VHP and CNTQ LDAR program for VOC fugitive emissions and 28AVO for H_2S, • Monthly monitoring of the cooling tower water VOC emissions, • Weekly monitoring of PM emissions from the cooling towers, • Standard monitoring and recordkeeping of MSS activities and emissions.
Compliance Assurance Monitoring (CAM) applicability: The site is subject to Title V permitting requirements. The flares, scrubbers, and selective catalytic reduction (SCR) systems are control devices used to achieve compliance with an applicable requirement of the permit, and control emissions sources with a pre-control emission rate in excess of an applicable major source threshold. CAM for the flares is addressed by continuous flow and heating value monitoring in accordance with MACT CC. The capture system is required to be inspected annually in accordance with 40 CFR Part 60, Appendix A, Test Method 21 and the bypass prohibited. CAM for the SCR is addressed by ammonia slip monitoring and/or CEMS. CAM for the scrubber is addressed by a CEMS.

Process Description

The heavy oil cracking (HOC) unit is classified as a type of fluid catalytic cracking (FCC) unit that processes residual feedstocks, and its operation is similar to other FCC units.

Residual feedstocks (e.g., atmospheric residuum, vacuum tower bottoms) are upgraded to produce light cycle oil, cat naphtha, and olefin-rich, LPG-range materials. Vaporized, preheated feed and finely dispersed catalyst are introduced at the bottom of a riser. Feed and catalyst form a continuous phase and travel upwards through the riser into a reactor, where spent catalyst is disengaged from upward-flowing products in the vapor phase. The primary effect of the cracking reaction is to break carbon-carbon bonds, reducing the average molecular weight of the feed and generating a substantial proportion of olefinic compounds. Because the cracking reaction takes place in the riser as well as the reactor, the term “riser-reactor” is commonly used to refer to the collection of process equipment where the primary cracking reactions take place.

A secondary reaction is the formation of coke on the catalyst particles, which inhibits their activity. The spent catalyst flows downward from the reactor into a regenerator, where air is introduced to burn off the coke. Hot rejuvenated catalyst is returned to the riser. The returned catalyst also serves to provide a source of heat for the endothermic catalytic cracking reaction process.

The combustion of coke in the regenerator generates particulate matter, carbon monoxide, nitrogen oxides, and hydrocarbon emissions. The coke also contains organic sulfur and nitrogen that were originally present in the FCC feed, and these may be converted to SO_2, NO_X, and HCN during regeneration. SO_2 and PM emissions are controlled using the Belco Scrubber (EPN 121), while NO_X, CO, VOC, and HCN emissions are controlled via combustion.

Product effluent from the reactor-riser is directed to a gas plant where it is quenched and fractionated into products, including light cycle oil, cat naphtha, C3 and C4 LPGs, and fuel gas.

Project Scope

The project will install a secondary riser-reactor in the HOC Unit and a new gas plant next to the HOC Unit. The secondary riser-reactor will be connected to and will share the existing HOC regenerator for catalyst regeneration and heat transfer purposes. Cat naphtha produced at the HOC, which is currently sent to the Gasoline Desulfurization Unit (GDU), will be rerouted to the secondary reactor riser, where it will be cracked into light olefins and naphtha. The gaseous olefins will be separated in the new gas plant, producing propylene butylenes, high-octane naphtha, and light cycle oil (LCO). The propylene will be exported for sale. The butylenes will be routed to the Alkylation unit, backing out butylenes which are currently routed to the Alkylation Unit from the Oleflex Unit. Those Oleflex Unit butylenes that are backed out from Alkylation Unit will be routed to the Iso-Octene Unit resulting in increased production of iso-octene (a gasoline blendstock). The high-octane naphtha that is produced will be routed to the GDU, partially making up for the cat naphtha that was re-directed to the secondary reactor-riser. The LCO that is produced will be routed back through the HOC unit and then ultimately routed to the Hydrocracker Unit (HCU) as incremental feed. Off-gas generated in the process will be amine treated using existing equipment to reduce sulfur content and then either exported to a 3rd party facility as a feedstock or routed to the refinery's fuel gas system. Heat generated from the combustion of coke in the HOC regenerator is used to vaporize and preheat the feed, providing heat of reaction for the endothermic cracking reaction. The HOC regenerator is currently equipped with bed coils at its bottom which remove the excess heat by producing steam.

These bed coils will be removed as part of the project. The cracking in the proposed secondary riser reactor will also be an endothermic process and will remove the excess heat generated by the HOC regenerator, eliminating the need for the bed coils. The loss of steam supply due to removal of the bed coils will be compensated for by the installation of a new boiler, which will also serve to enhance steam reliability for other refinery process units. The second reactor-riser will create a modest increase in coke burn activity due to the lower cokeforming tendencies of the lighter feeds used. Therefore, it is not necessary to construct a second regenerator to accommodate the new reactor-riser. The gas plant will include a Merox Unit for removing mercaptan sulfur from LPG products and a Selective Hydrogenation Unit (SHU) for converting unwanted di-olefins into mono-olefin products.

The gas plant will also include a new C3/C4 splitter tower for separating butylenes from propylene. Steam and cooling water needed for these units will be provided by the new boiler and new cooling tower. Incremental hydrogen that will be consumed in the new SHU Unit will be provided by the refinery's existing SMR Unit. The Merox Unit will generate a very low-volume air-oxidation off-gas stream which will be routed to the new boiler and/or the existing SRU Tail Gas Incinerator for control. A wastewater collection system is also part of the new gas plant.

The project will include other changes in the OSBL sections of the refinery, including a new boiler, a new cooling tower, an additional sour water stripper, pressurized bullet tanks for storage of liquefied gases, miscellaneous piping changes, and other changes not affecting equipment with potential to emit air contaminants (e.g., control and instrumentation, electrical equipment, electric-drive air compressors).

Valero is also correcting the drift factor for the existing HOC cooling tower (EPN 122). The current permit limits are based on a drift loss percent of 0.005%. However, the drift eliminators installed on the HOC colling tower are designed to have no more than 0.001% drift loss.

Finally, Valero is requesting conditions specifying sour water tank retention time and MSS requirements.

A summary of the draft permit requirements, including control, monitoring, recordkeeping and reporting requirements, is given below.

SC No.	Comment
1	Correction to the name of the MAERT.
16	Limits for products of combustion (NO_X, CO), VOC, PM, and H_2S and ammonia slip for boiler 30-B-05.
30	Required monitoring, recordkeeping, and leak detection and repair requirements for cooling towers and heat exchange systems. Limitations on particulate emissions from cooling tower drift.
36	Required monitoring requirements and limit on benzene and VOC for CAS.
79	Sour water tank retention time and MSS requirements.

SC No.	Comment
80-83	Greenhouse gas emissions recordkeeping requirements.
84	Operating and monitoring requirements for boiler 30-B-05

Best Available Control Technology

Control technology is consistent with PSD BACT for PSD pollutants (VOC, NO_X, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, H_2SO_4 and GHG) and state minor NSR BACT for H_2S. A control technology review was conducted for all pollutants. The controls described in this section were determined to satisfy BACT requirements based on a review of recently issued permits from Texas and other states, and consideration of the RACT/BACT/LAER Clearinghouse (RBLC) data provided by the applicant.

EPN	Source Name	Best Available Control Technology Description
30-B-05	Boiler 30-B-05	Boiler 30-B-05 is a new boiler with a maximum hourly and annual average fire rates of 462 MMBtu/hr and 420 MMBtu/hr, respectively. The boiler will be fired with refinery fuel gas and/or natural gas. Emissions of NO_X are minimized through the use of ultra-low NO_X burners and SCR. The permit limits NO_X emissions to 0.015 lb/MMBtu fuel fired (HHV basis) on a 1-hr average and 0.015 lb/MMBtu fuel fired on an annual average. Ammonia slip from the SCR is limited to 10 ppmvd (3% O_2 basis) on a 24-hr average. Emissions of CO are limited to 100 ppmvd (3% O_2 basis) on a 1-hr average and 50 ppmvd (3% O_2 basis) on an annual average. SO_2 emissions are limited through use of refinery fuel gas with a maximum H_2S concentration of 87 ppmv on a 1-hour average and 60 ppmv on an annual basis. Emissions of particulate and VOC are limited through good combustion practices and the use of gaseous fuel to maintain opacity less than 5%. VOC emissions will be minimized by maintaining good combustion efficiency and proper combustion design and practices. GHGs from the boiler will be limited through the use of low carbon fuel (refinery fuel gas), good combustion practices, and proper operation and maintenance to achieve a net thermal efficiency of 78%.
121	Heavy Oil Cracker (HOC) Belco Scrubber	The HOC is a type of fluidized catalytic cracking (FCC) unit. SO_2 emissions are limited to 50 ppmvd (0% O_2 basis) on a 1-hr and 7-day rolling average, and 25 ppmvd (0% O_2 basis) on a 365-day rolling average. CO is limited to 500 ppmvd (0% O_2 basis) on a 1-hr average. PM is limited to 1 lb/1000 lbs of coke burned off and opacity is limited to 20% over a 6-minute average. VOC emissions are limited to less than 10 ppmv 0% O_2 basis) on a 1-hr average. HCN emissions are limited through compliance with MACT UUU for organic HAPs. H_2SO_4 emissions are limited to 0.35 lb/1000 lb coke burn off. GHG emissions will be limited through work practices consisting of operating the HOC with a high-conversion rate to minimize coke formation. NO_X emissions are limited to 37 ppmvd and (0% O_2 basis) on a 365-day rolling average and limited by using operational practices to reduce NO_X including excess oxygen control and non-Pt combustion promoters. BACT for NO_X was determined using a Tier III analysis, which is detailed in the application, and BACT for all other pollutants was based on a Tier I analysis.

EPN	Source Name	Best Available Control Technology Description
121 30-B-05	Merox vent	This VOC process vent will be routed to the Boiler 30-B-05 firebox or existing SRU tail gas incinerator to achieve a minimum of 99% DRE as specified in the permit special conditions.
HOC-PP-CT	Cooling Tower-Propylene Project	The Propylene cooling tower is a new non-contact design cooling tower. The permit requires weekly sampling of cooling water for strippable VOC. Corrective action must be taken if total strippable hydrocarbon content of the cooling water exceeds 0.08 ppmw equivalent, and delay of repair procedures cannot be used if the strippable hydrocarbon content exceeds 0.8 ppmw. The permit requires that particulate emissions be minimized through the drift eliminators which are designed to limit total liquid drift to no greater than 0.001%. Drift eliminators must be inspected regularly and must be repaired or replaced when defects are discovered.
CAS-HOCPP	HOC Gas Plant Wastewater Lift Station	A Carbon Absorption System (CAS) will be installed on the new wastewater lift station in the new Gas Plant to control VOC emissions. The CAS will consist of two adsorbers, connected in series. The outlet of the first adsorber is the breakthrough monitoring point. Breakthrough is defined as 5 ppmv benzene or 100 ppmv VOC at the outlet of the primary canister. If breakthrough is detected, the carbon adsorber is considered spent and must be replaced. When breakthrough is reached on the primary (lead) adsorber, the secondary (lag) adsorber is also monitored at the outlet for breakthrough. If the secondary canister has not broken through, it is moved to the primary position and a fresh adsorber is moved into the secondary position within 24 hours. If the secondary canister has also broken through, then both canisters will be replaced within 24 hours.
21/22F	HOC Unit Fugitives	Fugitive emissions from piping components in VOC service will be monitored using the TCEQ 28VHP and 28CNTQ leak detection and repair (LDAR) programs. These programs will also limit GHG emissions. The piping components in H_2S service will be monitored with the 28AVO LDAR program.
42F	Sour Wtr, Stripper Fugitives	
FUG-CAP	Piping Fugitives	
##F	Selective Hydrogenation Unit, LPG Gas Plant, Boiler 30-B-05	
Various	MSS	The process vessel purge gases will be routed to one of two West Plant flares (EPNs 126 and 158). Valero proposes to flare purge gas from any process vessels that contained liquids with vapor pressures equal or greater than 0.5 psia until a prescribed condition is met. Any residual process liquids and vapors are reduced to the best extent possible via process fluid recovery, followed by flaring before opening the process vessels for inspection and maintenance.
EPN 126 EPN 158	Main Flare Ground Flare	The flares achieve a minimum DRE of 99% for hydrocarbons containing 3 carbon atoms or less, and 98% for all other compounds. The flares are required to comply with 40 CFR § 63.670 specifications for minimum combustion zone net heating value and maximum tip velocity. The flares are equipped with flow monitors and gas chromatograph or calorimeter.

Permits Incorporation

Permit by Rule (PBR) / Standard Permit / Permit Nos.	Description (include affected EPNs)	Action (Reference / Consolidate / Void)
N/A	N/A	N/A

Impacts Evaluation

Was modeling conducted? Yes Type of Modeling: AERMOD

Is the site within 3,000 feet of any school? No

Additional site/land use information: None

Air dispersion modeling was performed by the applicant to evaluate total air emissions from the proposed project. Based on the results of the dispersion model, emissions from the site are not expected to result in a violation of any state or national ambient air quality standard, or a violation of any PSD increment. Emissions of non-criterial air contaminants are not expected to create adverse impacts to public health. The air dispersion modeling demonstration was audited by the TCEQ Air Dispersion Modeling Team and approved (memo dated May 18, 2022).

Project Reviewer	Date	Team Leader	Date
Cara Hill		Joel Stanford	

TCEQ Interoffice Memorandum

To: Cara Hill
Mechanical/Coatings Section

Thru: Chad Dumas, Team Leader
Air Dispersion Modeling Team (ADMT)

From: Justin Cherry, P.E.
ADMT

Date: May 18, 2022

Subject: Air Quality Analysis Audit – Valero Refining-Texas, L.P. (RN100214386)

1. Project Identification Information

Permit Application Number: 38754
NSR Project Number: 333877
ADMT Project Number: 7809
County: Nueces
Published Map: \\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\7809\7809.pdf

Air Quality Analysis: Submitted by DiSorbo Consulting LLC, January 2022, on behalf of Valero Refining-Texas, L.P. Additional information was provided April and May 2022.

2. Report Summary

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 indicate that 1-hr, 24-hr, and annual SO_2, 24-hr and annual $PM_{2.5}$ (NAAQS and Increment), and 1-hr and annual NO_2 exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 3-hr SO_2, 24-hr and annual PM_{10}, and 1-hr and 8-hr 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 NO_2 and 1-hr SO_2 De Minimis levels is based on the assumptions underlying EPA's development of the 1-hr NO_2 and 1-hr SO_2 De Minimis levels. As explained in EPA guidance memoranda[1,2], 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 and 1-hr SO_2 NAAQS.

The $PM_{2.5}$ and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and $PM_{2.5}$ NAAQS or $PM_{2.5}$ PSD increments based on the analyses documented in EPA guidance and policy memoranda[3].

[1] www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[2] www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf
[3] www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

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/m³)

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
SO_2	1-hr	20	7.8
SO_2	3-hr	20	25
SO_2	24-hr	16	5
SO_2	Annual	2	1
PM_{10}	24-hr	4.8	5
PM_{10}	Annual	0.9	1
$PM_{2.5}$ (NAAQS)	24-hr	4	1.2
$PM_{2.5}$ (NAAQS)	Annual	0.8	0.2
$PM_{2.5}$ (Increment)	24-hr	4.7	1.2
$PM_{2.5}$ (Increment)	Annual	0.9	0.2
NO_2	1-hr	30.2	7.5
NO_2	Annual	2	1
CO	1-hr	362	2000
CO	8-hr	319	500

The 1-hr SO_2, 24-hr and annual $PM_{2.5}$ (NAAQS), and 1-hr NO_2 GLCmax are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Intermittent guidance was relied on for the 1-hr SO_2 and 1-hr NO_2 PSD De Minimis analyses.

To evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant 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 500 tpy Harris County source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.36 µg/m^3 and 0.01 µg/m^3, respectively. Since the combined direct and secondary 24-hr and annual $PM_{2.5}$ impacts are above the De minimis levels, a full impacts analysis is required.

Table 2. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O_3	8-hr	0.42	1

The applicant performed an O_3 analysis as part of the PSD AQA. The applicant evaluated project emissions of O_3 precursor emissions (NO_x and VOC). For the project NO_x and VOC emissions, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. As noted above, 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 500 tpy Harris County source for NO_x and 1000 tpy Harris County source for VOCs, the applicant estimated an 8-hr O_3 concentration of 0.42 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that the 24-hr SO_2 exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

The De Minimis analysis modeling results indicate that 24-hr PM_{10}, annual NO_2, and 8-hr CO are below their respective monitoring significance level.

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax (µg/m^3)	Significance (µg/m^3)
SO_2	24-hr	16	13
PM_{10}	24-hr	4.8	10
NO_2	Annual	2	14
CO	8-hr	319	575

The GLCmax represent the maximum predicted concentrations over five years of meteorological data.

The applicant evaluated ambient SO_2 and $PM_{2.5}$ monitoring data to satisfy the requirements for the pre-application air quality analysis.

Background concentrations for SO_2 were obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd., Corpus Christi, Nueces County. The applicant used a three-

year average (2018-2020) of the 99th percentile of the annual distribution of daily maximum 1-hr concentrations for the 1-hr value (14.5 µg/m^3). The second highest 24-hr concentration from 2020 was used for the 24-hr value (3.1 µg/m^3). The applicant used the 1-hr value and 24-hr value to represent the 3-hr and annual concentrations, respectively. This is conservative. The use of this monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site. The 1-hr background value was also used in the PSD NAAQS analysis.

Background concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 483550034 located at 5707 Up River Rd., Corpus Christi, Nueces County. The applicant used a three-year average (2018-2020) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (19 µg/m^3). The applicant used a three-year average (2018-2020) of the annual mean concentrations for the annual value (7.7 µg/m^3). The use of this monitor is reasonable based on the applicant's analysis of the surrounding land use and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site. The background values were also used in the PSD NAAQS analysis.

Since the project has a net emissions increase of 100 tons per year (tpy) or more of volatile organic compounds or nitrogen oxides, the applicant evaluated ambient O_3 monitoring data to satisfy requirements in 40 CFR 52.21 (i)(5)(i)(f).

A background concentration for O_3 was obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd., Corpus Christi, Nueces County. A three-year average (2018-2020) of the annual fourth highest daily maximum 8-hr concentrations was used in the analysis (61 ppb). The use of this monitor for a background concentration of ozone is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site.

C. National Ambient Air Quality Standard (NAAQS) Analysis

The De Minimis analysis modeling results indicate that 1-hr SO_2, 24-hr and annual $PM_{2.5}$, and 1-hr and annual NO_2 exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax (µg/m^3)	Background (µg/m^3)	Total Conc. = [Background + GLCmax] (µg/m^3)	Standard (µg/m^3)
SO_2	1-hr	151	14.5	166	196
$PM_{2.5}$	24-hr	15	19	34	35
$PM_{2.5}$	Annual	3.6	7.7	11.3	12
NO_2	1-hr	121	34	155	188
NO_2	Annual	23	5	28	100

The 1-hr SO_2 GLCmax is the maximum five-year average of the 99th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The 24-hr $PM_{2.5}$ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor. The annual $PM_{2.5}$ GLCmax is the maximum five-year average of the predicted annual concentrations determined for each receptor. The 1-hr NO_2 GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The annual NO_2 GLCmax is the maximum predicted concentrations over five years of meteorological data.

The primary NAAQS for 24-hr and annual SO_2 have been revoked for Nueces County and are not reported above.

Background concentrations for NO_2 were obtained from the EPA AIRS monitor 480391016 located at 109B Brazoria Hwy 332 West, Lake Jackson, Brazoria County. The three-year average (2017, 2018, and 2020) of the 98th percentile of the annual distribution of the maximum daily 1-hr concentrations was used for the 1-hr value. The annual concentration from 2020 was used for the annual value. 2019 monitoring data did not meet the completeness criteria. The ADMT reviewed the 2020 design value for Brazoria County, which is based on the highest monitor in the county and determined that this discrepancy would not change the overall conclusions. The use of this monitor is reasonable based on the applicant's analysis of the surrounding land use and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

As stated above, to evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Harris County source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.36 µg/m^3 and 0.01 µg/m^3, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

D. Increment Analysis

The De Minimis analysis modeling results indicate that 24-hr and annual SO_2, 24-hr and annual $PM_{2.5}$, and annual NO_2 exceed the respective de minimis concentrations and require a PSD increment analysis.

Table 5. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax (µg/m^3)	Increment (µg/m^3)
SO_2	24-hr	68	91
SO_2	Annual	11	20
$PM_{2.5}$	24-hr	8.9	9
$PM_{2.5}$	Annual	2.9	4
NO_2	Annual	23	25

The GLCmax for the 24-hr SO_2 and 24-hr $PM_{2.5}$ is the maximum high, second high (H2H) predicted concentration across five years of meteorological data. For annual SO_2, NO_2 and

annual $PM_{2.5}$, the GLCmax represents the maximum predicted concentrations over five years of meteorological data.

The GLCmax for 24-hr and annual $PM_{2.5}$ reported in the table above represent the total predicted concentrations associated with modeling the direct $PM_{2.5}$ emissions and the contributions associated with secondary $PM_{2.5}$ formation (discussed above in the NAAQS Analysis section).

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 project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Big Bend National Park, is located approximately 550 kilometers (km) from the proposed site.

The H_2SO_4 24-hr maximum predicted concentration of 3 µg/m^3 occurred approximately 200 meters from the property line towards the north. The H_2SO_4 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10 km from the proposed sources, in the direction of the Big Bend National Park Class I area is 0.3 µg/m^3. The Big Bend National Park Class I area is an additional 540 km from the edge of the receptor grid. Therefore, emissions of H_2SO_4 from the proposed project are not expected to adversely affect the Big Bend National Park Class I area.

The predicted concentrations of PM_{10}, $PM_{2.5}$, NO_2, and SO_2 for all averaging times, are all less than de minimis levels at a distance of 5 km from the proposed sources in the direction the Big Bend National Park Class I area. The Big Bend National Park Class I area is an additional 545 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 Big Bend National Park Class I area.

F. Minor Source NSR and Air Toxics Analysis

Table 6. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
H_2S	1-hr	0.38	2.16

Table 7. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m^3)	Standard (µg/m^3)
SO_2	1-hr	183	1021
H_2SO_4	1-hr	9	50

H_2SO_4	24-hr	3	15

Table 8. Generic Modeling Results

Source ID	1-hr GLCmax (µg/m^3 per lb/hr)	Annual GLCmax (µg/m^3 per tpy)
30_B_05	1.74	-
HOCPPCT	7.19	-
121HOC	0.18	-
MEROX	1.74	--
126	0.23	0.004
127	0.23	0.004
158	4.51	0.07
FUGCAP	27.84	-
CASHOCPP	28.93	-

Table 9. Minor NSR Project (Increases Only) Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m^3)	10% ESL (µg/m^3)
ammonia 7664-41-7	1-hr	5	18
distillates (petroleum), light catalytic cracked 64741-59-9	1-hr	195	350

The ADMT was unable to verify the reported 1-hr GLCmax for ammonia. The ADMT supplemented the GLCmax in Table 9 based on ADMT calculations.

3. Model Used and Modeling Techniques

AERMOD (Version 21112) was used in a refined screening mode.

For the health effects analyses, unitized emission rates of 1 lb/hr and 1 tpy were used to predict a generic short-term and long-term impact for each applicable source, respectively. The generic impact was multiplied by the proposed pollutant specific emission rates to calculate a maximum predicted concentration for each source. The maximum predicted concentration for each source was summed to get a total predicted concentration for each pollutant.

The applicant conducted the 1-hr and annual NO_2 de minimis and 1-hr NO_2 NAAQS analyses using the ARM2 model option following EPA guidance.

The applicant used the worst-case flare (Model ID 158) to represent emissions associated with EPN MSS Caps. The worst-case flare was determined from generic modeling noted above.

Since a company cannot contribute to a condition of air pollution located within its own property, two separate modeling demonstrations were provided for the 24-hr $PM_{2.5}$ full PSD Increment analyses. One model run consisted of receptors located within the nearby POTAC LLC (POT) property and included all sources except POT sources (please note that the applicant included two sources [Model IDs 576501 and 576534] from POT without explanation). The second model run consisted of all receptors not within POT property and included all sources being modeled.

A. Land Use

Medium roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the AERSURFACE analysis, topographic map, DEMs, and aerial photography. The selection of medium roughness is reasonable.

The urban option was used in AERMOD to account for enhanced night-time dispersion due to heat island effects associated with the urban area and heat generated from nearby industrial sources. The population chosen was 162,728 people. The applicant followed EPA guidance from Section 5 of the AERMOD Implementation Guide.

B. Meteorological Data

Surface Station and ID: Corpus Christi, TX (Station #: 12924)
Upper Air Station and ID: Corpus Christi, TX (Station #: 12924)
Meteorological Dataset: 2014-2018 for the de minimis, PSD NAAQS and Increment, and SO_2 State Property Line analyses; 2016 for all other analyses
Profile Base Elevation: 13.4 meters

C. Receptor Grid

The grid modeled was sufficient in density and spatial coverage to capture representative maximum ground-level concentrations.

D. Building Wake Effects (Downwash)

Input data to Building Profile Input Program Prime (Version 04274) are consistent with the aerial photography, plot plan, and modeling report.

The applicant did not include downwash for all point sources in the SO_2 State Property Line analysis. The ADMT conducted test modeling and determined that this discrepancy would not change the overall conclusions.

4. Modeling Emissions Inventory

The modeled emission point and volume source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

The computation of the effective stack diameters for the flares is consistent with TCEQ modeling guidance.

For the annual NO_2 NAAQS and Increment analyses, a NO_x to NO_2 conversion factor of 0.9, based on ARM2, was applied to the modeled annual NO_x concentrations. This is reasonable.

For the 1-hr NO_2 de minimis and NAAQS analyses, MSS emissions from the boiler (Model ID 30_B_05M) were modeled with an annual average emission rate, consistent with EPA guidance

for evaluating intermittent emissions. MSS emissions from the boiler were represented to occur no more than 50 hours per year.

For the 1-hr NO_2 and 1-hr SO_2 NAAQS analyses, emissions from the diesel emergency generator engines (Model IDs 16_P_04, 16_P_07, and 16_P_11 thru 16_P_14) and firewater pumps (Model IDs 83P_136A and B) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions from each engine were represented to occur no more than 52 hours per year.

For the 1-hr NO_2 and 1-hr SO_2 NAAQS analyses, MSS flaring emissions (Model ID MSSFLR) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions were represented to occur no more than 192 hours per year.

For the 1-hr NO_2 and 1-hr SO_2 NAAQS analyses, MSS startup/shutdown emissions associated with the sulfur recovery unit (Model ID MSSSRU) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions were represented to occur no more than 48 hours per year.

For the 1-hr NO_2 and 1-hr SO_2 NAAQS analyses, MSS startup/shutdown emissions associated with the hot oil cracker (Model ID MSSHOC) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions were represented to occur no more than 30 hours per year.

For the 1-hr NO_2 NAAQS analysis, MSS emissions associated with the tanks (EPN MSS Caps) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. MSS emissions from the tanks were represented to occur no more than 288 hours per year. The applicant modeled the intermittent rate out of each applicable tank (Model IDs MSSTK4, MSSTK7, MSSTK11, and MSSTK12). This is conservative.

For the 24-hr SO_2 and 24-hr $PM_{2.5}$ averaging time analyses, the modeled emission rates of the diesel emergency generator engines (Model IDs 16_P_04, 16_P_07, and 16_P_11 thru 16_P_14) and firewater pumps (Model IDs 83P_136A and B) are based on 24-hr emission rates. The 24-hr emission rates are based on one hour of operation in a 24-hour period.

For the 24-hr $PM_{2.5}$ NAAQS and Increment analyses, emissions were divided evenly between the number of sources within each set of cooling towers (Model IDs 122CT_1 thru 8, 123CT_1 thru 3, 1CT_1 and 2, and 167CT_1 and 2).

For the annual NO_2 NAAQS and Increment analyses, emissions from the off-property sources were based on the 1-hr NO_x maximum allowable emission rates. This is conservative.

Except as noted above, maximum allowable hourly emission rates were used for the short-term averaging time analyses, and annual average emission rates were used for the annual averaging time analyses.

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State of Texas
County of Travis
MAR 2 0 2023
I hereby certify this is a true and correct copy of a Texas Commission on Environmental Quality (TCEQ) document, which is filed in the Records of the Commission. Given under my hand and the seal of office.

Veronica Barnes, Custodian of Records
Texas Commission on Environmental Quality

Compliance History Report

Compliance History Report for CN600127468, RN100214386, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Respondent, or Owner/Operator: CN600127468, Valero Refining-Texas, L.P. **Classification:** SATISFACTORY **Rating:** 4.05

Regulated Entity: RN100214386, VALERO CORPUS CHRISTI REFINERY WEST PLANT **Classification:** SATISFACTORY **Rating:** 2.77

Complexity Points: 36 **Repeat Violator:** NO

CH Group: 02 - Oil and Petroleum Refineries

Location: 5900 UP RIVER RD NUECES, TX, NUECES COUNTY

TCEQ Region: REGION 14 - CORPUS CHRISTI

ID Number(s):

AIR OPERATING PERMITS ACCOUNT NUMBER NE0112G
AIR OPERATING PERMITS PERMIT 2601
AIR NEW SOURCE PERMITS ACCOUNT NUMBER NE0112G
AIR NEW SOURCE PERMITS PERMIT 20992
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M9
AIR NEW SOURCE PERMITS AFS NUM 4835500050
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M8
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M13
AIR NEW SOURCE PERMITS REGISTRATION 103920
AIR NEW SOURCE PERMITS REGISTRATION 103932
AIR NEW SOURCE PERMITS REGISTRATION 103936
AIR NEW SOURCE PERMITS REGISTRATION 103937
AIR NEW SOURCE PERMITS REGISTRATION 103922
AIR NEW SOURCE PERMITS REGISTRATION 103919
AIR NEW SOURCE PERMITS PERMIT 106965
AIR NEW SOURCE PERMITS REGISTRATION 168339
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M15
AIR NEW SOURCE PERMITS PERMIT AMOC210
AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX211
AIR NEW SOURCE PERMITS REGISTRATION 155846
AIR NEW SOURCE PERMITS REGISTRATION 156307
STORMWATER PERMIT TXR05FS92
WASTEWATER EPA ID TX0063355
POLLUTION PREVENTION PLANNING ID NUMBER P00757
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TXD074604166
AIR OPERATING PERMITS PERMIT 1458
AIR NEW SOURCE PERMITS PERMIT 38754
AIR NEW SOURCE PERMITS PERMIT 20740
AIR NEW SOURCE PERMITS REGISTRATION 39505
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M10
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M11
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M12
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX324M14
AIR NEW SOURCE PERMITS REGISTRATION 103918
AIR NEW SOURCE PERMITS REGISTRATION 103930
AIR NEW SOURCE PERMITS REGISTRATION 103934
AIR NEW SOURCE PERMITS REGISTRATION 103938
AIR NEW SOURCE PERMITS REGISTRATION 103921
AIR NEW SOURCE PERMITS REGISTRATION 140196
AIR NEW SOURCE PERMITS PERMIT AMOC39
AIR NEW SOURCE PERMITS REGISTRATION 165131
AIR NEW SOURCE PERMITS REGISTRATION 168565
AIR NEW SOURCE PERMITS REGISTRATION 164619
AIR NEW SOURCE PERMITS REGISTRATION 151262
AIR NEW SOURCE PERMITS PERMIT AMOC131
IHW CORRECTIVE ACTION SOLID WASTE REGISTRATION # (SWR) 30478
WASTEWATER PERMIT WQ0001909000
AIR EMISSIONS INVENTORY ACCOUNT NUMBER NE0112G
INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 30478
TAX RELIEF ID NUMBER 16116

Compliance History Period: September 01, 2016 to August 31, 2021 **Rating Year:** 2021 **Rating Date:** 09/01/2021

Date Compliance History Report Prepared: March 02, 2023

Agency Decision Requiring Compliance History: Enforcement

Component Period Selected: September 30, 2016 to September 30, 2021

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: TCEQ Staff Member **Phone:** (512) 239-1000

Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

1 Effective Date: 06/30/2020 ADMINORDER 2019-1594-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: GTC and STC No. 2.F OP

Description: Failure to submit an initial notification for a reportable emissions event no later than 24 hours after the discovery of an emissions event. Specifically, the initial notification for Incident No. 309030 was due by May 22, 2019 at 9:45 a.m., but was not submitted until May 22, 2019 at 2:03 p.m.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: GTC and STC No. 22 OP
SC 1 PA

Description: Failure to prevent unauthorized emissions. Specifically, the Respondent released 225.88 pounds ("lbs") of nitrogen oxides and 897.05 lbs of sulfur dioxide from the Main Flare, Emissions Point Number 126, during an emissions event (Incident No. 309030) that began on May 21, 2019 and lasted 16 hours and 40 minutes. The emissions event occurred due to a process upset that caused Propane Tank 35 to vent to the Main Flare, resulting in flaring. Since the Respondent did not comply with the emission

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(1)(E)
30 TAC Chapter 101, SubChapter F 101.201(b)(1)(J)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: GTC and STC No. 2.F. OP

Description: Failure to identify all required information on the final record for a reportable emissions event. Specifically, the Respondent did not identify the time of the discovery of the emissions event and the best known cause of the emissions event on the final record for Incident No. 309030.

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	October 07, 2016	(1364312)
Item 2	October 20, 2016	(1379223)
Item 3	October 26, 2016	(1358825)
Item 4	November 18, 2016	(1385176)
Item 5	December 19, 2016	(1391305)
Item 6	January 30, 2017	(1355237)
Item 7	February 17, 2017	(1404821)
Item 8	March 18, 2017	(1411908)
Item 9	March 23, 2017	(1261210)
Item 10	April 11, 2017	(1401256)
Item 11	May 25, 2017	(1415620)
Item 12	June 01, 2017	(1394523)
Item 13	June 20, 2017	(1432051)
Item 14	August 31, 2017	(1428969)
Item 15	September 22, 2017	(1450897)
Item 16	September 26, 2017	(1437017)
Item 17	October 20, 2017	(1456763)
Item 18	November 20, 2017	(1462226)
Item 19	December 20, 2017	(1468608)
Item 20	January 19, 2018	(1475318)

Item 21	April 20, 2018	(1494444)
Item 22	May 18, 2018	(1501390)
Item 23	June 20, 2018	(1508484)
Item 24	August 13, 2018	(1505156)
Item 25	October 10, 2018	(1518007)
Item 26	October 12, 2018	(1513088)
Item 27	November 18, 2018	(1513740)
Item 28	November 20, 2018	(1542227)
Item 29	November 30, 2018	(1525120)
Item 30	December 20, 2018	(1489947)
Item 31	January 18, 2019	(1562018)
Item 32	February 05, 2019	(1425021)
Item 33	March 20, 2019	(1562017)
Item 34	April 18, 2019	(1572593)
Item 35	June 13, 2019	(1558946)
Item 36	June 20, 2019	(1531493)
Item 37	July 19, 2019	(1593939)
Item 38	August 20, 2019	(1600264)
Item 39	September 20, 2019	(1607158)
Item 40	October 04, 2019	(1597591)
Item 41	October 20, 2019	(1614009)
Item 42	November 20, 2019	(1619821)
Item 43	November 25, 2019	(1589763)
Item 44	January 20, 2020	(1634819)
Item 45	March 20, 2020	(1647940)
Item 46	April 22, 2020	(1640192)
Item 47	May 18, 2020	(1605207)
Item 48	May 20, 2020	(1660859)
Item 49	May 22, 2020	(1644286)
Item 50	June 23, 2020	(1657457)
Item 51	June 25, 2020	(1657246)
Item 52	July 06, 2020	(1652651)
Item 53	July 20, 2020	(1674342)
Item 54	August 03, 2020	(1665629)
Item 55	August 20, 2020	(1681116)
Item 57	September 11, 2020	(1672899)
Item 58	September 21, 2020	(1687686)
Item 59	October 20, 2020	(1694028)
Item 60	October 29, 2020	(1679550)
Item 61	November 02, 2020	(1684592)
Item 62	December 04, 2020	(1692495)
Item 63	January 12, 2021	(1690469)
Item 64	January 13, 2021	(1693082)
Item 65	January 20, 2021	(1714754)
Item 66	February 10, 2021	(1697386)
Item 67	February 19, 2021	(1727817)
Item 68	April 19, 2021	(1727819)
Item 69	May 20, 2021	(1741205)
Item 70	May 21, 2021	(1706396)
Item 71	June 18, 2021	(1747985)
Item 72	July 20, 2021	(1752466)
Item 73	August 20, 2021	(1757895)
Item 74	September 01, 2021	(1760438)
Item 75	September 20, 2021	(1767120)
Item 76	September 21, 2021	(1751345)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

1 Date: 10/31/2020 (1714752)

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

2 Date: 11/20/2020 (1683979)

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 319, SubChapter A 319.11(b)
Monitoring Requirements No. 2. a., Pg. 4 PERMIT

Description: Failed to properly analyze the pH samples.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
Reporting Requirement; No. 7.c., Pg. 5 PERMIT

Description: Failed to report any effluent violation which deviates from the permitted effluent limitation by more than 40% in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
Reporting Requirements; No. 1, Pg. 4 PERMIT

Description: Failed to correctly report the number of excursions on the discharge monitoring reports (DMRs).

3 Date: 11/30/2020 (1714753)

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

4 Date: 02/28/2021 (1727818)

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

5 Date: 08/25/2021 (1735080)

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 113, SubChapter C 113.100
40 CFR Chapter 63, SubChapter C, PT 63, SubPT DDDDD 63.7540(a)
5C THSC Chapter 382 382.085(b)

Description: Failure to complete annual boiler tune-up by the required date.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 113, SubChapter C 113.100
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.643(c)(1)(i)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754, SC 51D PERMIT

Description: Failure to perform monitoring for the lower explosion limit (LEL).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.104(a)(1)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754, SC 15 PERMIT

Description: Failure to comply with required hydrogen sulfide (H2S) limits.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.18(c)(3)(ii)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.643(a)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.670(e)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754 / PSDTX324M14, SC 12 PERMIT

Description: Failure to maintain minimum net heating value on flares.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.18(c)(4)(ii)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.643(a)(1)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.670(d)
5C THSC Chapter 382 382.085(b)
FOP O-01458, Special Term & Condition 22 OP
NSR 38754 / PSDTX324M14, SC 15 PERMIT
NSR 38754 / PSDTX324M14, SC 59D(1) PERMIT

Description: Failure to maintain the exit velocity at less than the required limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-01458, Special Term & Condition 22 OP
NSR 38754 / PSDTX324M14, SC 26 PERMIT

Description: Failure to obtain samples.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-01458, Special Term & Condition 22 OP
NSR 38754 / PSDTX324M14, SC 21 PERMIT

Description: Failure to maintain the pH of the Scrubber circulating caustic solution between the required range.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-01458, CAM Summary OP
FOP O-01458, Special Term & Condition 20 OP

Description: Failure to maintain filter pressure above permitted limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.103(a)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1565(a)(1)
5C THSC Chapter 382 382.085(b)
FOP O-01458, Special Term & Condition 22 OP
NSR 38754/PSDTX324M14, SC 41 PERMIT

Description: Failure to comply with the permitted concentration limit for carbon monoxide (CO).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.698(d)(1)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.357(d)(7)(iv)(A)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754/PSDTX324M14, SC 13 PERMIT

Description: Failure to comply with temperature limitations.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 106965, Special Condition 10 PERMIT
NSR 38754 / PSDTX324M14, SC 16 PERMIT

Description: Failure to comply with nitrogen oxide (NOx) emissions rate limits.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

FOP O-1458, ST&C 22 PERMIT
NSR 38754/PSDTX324M14, SC 16 PERMIT

Description: Failure to comply with carbon monoxide (CO) emissions rate limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 115, SubChapter D 115.322(1)
30 TAC Chapter 115, SubChapter D 115.322(2)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-2(c)
5C THSC Chapter 382 382.085(b)
FOP O-1458, Special Term & Condition 22 OP
NSR 38754/PSDTX324M14, SC 31(I) PERMIT

Description: Failure to repair leaking components within the required timeframe.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 115, SubChapter D 115.322(4)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Part 60, Subpart VV 60.482-6
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 106965, SC 5(E) PERMIT
NSR 38754/PSDTX324M14, SC 31(E) PERMIT

Description: Failure to equip each open ended valve or line (OEL) with an appropriately sized cap, blind flange, plug, or a second valve to seal the line.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754/PSDTX324M14, SC 26 PERMIT

Description: Failure to maintain the caustic concentration above the required limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754/PSDTX324M14, SC 46 PERMIT

Description: Failure to maintain the stripper exhaust gas temperature below the temperature maintained during the most recent stack sample following the initial stack test.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754/PSDTX324M14, SC 38 PERMIT

Description: Failure to maintain the minimum mixed liquor total suspended solids (MLSS) above the permitted limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 106965, SC 1 PERMIT
NSR 38754/PSDTX324M14, SC 1 PERMIT

Description: Failure to comply with the annual permitted emissions limit (tons per year [TPY]) listed on the Maximum Allowable Emission Rate Table (MAERT).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-1458, ST&C 22 OP
NSR 38754/PSDTX324M14, SC 1 PERMIT

Description: Failure to comply with hourly emissions limitations listed on the Maximum Allowable Emissions Rate Table (MAERT).

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 111, SubChapter A 111.111(a)(1)(B)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.18(d)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.102(a)(1)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.104(a)(1)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.105(a)(3)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(e)(1)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.670(e)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1570(f)
5C THSC Chapter 382 382.085(b)
FOP O-1458, General Terms & Conditions OP
PERMIT 1458, FOP O-1458, CAM Summary OP
PERMIT 20740, NSR 20740, SC 7(D) PERMIT
Various NSRs PERMIT

Description: Failure to maintain records sufficient to demonstrate compliance.

F. Environmental audits:

Notice of Intent Date: 01/05/2017 (1388471)

No DOV Associated

Notice of Intent Date: 05/16/2018 (1486351)

Disclosure Date: 09/06/2018

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.356(g)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.356(h)

Description: Failure to ensure consistent verification of applicable requirements for BWON containers during BWON quarterly visual inspections and records for vacuum trucks.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.343(a)(1)(i)(B)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)(1)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)(3)

Description: Failure to ensure timely repair of a carbon canister system with integrity deficiencies and failure to ensure that a gauge hatch at the top of vessel V-53 is maintained secured.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.142(b)(2)

Rqmt Prov: PERMIT Special Condition No. 12.D.

Description: Failure to maintain readily available record that indicate that the flare analyzers are being operated at least 95% of the time through regular calculation on a 12month rolling average basis.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.311(b)(1)
30 TAC Chapter 115, SubChapter D 115.312(b)(2)
30 TAC Chapter 115, SubChapter D 115.317

Description: Failure to document an exemption from control for the outlets of the steam eductors that are routed to the atmosphere (Unit 36, 38, and 47).

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.654(f)

Description: Failure to report a Title V deviation for the heat exchanger leak in the Alky Cooling Tower that was not repaired within 30 days.

Viol. Classification: Moderate

Citation: 4F TWC Chapter 60, SubChapter A 60.104(b)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.104(d)

Description: Failure to maintain complete documentation to show that the FCCU SO2 CEMS meets the applicable 30-day rolling average for 22 valid days of data.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(a)(2)

Description: Failure to maintain complete documentation to verify that water seals were present in all NSPS Subpart QQQ drains (an alternative monitoring request remains pending with EPA).

Disclosure Date: 04/16/2019

Viol. Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.128(a)
30 TAC Chapter 305, SubChapter F 305.128(c)
30 TAC Chapter 305, SubChapter C 305.44(a)

Rqmt Prov: PERMIT Section 5.9 & 6.1

Description: Failure to maintain documentation of storm water pollution prevention plan training, documentation of non-storm water discharge certification, and complete and accurate quarterly outfall inspection forms.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 265, SubChapter I, PT 265, SubPT B 265.16(a)

40 CFR Chapter 265, SubChapter I, PT 265, SubPT B 265.16(c)

Description: Failure to maintain current and consistent training records for representatives performing RCRA-related tasks.

Notice of Intent Date: 01/24/2019 (1548746)

Disclosure Date: 04/08/2019

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.343(c)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)(1)(i)(A)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)(2)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(b)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(b)(4)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.349(f)

Description: Failure to ensure that benzene waste management units and other equipment subject to the benzene waste NESHAP rule requirements are all being properly monitored and/or inspected.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.343(a)(1)

Description: Failure to ensure that cover and opening of tanks subject to the benzene waste NESHAP control requirements are consistently maintained in a closed sealed position.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.347(a)(1)

Description: Failure to ensure that covers and openings of equipment associated with the oil-water separators are consistently maintained in a closed sealed position.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)

Description: Failure to ensure that individual drain systems subject to alternative control requirements under the benzene waste NESHAP for drains, junction boxes, and sewer lines are consistently maintained in a sealed position.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(b)

Description: Failure to ensure that individual drain systems subject to alternative control requirements under the benzene waste NESHAP for drains, junction boxes, and sewer lines are consistently maintained to ensure compliance with alternative requirements.

Disclosure Date: 09/04/2019

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(b)(4)

Rqmt Prov: OP SC 9.B.

PERMIT SC Nos. 36 & 36

Description: Failure to ensure a timely first attempt at repair is made after a broken seal or gap was identified on individual drain systems subject to VOC emission rule requirements.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(a)(5)

Rqmt Prov: PERMIT SC No. 35 & 36

OP SC No. 9.B

Description: Failure to ensure that individual drain systems subject to VOC emissions control do not have low water levels or missing/improperly installed caps/plugs and ensure they receive a timely first effort at repair.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-3(a)(2)

Rqmt Prov: OP App. Requirement Summary

PERMIT SC No. 29

Description: Failure to prevent non-fugitive emissions from pressure relief valves from the API separators, based on AVO and IR camera inspections.

Disclosure Date: 03/06/2020

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.658(h)

Rqmt Prov: OP ST&Cs

Description: Failure to timely report fenceline reporting requirements in the corrective action plan.

Notice of Intent Date: 07/20/2020 (1670817)

Disclosure Date: 03/05/2021

Viol. Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter B 115.112(b)(1)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.112b(b)
Description: Failure to meet the vapor pressure control requirements for Tank 73TK168 for the month of September.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.113b(a)(4)
Description: Failure to conduct the 10 year internal inspections for listed tanks.

G. Type of environmental management systems (EMSs):
N/A

H. Voluntary on-site compliance assessment dates:
N/A

I. Participation in a voluntary pollution reduction program:
N/A

J. Early compliance:
N/A

Sites Outside of Texas:
N/A

Preliminary Determination Summary

Valero Refining-Texas, L.P.
Permit Numbers 38754, PSDTX324M15, and GHGPSDTX211

I. Applicant

Valero Refining-Texas LP
PO Box 9370
Corpus Christi, TX 78469-9370

II. Project Location

Valero Corpus Christi Refinery West Plant
5900 Up River Rd
Nueces County
Corpus Christi, Texas 78407

III. Project Description

Valero Refining Texas, LP (Valero) operates the Bill Greehey Refineries located in Corpus Christi, Nueces County. The Bill Greehey Refineries consist of two plants, the West Plant and the East Plant. Operation of the West Plant is currently authorized under Permit Nos. 38754, PSDTX324M14, and various Permit by Rule (PBR) and Standard Permit authorizations. Valero plans to undertake changes to the West Plant Heavy Oil Cracker (HOC), a type of fluidized catalytic cracking (FCC) unit. This project ("HOC Reconfiguration Project") will necessitate certain operational changes at other existing process units and will entail the construction of a new utility steam boiler, a new cooling tower, a new gas plant, a new sour water stripper, a new liquefied petroleum gas (LPG) Merox Treating Unit, a new Selective Hydrogenation Unit (SHU), a new C3/C4 Splitter Tower, and two new butane/butylene bullet tanks. Maintenance, startup and shutdown (MSS) activities for all process units at the West Plant are currently authorized by permit.

The refinery is an existing named major source under Prevention of Significant Deterioration (PSD) regulations, and is subject to PSD permitting requirements, including Best Available Control Technology (BACT) requirements for emissions of greenhouse gasses (GHG). Since the refinery is located in an area that in attainment for each National Ambient Air Quality Standard (NAAQS), Nonattainment New Source Review (NNSR) does not apply.

IV. Emissions

Total emissions authorized by the draft permit are as follows:

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	1,076.74
NO_x	1,641.33
SO_2	1,596.95
CO	3,183.10
PM	840.90
PM_{10}	836.57
$PM_{2.5}$	807.41

H_2SO_4	199.31
H_2S	21.79
NH_3	37.25
CO_2	2,674,037.00
CH_4	79.86
SF_6	14.84
N2O	2,680,456.00
CO_2 Equivalents (CO_{2e})	2,674,037.00

CO2e - carbon dioxide equivalents based on global warming potentials of CH_4 = 25, N_2O = 298, SF_6=22,800.

V. Federal Applicability

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD or Nonattainment (NA) review.

Pollutant	Project Emissions (tpy)	Major Mod Trigger (tpy)	NA Triggered Y/N	PSD Triggered Y/N
VOC	110.70	40	N/A	Y
NO_x	298.80	40	N/A	Y
SO_2	447.70	40	N/A	Y
CO	413.30	100	N/A	Y
PM	241.7	25	N/A	Y
PM_{10}	239.1	15	N/A	Y
$PM_{2.5}$	238.3	10	N/A	Y
H_2SO_4	168.60	7	N/A	Y
H_2S	0.06	10	N/A	N

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 CO_{2e}, PSD review is triggered for GHG emissions.

Pollutant	Project Emissions (tpy)	Major Source or Major Mod Trigger Level (tpy)	PSD Triggered Y/N
CO2e	1,110,869.00	75,000	Y

The refinery is located in Nueces County, which is classified as attainment for all criteria pollutants. Nonattainment review is not applicable. The refinery is a named source, and as a potential to emit (PTE) in excess of 100 tpy for at least one pollutant. Project increases are calculated using the actual-to-potential applicability test and include modified and affected sources. Baseline actual emissions of new units are assumed to be zero. PSD review applies to the following pollutants for which the PTE exceeds an applicable significance threshold (40 CFR § 52.21(b)(23)(i)): VOC, NO_X, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, and H_2SO_4. The refinery has a PTE in excess of 100 tpy (mass basis) and 75,000 tpy GHG (CO_{2e} basis) for GHG. GHG are therefore subject to regulation (40 CFR § 52.21(b)(49)(iv)).

VI. Control Technology Review

EPN	Source Name	Best Available Control Technology Description
30-B-05	Boiler 30-B-05	Boiler 30-B-05 is a new boiler with a maximum hourly and annual average fire rates of 462 MMBtu/hr and 420 MMBtu/hr, respectively. The boiler will be fired with refinery fuel gas and/or natural gas. Emissions of NO_X are minimized through the use of ultra-low NO_X burners and SCR. The permit limits NO_X emissions to 0.015 lb/MMBtu fuel fired (HHV basis) on a 1-hr average and 0.015 lb/MMBtu fuel fired on an annual average. Ammonia slip from the SCR is limited to 10 ppmvd (3% O_2 basis) on a 24-hr average. Emissions of CO are limited to 100 ppmvd (3% O_2 basis) on a 1-hr average and 50 ppmvd (3% O_2 basis) on an annual average. SO_2 emissions are limited through use of refinery fuel gas with a maximum H_2S concentration of 87 ppmv on a 1-hour average and 60 ppmv on an annual basis. Emissions of particulate and VOC are limited through good combustion practices and the use of gaseous fuel to maintain opacity less than 5%. VOC emissions will be minimized by maintaining good combustion efficiency and proper combustion design and practices. GHGs from the boiler will be limited through the use of low carbon fuel (refinery fuel gas), good combustion practices, and proper operation and maintenance to achieve a net thermal efficiency of 78%.
121	Heavy Oil Cracker (HOC) Belco Scrubber	The HOC is a type of fluidized catalytic cracking (FCC) unit. SO_2 emissions are limited to 50 ppmvd (0% O_2 basis) on a 1-hr and 7-day rolling average, and 25 ppmvd (0% O_2 basis) on a 365-day rolling average. CO is limited to 500 ppmvd (0% O_2 basis) on a 1-hr average. PM is limited to 1 lb/1000 lbs of coke burned off and opacity is limited to 20% over a 6-minute

EPN	Source Name	Best Available Control Technology Description
		average. VOC emissions are limited to less than 10 ppmv 0% O_2 basis) on a 1-hr average. HCN emissions are limited through compliance with MACT UUU for organic HAPs. H_2SO_4 emissions are limited to 0.35 lb/1000 lb coke burn off. GHG emissions will be limited through work practices consisting of operating the HOC with a high-conversion rate to minimize coke formation. NO_X emissions are limited to 37 ppmvd and (0% O_2 basis) on a 365-day rolling average and limited by using operational practices to reduce NO_X including excess oxygen control and non-Pt combustion promoters. BACT for NO_X was determined using a Tier III analysis, which is detailed in the application, and BACT for all other pollutants was based on a Tier I analysis.
121 30-B-05	Merox vent	This VOC process vent will be routed to the Boiler 30-B-05 firebox or existing SRU tail gas incinerator to achieve a minimum of 99% DRE as specified in the permit special conditions.
HOC-PP-CT	Cooling Tower-Propylene Project	**The Propylene cooling tower is a new non-contact design cooling tower.** The permit requires weekly sampling of cooling water for strippable VOC. Corrective action must be taken if total strippable hydrocarbon content of the cooling water exceeds 0.08 ppmw equivalent, and delay of repair procedures cannot be used if the strippable hydrocarbon content exceeds 0.8 ppmw. The permit requires that particulate emissions be minimized through the drift eliminators which are designed to limit total liquid drift to no greater than 0.001%. Drift eliminators must be inspected regularly and must be repaired or replaced when defects are discovered.
CAS-HOCPP	HOC Gas Plant Wastewater Lift Station	A Carbon Absorption System (CAS) will be installed on the new wastewater lift station in the new Gas Plant to control VOC emissions. The CAS will consist of two adsorbers, connected in series. The outlet of the first adsorber is the breakthrough monitoring point. Breakthrough is defined as 5 ppmv benzene or 100 ppmv VOC at the outlet of the primary canister. If breakthrough is detected, the carbon adsorber is considered spent and must be replaced. When breakthrough is reached on the primary (lead) adsorber, the secondary (lag) adsorber is also monitored at the outlet for breakthrough. If the secondary canister has not broken through, it is moved to the primary position and a fresh adsorber is moved into the secondary position within 24 hours. If the secondary canister has also broken through, then both canisters will be replaced within 24 hours.

EPN	Source Name	Best Available Control Technology Description
21/22F	HOC Unit Fugitives	Fugitive emissions from piping components in VOC service will be monitored using the TCEQ 28VHP and 28CNTQ leak detection and repair (LDAR) programs. These programs will also limit GHG emissions. The piping components in H_2S service will be monitored with the 28AVO LDAR program.
42F	Sour Wtr, Stripper Fugitives	
FUG-CAP	Piping Fugitives	
##F	Selective Hydrogenation Unit, LPG Gas Plant, Boiler 30-B-05	
Various	MSS	The process vessel purge gases will be routed to one of two West Plant flares (EPNs 126 and 158). Valero proposes to flare purge gas from any process vessels that contained liquids with vapor pressures equal or greater than 0.5 psia until a prescribed condition is met. Any residual process liquids and vapors are reduced to the best extent possible via process fluid recovery, followed by flaring before opening the process vessels for inspection and maintenance.
EPN 126 EPN 158	Main Flare Ground Flare	The flares achieve a minimum DRE of 99% for hydrocarbons containing 3 carbon atoms or less, and 98% for all other compounds. The flares are required to comply with 40 CFR § 63.670 specifications for minimum combustion zone net heating value and maximum tip velocity. The flares are equipped with flow monitors and gas chromatograph or calorimeter.

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 indicate that 1-hr, 24-hr, and annual SO_2, 24-hr and annual $PM_{2.5}$ (NAAQS and Increment), and 1-hr and annual NO_2 exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 3-hr SO_2, 24-hr and annual PM_{10}, and 1-hr and 8-hr 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 NO_2 and 1-hr SO_2 De Minimis levels is based on the assumptions underlying EPA's development of the 1-hr NO_2 and 1-hr SO_2 De Minimis levels. As explained in EPA guidance memoranda[1,2], 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 and 1-hr SO_2 NAAQS.

The $PM_{2.5}$ and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed

[1] www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[2] www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf

source will not cause or contribute to a violation of an ozone and $PM_{2.5}$ NAAQS or $PM_{2.5}$ PSD increments based on the analyses documented in EPA guidance and policy memoranda[3].

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/m³)

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
SO_2	1-hr	20	7.8
SO_2	3-hr	20	25
SO_2	24-hr	16	5
SO_2	Annual	2	1
PM_{10}	24-hr	4.8	5
PM_{10}	Annual	0.9	1
$PM_{2.5}$ (NAAQS)	24-hr	4	1.2
$PM_{2.5}$ (NAAQS)	Annual	0.8	0.2
$PM_{2.5}$ (Increment)	24-hr	4.7	1.2
$PM_{2.5}$ (Increment)	Annual	0.9	0.2
NO_2	1-hr	30.2	7.5
NO_2	Annual	2	1
CO	1-hr	362	2000
CO	8-hr	319	500

The 1-hr SO_2, 24-hr and annual $PM_{2.5}$ (NAAQS), and 1-hr NO_2 GLCmax are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

[3] www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

Intermittent guidance was relied on for the 1-hr SO_2 and 1-hr NO_2 PSD De Minimis analyses.

To evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant 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 500 tpy Harris County source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.36 µg/m^3 and 0.01 µg/m^3, respectively. Since the combined direct and secondary 24-hr and annual $PM_{2.5}$ impacts are above the De minimis levels, a full impacts analysis is required.

Table 2. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O_3	8-hr	0.42	1

The applicant performed an O_3 analysis as part of the PSD AQA. The applicant evaluated project emissions of O_3 precursor emissions (NO_x and VOC). For the project NO_x and VOC emissions, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. As noted above, 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 500 tpy Harris County source for NO_x and 1000 tpy Harris County source for VOCs, the applicant estimated an 8-hr O_3 concentration of 0.42 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that the 24-hr SO_2 exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

The De Minimis analysis modeling results indicate that 24-hr PM_{10}, annual NO_2, and 8-hr CO are below their respective monitoring significance level.

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax (µg/m^3)	Significance (µg/m^3)
SO_2	24-hr	16	13
PM_{10}	24-hr	4.8	10
NO_2	Annual	2	14

Pollutant	Averaging Time	GLCmax (µg/m^3)	Significance (µg/m^3)
CO	8-hr	319	575

The GLCmax represent the maximum predicted concentrations over five years of meteorological data.

The applicant evaluated ambient SO_2 and $PM_{2.5}$ monitoring data to satisfy the requirements for the pre-application air quality analysis.

Background concentrations for SO_2 were obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd., Corpus Christi, Nueces County. The applicant used a three-year average (2018-2020) of the 99th percentile of the annual distribution of daily maximum 1-hr concentrations for the 1-hr value (14.5 µg/m^3). The second highest 24-hr concentration from 2020 was used for the 24-hr value (3.1 µg/m^3). The applicant used the 1-hr value and 24-hr value to represent the 3-hr and annual concentrations, respectively. This is conservative. The use of this monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site. The 1-hr background value was also used in the PSD NAAQS analysis.

Background concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 483550034 located at 5707 Up River Rd., Corpus Christi, Nueces County. The applicant used a three-year average (2018-2020) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (19 µg/m^3). The applicant used a three-year average (2018-2020) of the annual mean concentrations for the annual value (7.7 µg/m^3). The use of this monitor is reasonable based on the applicant's analysis of the surrounding land use and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site. The background values were also used in the PSD NAAQS analysis.

Since the project has a net emissions increase of 100 tons per year (tpy) or more of volatile organic compounds or nitrogen oxides, the applicant evaluated ambient O_3 monitoring data to satisfy requirements in 40 CFR 52.21 (i)(5)(i)(f).

A background concentration for O_3 was obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd., Corpus Christi, Nueces County. A three-year average (2018-2020) of the annual fourth highest daily maximum 8-hr concentrations was used in the analysis (61 ppb). The use of this monitor for a background concentration of ozone is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site and proximity of the monitor to the project site.

C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate that 1-hr SO_2, 24-hr and annual $PM_{2.5}$, and 1-hr and annual NO_2 exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total Conc. = [Background + GLCmax] ($\mu g/m^3$)	Standard ($\mu g/m^3$)
SO_2	1-hr	151	14.5	166	196
$PM_{2.5}$	24-hr	15	19	34	35
$PM_{2.5}$	Annual	3.6	7.7	11.3	12
NO_2	1-hr	121	34	155	188
NO_2	Annual	23	5	28	100

The 1-hr SO_2 GLCmax is the maximum five-year average of the 99th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The 24-hr $PM_{2.5}$ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor. The annual $PM_{2.5}$ GLCmax is the maximum five-year average of the predicted annual concentrations determined for each receptor. The 1-hr NO_2 GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The annual NO_2 GLCmax is the maximum predicted concentrations over five years of meteorological data.

The primary NAAQS for 24-hr and annual SO_2 have been revoked for Nueces County and are not reported above.

Background concentrations for NO_2 were obtained from the EPA AIRS monitor 480391016 located at 109B Brazoria Hwy 332 West, Lake Jackson, Brazoria County. The three-year average (2017, 2018, and 2020) of the 98th percentile of the annual distribution of the maximum daily 1-hr concentrations was used for the 1-hr value. The annual concentration from 2020 was used for the annual value. 2019 monitoring data did not meet the completeness criteria. The ADMT reviewed the 2020 design value for Brazoria County, which is based on the highest monitor in the county and determined that this discrepancy would not change the overall conclusions. The use of this monitor is reasonable based on the applicant's analysis of the surrounding land use and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

As stated above, to evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Harris County source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.36 $\mu g/m^3$ and 0.01 $\mu g/m^3$, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

D. Increment Analysis

The De Minimis analysis modeling results indicate that 24-hr and annual SO_2, 24-hr and annual $PM_{2.5}$, and annual NO_2 exceed the respective de minimis concentrations and require a PSD increment analysis.

Table 5. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax (µg/m³)	Increment (µg/m³)
SO_2	24-hr	68	91
SO_2	Annual	11	20
$PM_{2.5}$	24-hr	8.9	9
$PM_{2.5}$	Annual	2.9	4
NO_2	Annual	23	25

The GLCmax for the 24-hr SO_2 and 24-hr $PM_{2.5}$ is the maximum high, second high (H2H) predicted concentration across five years of meteorological data. For annual SO_2, NO_2 and annual $PM_{2.5}$, the GLCmax represents the maximum predicted concentrations over five years of meteorological data.

The GLCmax for 24-hr and annual $PM_{2.5}$ reported in the table above represent the total predicted concentrations associated with modeling the direct $PM_{2.5}$ emissions and the contributions associated with secondary $PM_{2.5}$ formation (discussed above in the NAAQS Analysis section).

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 project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Big Bend National Park, is located approximately 550 kilometers (km) from the proposed site.

The H_2SO_4 24-hr maximum predicted concentration of 3 µg/m³ occurred approximately 200 meters from the property line towards the north. The H_2SO_4 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10 km from the proposed sources, in the direction of the Big Bend National Park Class I area is 0.3 µg/m³. The Big Bend National Park Class I area is an additional 540 km from the edge of the receptor grid. Therefore, emissions of H_2SO_4 from the proposed project are not expected to adversely affect the Big Bend National Park Class I area.

The predicted concentrations of PM_{10}, $PM_{2.5}$, NO_2, and SO_2 for all averaging times, are all less than de minimis levels at a distance of 5 km from the proposed sources in the direction the Big Bend National Park Class I area. The Big Bend National Park Class I area is an additional 545 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 Big Bend National Park Class I area.

F. Minor Source NSR and Air Toxics Review

Table 7. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m^3)	Standard (µg/m^3)
SO_2	1-hr	183	1021
H_2SO_4	1-hr	9	50
H_2SO_4	24-hr	3	15

Table 8. Generic Modeling Results

Source ID	1-hr GLCmax (µg/m^3 per lb/hr)	Annual GLCmax (µg/m^3 per tpy)
30_B_05	1.74	-
HOCPPCT	7.19	-
121HOC	0.18	-
MEROX	1.74	--
126	0.23	0.004
127	0.23	0.004
158	4.51	0.07
FUGCAP	27.84	-
CASHOCPP	28.93	-

Table 9. Minor NSR Project (Increases Only) Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m^3)	10% ESL (µg/m^3)
ammonia 7664-41-7	1-hr	5	18

Pollutant & CAS#	Averaging Time	GLCmax (µg/m^3)	10% ESL (µg/m^3)
distillates (petroleum), light catalytic cracked 64741-59-9	1-hr	195	350

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. Conclusion

As described above, the applicant has demonstrated that the project meets all applicable rules, regulations and requirements of the Texas and Federal Clean Air Acts. The Executive Director's preliminary determination is that the permits should be issued.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2022

MR JOE ALMARAZ
DIRECTOR ENVIRONMENTAL SAFETY AFFAIRS
VALERO REFINING-TEXAS LP
PO BOX 9370
CORPUS CHRISTI TEXAS 78469-9370

Re: Prevention of Significant Deterioration Permit
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Mr. Almaraz:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced application. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Notice of Application and Preliminary Decision. You must provide a copy of this preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please call Ms. Cara Hill at (512) 239-5123, or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Samuel Short, Deputy Director
Air Permits Division
Office of Air

Enclosure

cc: Air Section Manager, Region 14 - Corpus Christi

Project Number: 333877

State of Texas
County of Travis MAR 20 2023

I hereby certify this is a true and correct copy of a Texas Commission on Environmental Quality (TCEQ) document, which is filed in the Records of the Commission. Given under my hand and the seal of office.

Veronica Barnes, Custodian of Records
Texas Commission on Environmental Quality

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2022

THE HONORABLE BARBARA CANALES
COUNTY JUDGE
COUNTY COURTHOUSE
901 LEOPARD STREET
CORPUS CHRISTI TX 78401

Re: Prevention of Significant Deterioration Permit
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Judge Canales:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Valero Refining-Texas, L.P. is now required to publish notice of the application which would authorize modification to the Valero Corpus Christi Refinery West Plant located at 5900 Up River Rd, Corpus Christi, Nueces County, Texas 78407. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at www.tceq.texas.gov/goto/cid: the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

Samuel Short, Deputy Director
Air Permits Division
Office of Air

Enclosure

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2022

THE HONORABLE PAULETTE GUAJARDO
MAYOR OF CORPUS CHRISTI
1201 LEOPARD STREET
CORPUS CHRISTI TX 78401

Re: Prevention of Significant Deterioration Permit
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Mayor Guajardo:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Valero Refining-Texas, L.P. is now required to publish notice of the application which would authorize modification to the Valero Corpus Christi Refinery West Plant located at 5900 Up River Rd, Corpus Christi, Nueces County, Texas 78407. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at www.tceq.texas.gov/goto/cid: the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

Samuel Short, Deputy Director
Air Permits Division
Office of Air

Enclosure

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2022

MR JOHN BUCKNER
COASTAL BEND COUNCIL OF GOVERNMENTS
P.O. BOX 9909
CORPUS CHRISTI TX 78469

Re: Prevention of Significant Deterioration Permit
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Mr. Buckner:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Valero Refining-Texas, L.P. is now required to publish notice of the application which would authorize modification to the Valero Corpus Christi Refinery West Plant located at 5900 Up River Rd, Corpus Christi, Nueces County, Texas 78407. You may view the following documents through the Texas Commission on Environmental Quality Web site at www.tceq.texas.gov/goto/cid: the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

Samuel Short, Deputy Director
Air Permits Division
Office of Air

Enclosure

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 19, 2022

MR JOE ALMARAZ
DIRECTOR ENVIRONMENTAL SAFETY AFFAIRS
VALERO REFINING-TEXAS LP
PO BOX 9370
CORPUS CHRISTI TEXAS 78469-9370

Re: Prevention of Significant Deterioration Permit
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Mr. Almaraz:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

Re: Permit: 38754, PSDTX324M15, GHGPSDTX211

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Ms. Cara Hill at (512) 239-5123.

Sincerely,

Laurie Gharis
Chief Clerk
Office of the Chief Clerk
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 14 - Corpus Christi
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 333877

bcc: Ashley Rich, Environmental Law Division, MC-173, Austin

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXAMPLE A

NOTICE OF APPLICATION AND PRELIMINARY DECISION
FOR AIR QUALITY PERMITS

AIR QUALITY PERMIT NUMBERS 38754, PSDTX324M15, AND GHGPSDTX211

APPLICATION AND PRELIMINARY DECISION. Valero Refining-Texas, L.P., Post Office Box 9370, Corpus Christi, Texas 78469-9370, has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to State Air Quality Permit 38754, modification to Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX324M15, and issuance of Greenhouse Gas (GHG) PSD Air Quality Permit GHGPSDTX211 for emissions of GHGs, which would authorize modification to the Valero Corpus Christi Refinery West Plant located at 5900 Up River Road, Corpus Christi, Nueces County, Texas 78407. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. The existing facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide. In addition, the facility will emit the following air contaminants: ammonia and hydrogen sulfide.

The degree of PSD increment predicted to be consumed by the existing facility and other increment-consuming sources in the area is as follows:

Sulfur Dioxide

Maximum Averaging Time	**Maximum Increment Consumed ($\mu g/m^3$)**	**Allowable Increment ($\mu g/m^3$)**
24-hour	68	91
Annual	11	20

Nitrogen Dioxide

Maximum Averaging Time	**Maximum Increment Consumed ($\mu g/m^3$)**	**Allowable Increment ($\mu g/m^3$)**
Annual	23	25

$PM_{2.5}$

Maximum Averaging Time	**Maximum Increment Consumed ($\mu g/m^3$)**	**Allowable Increment ($\mu g/m^3$)**
24-hour	8.9	9
Annual	2.9	4

This application was submitted to the TCEQ on September 30, 2021. The executive director has determined that the emissions of air contaminants from the existing facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Corpus Christi regional office, and at the Owen R. Hopkins Public Library, 3202 McKinzie Road, Corpus Christi, Nueces County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Corpus Christi Regional Office, 500 North Shoreline Boulevard, Suite 500, Corpus Christi, Texas.

INFORMATION AVAILABLE ONLINE. These documents are accessible through the Commission's Web site at www.tceq.texas.gov/goto/cid: the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=27.820555&lng=-97.488333&zoom=13&type=r.

PUBLIC COMMENT/PUBLIC MEETING. You may submit public comments or request a public meeting to the Office of the Chief Clerk at the address below. The purpose of a public meeting is to provide the opportunity to submit comment or to ask questions about the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application, if requested by an interested person, or if requested by a local legislator. A public meeting is not a contested case hearing. **You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all relevant and material or significant public comment. **The response to comments, along with the executive director's decision on the application, will be mailed to everyone who submitted public comments or is on a mailing list for this application. The mailing will also provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.**

OPPORTUNITY FOR A CONTESTED CASE HEARING. You may request a contested case hearing regarding the portions of the application for State Air Quality Permit Number 38754 and for PSD Air Quality Permit Number PSDTX324M15. There is no opportunity to request a contested case hearing regarding the portion of the application for GHG PSD Air Quality Permit Number GHGPSDTX211. A contested case hearing is a legal proceeding similar to a civil trial in a state district court. A person who may be affected by emissions of air contaminants, other than GHGs, from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

EXECUTIVE DIRECTOR ACTION. The executive director may issue final approval of the application for the portion of the application for GHG PSD Air Quality Permit GHGPSDTX211. If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn regarding State Air Quality Permit Number 38754

and for PSD Air Quality Permit Number PSDTX324M15, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the State Air Quality Permit Number 38754 and for PSD Air Quality Permit Number PSDTX324M15 and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

MAILING LIST. You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

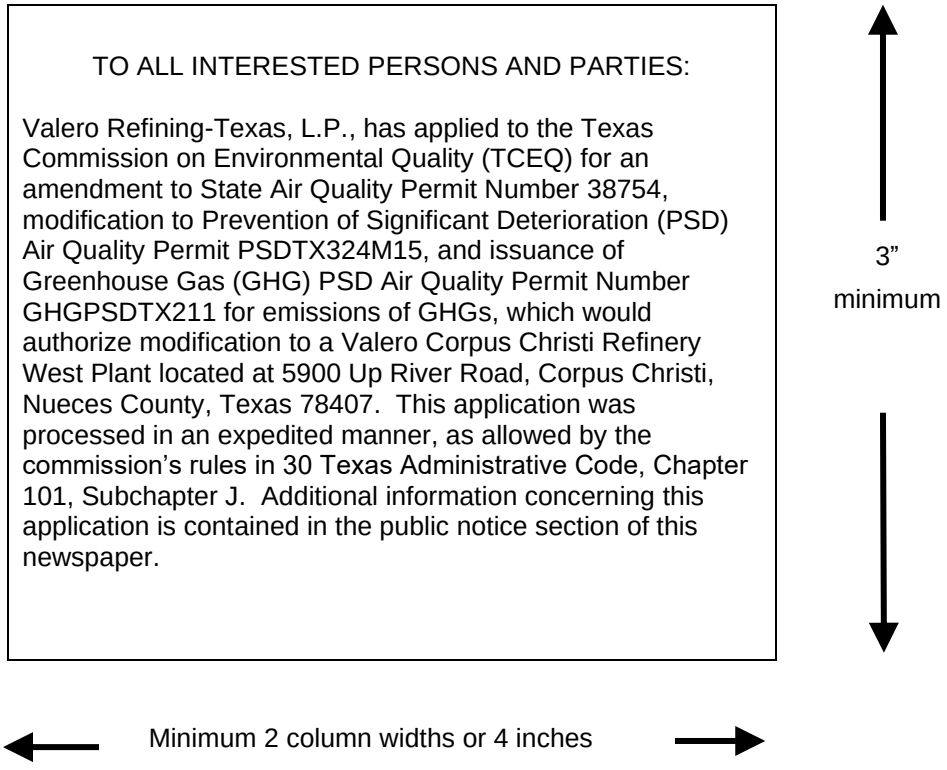
AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www14.tceq.texas.gov/epic/eComment/, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Valero Refining-Texas L.P. at the address stated above or by calling Ms. Meagan Marquard, Superintendent Environmental at (361) 299-8913.

Notice Issuance Date: May 19, 2022

Example B

Publication Elsewhere in the Newspaper:



Public Notice Checklist

Notice of Application and Preliminary Decision for an Air Quality Permit
(2nd Notice)

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

Within 33 calendar days after date of this letter
Publish *Notice of Application and Preliminary Decision for an Air Quality Permit* in the same newspaper(s) in which you published *Notice of Receipt of Intent to Obtain Permit* for this application. - Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing. - Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper - As part of the expedited permitting process, it is recommended that you publish immediately. Provide copy of the complete application, the executive director's preliminary decision (including the draft permit), and the executive director's preliminary determination summary and executive director's air quality analysis, including any revisions, at a public place for review and copying. Keep them there for duration of the designated comment period. The public place should provide public access to the internet.
First day of newspaper publication
Review published newspaper notice for accuracy. If errors, contact Air Permits Division. Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place. It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).
Within 10 business days after date of publication
Proof of publication showing publication date and newspaper name should be emailed to PROOFS@tceq.texas.gov or mailed to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on *Notification List*.
Within 30 calendar days after date of publication
Affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) should be emailed to PROOFS@tceq.texas.gov or mailed to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of affidavits to persons listed on *Notification List*.
Within 10 business days after end of the designated comment period
Public Notice Verification Form should be emailed to PROOFS@tceq.texas.gov or mailed to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on *Notification List*.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Instructions for Public Notice
For New Source Review & Prevention of Significant Deterioration Air Permit

Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter). As part of the expedited permitting process, it is recommended that you publish immediately.

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.

- You must publish this notice in one issue of any applicable newspaper.

- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.

- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths.** If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.

- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).

- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.

- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.

- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit (1st public notice)*.

- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.

- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the ***Public Notice Verification Form (Form TCEQ-20244)*** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- It is suggested the applicant work with the local school district to do the following:

  (a) determine if a bilingual program is required in the district;
  (b) determine which language is required by the bilingual program;
  (c) locate the nearest elementary and middle schools; and
  (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.

- **If you determine that you must meet the alternative language notice requirements after receipt of the full public notice package, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language. Spanish notice templates are available through the Air Permits Division Web site at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html**. All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication**. Email a copy to Air Permits Division staff.**

- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.

- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.

- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.

- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½'' x 11'' paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11'' must be copied onto multiple 8½'' x 11'' pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain newspaper clippings or tear sheets of the notice for your records.

- You must submit an **affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavits of publication.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.

- You must submit the ***Public Notice Verification Form (Form TCEQ-20244)*** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met bilingual notice requirements. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- The **affidavits of publication, *Public Notice Verification Form*, and acceptable proof of publication of the published notices** should be emailed to PROOFS@tceq.texas.gov or mailed to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team / AIR Expedited Permitting
P.O. Box 13087
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk have all blanks filled in correctly.

- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication *on time*,** the TCEQ may suspend further processing on your application or take other actions.

Sign Posting

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and the lettering must be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

Application in a Public Place

- You must provide a copy of the complete application, the executive director's preliminary decision (including the draft permit), the executive director's preliminary determination summary and the executive director's air quality analysis, (including any subsequent revisions), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.

- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls). Location selected must provide public access to the internet.

- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.

- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."

- You must submit verification of file availability using the ***Public Notice Verification Form (Form TCEQ-20244)*** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

General Information

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Valero Refining-Texas, L.P.
Permit No.: 38754, PSDTX324M15, and GHGPSDTX211
Application Received Date: September 30, 2021

AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is *(Name of Person Representing Newspaper)*

the _____ of the _____
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Valero Refining-Texas, L.P.
Permit No.: 38754, PSDTX324M15, and GHGPSDTX211
Application Received Date: September 30, 2021

ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is (*Name of Person Representing Newspaper)*

the _____ of the _____;
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
*(The **municipality or county** in which the facility or proposed facility is located)*

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribe and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting, the Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Acceptable proof of publication and any affidavits and Form TCEQ-*20244* should be emailed to PROOFS@tceq.texas.gov or mailed to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, AIR Expedited Permitting, P.O. Box 13087, Austin, Texas 78711-3087.

Electronic copies should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at R6AirPermitsTX@EPA.gov. Please contact Ms. Aimee Wilson (wilson.aimee@epa.gov) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

Email copies to Ms. Cara Hill at Cara.Hill@tceq.texas.gov

Hard copies should be sent to the following:

Texas Commission on Environmental Quality
Corpus Christi Regional Office
500 N. Shoreline Blvd., Suite 500
Corpus Christi, Texas 78401-0318

Texas General Land Office
Upland Leasing Team Leader
Professional Services
P.O. Box 12873
Austin, Texas 78711-2873

The Honorable Barbara Canales
County Judge
County Courthouse
901 Leopard Street
Corpus Christi, TX 78401

The Honorable Paulette Guajardo
Mayor of Corpus Christi
1201 Leopard Street
Corpus Christi, TX 78401

TCEQ Commissioners' Integrated Database - All Activity Actions

Back **Back to Report Result 1 - 4**

Activity Action List:

Date	Document Type	Action
02/07/2023	TCEQ DOCKET NUMBER	ISSUED
02/07/2023	TCEQ DOCKET NUMBER	REQUESTED
01/13/2023	DIRECT REFERRAL - APPLIC	RECEIVED
01/02/2023	RFR/HR PERIOD	END
12/02/2022	FINAL DECISION LETTER	MAILED
11/23/2022	RESPONSE TO COMMENTS	RECEIVED
07/12/2022	AVAILABILITY VERIFICATIO	RECEIVED
07/12/2022	ALTERNATIVE LANGUAGE VERIFICATION FORM	RECEIVED
07/11/2022	PUBLIC MEETING	SCHEDULED
07/11/2022	COMMENT PERIOD	END
07/11/2022	PUBLIC MEETING	HELD
06/14/2022	NOTICE OF PUBLIC MEETING	MAILED
06/13/2022	NEWSPAPER TEARSHEET	RECEIVED
06/10/2022	NOTICE OF PUBLIC MEETING	MAILED
06/07/2022	ALTERNATIVE LANGUAGE AFFIDAVIT	RECEIVED
06/07/2022	AFFIDAVIT - NAPD	RECEIVED
06/07/2022	ALTERNATIVE LANGUAGE TEARSHEET	RECEIVED
06/01/2022	ALTERNATIVE LANGUAGE NOTICE	PUBLISHED
06/01/2022	NOTICE - PRELIM DECISION	PUBLISHED
06/01/2022	NOTICE OF PUBLIC MEETING	RECEIVED
05/26/2022	CONFIRMATION	RECEIVED
05/25/2022	NOTICE - PRELIM DECISION	MAILED
05/19/2022	NOTICE - PRELIM DECISION	RECEIVED
05/10/2022	PUBLIC MEETING	ED APPROVE
05/09/2022	LETTER	SENT TO
11/22/2021	LETTER	SENT TO
11/19/2021	BILINGUAL VERIFICATION	RECEIVED
11/19/2021	AVAILABILITY VERIFICATIO	RECEIVED
11/15/2021	COMMENT PERIOD	END
11/03/2021	NEWSPAPER TEARSHEET	RECEIVED
11/03/2021	AFFIDAVIT - NORI	RECEIVED
10/22/2021	LETTER	SENT TO
10/20/2021	AFFIDAVIT - NORI	RECEIVED
10/20/2021	NEWSPAPER TEARSHEET	RECEIVED
10/20/2021	BILINGUAL AFFIDAVIT	RECEIVED
10/20/2021	BILINGUAL TEARSHEET	RECEIVED
10/15/2021	BILINGUAL NOTICE	PUBLISHED
10/14/2021	NOTICE OF RECEIPT/INTENT	PUBLISHED

10/06/2021	NOTICE OF RECEIPT/INTENT	MAILED
10/05/2021	NOTICE OF RECEIPT/INTENT	RECEIVED
10/05/2021	ADMIN REVIEW	COMPLETE
09/30/2021	APPLICATION	RECEIVED

Related Links:

Central Registry | Commissioners' Agenda | Executive Director's Agenda | Commission Issued Orders | Public Meetings | State Office of Administrative Hearings Exit... | Public Notice | Comment Online on Pending Permit Applications | File documents

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

MR JOE ALMARAZ
DIRECTOR ENVIRONMENTAL SAFETY AFFAIRS
VALERO REFINING-TEXAS LP
PO BOX 9370
CORPUS CHRISTI TX 78469-9370

Re: Permit Amendment
Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211
Expiration Date: January 22, 2024
Valero Refining-Texas, L.P.
Valero Corpus Christi Refinery West Plant
Corpus Christi, Nueces County
Regulated Entity Number: RN100214386
Customer Reference Number: CN600127468

Dear Mr. Almaraz:

Valero Refining-Texas, L.P. has requested an amendment to Permit Number 38754 and modification to Permit Numbers PSDTX324M15 and GHGPSDTX211.

In accordance with Title 30 Texas Administrative Code (TAC) §116.116(b) and §116.160, Permit Number 38754 is hereby amended and Permit Numbers PSDTX324M15 and GHGPSDTX211 are modified. Enclosed are revised general conditions, special conditions, and a maximum allowable emission rates table.

This permit amendment will automatically void upon the occurrence of any of the following, as indicated in 30 TAC § 116.120(a):

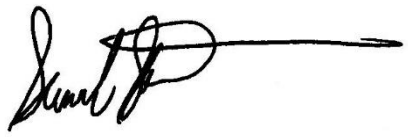
1. Failure to begin construction within 18 months of the date of issuance,
2. Discontinuance of construction for more than 18 months prior to completion, or
3. Failure to complete construction within a reasonable time.

Upon request, the executive director may grant extensions as allowed in 30 TAC §116.120(b).

Re: Permit Numbers: 38754, PSDTX324M15, and GHGPSDTX211

If you need further information or have any questions, please contact Ms. Cara Hill at (512) 239-5123 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



Samuel Short, Deputy Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 14 - Corpus Christi
Air Permits Section Chief, New Source Review Section (6PD-R), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 333877

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 2, 2022

TO: Persons on the attached mailing list.

RE: Valero Refining-Texas, L.P.
Air Quality Permit Nos. 38754, PSDTX324M15, and GHGPSDTX211

Decision of the Executive Director.

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. **This decision does not authorize construction or operation of any proposed facilities.** This decision will be considered by the commissioners at a regularly scheduled public meeting before any action is taken on this application unless all requests for contested case hearing or reconsideration have been withdrawn before that meeting.

Enclosed with this letter is a copy of the Executive Director's Response to Public Comment. A copy of the complete application, draft permit and related documents, including public comments, are available for review at the TCEQ Central Office. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ Central Office, the TCEQ Corpus Christi Regional Office, and at the Owen R. Hopkins Public Library, 3202 McKinzie Road, Corpus Christi, Nueces County, Texas. The facility's compliance file, if any exists, is available for public review at the TCEQ Corpus Christi Regional Office, 500 North Shoreline Boulevard, Suite 500, Corpus Christi, Texas.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. The procedures for the commission's evaluation of hearing requests/requests for reconsideration are located in 30 Texas Administrative Code Chapter 55, Subchapter F. A brief description of the procedures for these two types of requests follows.

How to Request a Contested Case Hearing.

It is important that your request include all the information that supports your right to a contested case hearing. You must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

The request must include the following:

(1) Your name, address, daytime telephone number, and, if possible, a fax number.

(2) If the request is made by a group or association, the request must identify:

(A) one person by name, address, daytime telephone number, and, if possible, the fax number, of the person who will be responsible for receiving all communications and documents for the group;

(B) the comments on the application submitted by the group that are the basis of the hearing request; and

(C) by name and physical address one or more members of the group that would otherwise have standing to request a hearing in their own right. The interests the group seeks to protect must relate to the organization's purpose. Neither the claim asserted nor the relief requested must require the participation of the individual members in the case.

(3) The name of the applicant, the permit number and other numbers listed above so that your request may be processed properly.

(4) A statement clearly expressing that you are requesting a contested case hearing. For example, the following statement would be sufficient: "I request a contested case hearing."

Your request must demonstrate that you are an **"affected person."** An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Your request must describe how and why you would be adversely affected by the proposed facility or activity in a manner not common to the general public. For example, to the extent your request is based on these concerns, you should describe the likely impact on your health, safety, or uses of your property which may be adversely affected by the proposed facility or activities. To demonstrate that you have a personal justiciable interest, you must state, as specifically as you are able, your location and the distance between your location and the proposed facility or activities. A person who may be affected by emissions of air contaminants from the facility is entitled to request a contested case hearing.

Your request must raise disputed issues of fact that are relevant and material to the commission's decision on this application that were raised **by you** during the public comment period. The request cannot be based solely on issues raised in comments that you have withdrawn.

To facilitate the commission's determination of the number and scope of issues to be referred to hearing, you should: 1) specify any of the executive director's responses to **your** comments that you dispute; 2) the factual basis of the dispute; and 3) list any disputed issues of law.

How to Request Reconsideration of the Executive Director's Decision.

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

Deadline for Submitting Requests.

A request for a contested case hearing or reconsideration of the executive director's decision must be **received by** the Chief Clerk's office no later than **30 calendar days** after the date of this letter. You may submit your request electronically at www.tceq.texas.gov/agency/decisions/cc/comments.html or by mail to the following address:

Laurie Gharis, Chief Clerk
TCEQ, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Processing of Requests.

Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the TCEQ's Alternative Dispute Resolution Program and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

How to Obtain Additional Information.

If you have any questions or need additional information about the procedures described in this letter, please call the Public Participation and Education Program, toll free, at 1-800-687-4040.

Sincerely,

Laurie Gharis
Chief Clerk

LG/erg

Enclosure

MAILING LIST
for
Valero Refining-Texas, L.P.
Air Quality Permit Nos. 38754, PSDTX324M15, and GHGPSDTX211

FOR THE APPLICANT:

Joe Almaraz, Director Environmental Safety Affairs
Valero Refining-Texas, L.P.
P.O. Box 9370
Corpus Christi, Texas 78469

Meagan Marquard, Superintendent Environmental
Valero Refining-Texas, L.P.
P.O. Box 9370
Corpus Christi, Texas 78469

INTERESTED PERSONS:

See attached list.

FOR THE EXECUTIVE DIRECTOR
via electronic mail:

Ryan Vise, Deputy Director
Texas Commission on Environmental Quality
External Relations Division
Public Education Program MC-108
P.O. Box 13087
Austin, Texas 78711-3087

Amanda Kraynok, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division MC-173
P.O. Box 13087
Austin, Texas 78711-3087

Cara Hill, Technical Staff
Texas Commission on Environmental Quality
Air Permits Division MC-163
P.O. Box 13087
Austin, Texas 78711-3087

FOR PUBLIC INTEREST COUNSEL
via electronic mail:

Garrett T. Arthur, Attorney
Texas Commission on Environmental Quality
Public Interest Counsel MC-103
P.O. Box 13087
Austin, Texas 78711-3087

FOR THE CHIEF CLERK
via electronic mail:

Laurie Gharis, Chief Clerk
Texas Commission on Environmental Quality
Office of Chief Clerk MC-105
P.O. Box 13087
Austin, Texas 78711-3087

ALMARAZ , JOE
VALERO CORPUS CHRISTI REFINERY
PO BOX 9370
CORPUS CHRISTI TX 78469-9370

CANALES , EDUARDO
7021 BEVINGTON DR
CORPUS CHRISTI TX 78413-5318

CASTILLO , ELIDA
PO BOX 643
TAFT TX 78390-0643

CASTILLO , ELIDA
131 LERDO ST
TAFT TX 78390-2222

COX , COLIN
ENVIRONMENTAL INTEGRITY PROJECT
1206 SAN ANTONIO ST
AUSTIN TX 78701-1834

COX , COLIN
ENVIRONMENTAL INTEGRITY PROJECT
1405 GARNER AVE
AUSTIN TX 78704-2846

COX , TERRY
1106 VERNON DR
CORPUS CHRISTI TX 78407-1328

CUEVAS , MARICELA
STE 100
5633 S STAPLES ST
CORPUS CHRISTI TX 78411-4646

CULBERTSON , MIKE
STE 1300S
800 N SHORELINE BLVD
CORPUS CHRISTI TX 78401-3700

HANSON , BEA
826 KRILL ST
CORPUS CHRISTI TX 78408-2515

LARUE , JOHN
426 CAPE LOOKOUT DR
CORPUS CHRISTI TX 78412-2636

TAYLOR , LAMONT C
APT 120
522 HANCOCK AVE
CORPUS CHRISTI TX 78404-2342

WALSH , RICH
9506 MAJESTIC OAK CIR
SAN ANTONIO TX 78255-3449

WILLIAMS JR , CLAUDE
938 IDLEWILDE PL
CORPUS CHRISTI TX 78408-2108

WILSON , AIMEE
US EPA
STE 500
1201 ELM ST
DALLAS TX 75270-2102

TCEQ AIR QUALITY PERMIT NUMBERS 38754, PSDTX324M15, and GHGPSDTX211

APPLICATION BY	**§**	**BEFORE THE**
VALERO REFINING-TEXAS, L.P.	**§**	**TEXAS COMMISSION ON**
VALERO CORPUS CHRISTI REFINERY	**§**	
WEST PLANT	**§**	**ENVIRONMENTAL QUALITY**
CORPUS CHRISTI, NUECES COUNTY		

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the New Source Review Authorization application and Executive Director's preliminary decision.

As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received timely comments from the following persons: Aimee Wilson (on behalf of the Environmental Protection Agency, hereinafter "EPA"), Colin Cox (on behalf of the Environmental Integrity Project, Hillcrest Residents Association, and Citizens for Environmental Justice, hereinafter "EIP"), Elida Castillo, Lamont C. Taylor (on behalf of the Hillcrest Residents Association and Citizens Alliance for Fairness and Progress), John LaRue (on behalf of the Corpus Christi Chamber of Commerce), Mike Culbertson (on behalf of the Corpus Christi Regional Economic Development Corporation), Maricela Cuevas (on behalf of the Corpus Christi Community Advisory Council), Bea Hanson (on behalf of the Coastal Bend Food Bank), Eduardo Canales, Gretchen Arnold. This Response addresses all timely public comments received, whether or not withdrawn. If you need more information about this permit application or the permitting process please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.texas.gov.

BACKGROUND

Description of Facility

Valero Refining-Texas, L.P. (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the modification of an existing facility that may emit air contaminants.

This permit will authorize the Applicant to modify the Valero Corpus Christi Refinery West Plant. The plant is located at 5900 Up River Road, Corpus Christi, Nueces County. Contaminants authorized under this permit amendment include carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, ammonia, and hydrogen sulfide. The proposed plant will also emit greenhouses gas.

Procedural Background

Before work is begun on the modification of an existing facility that may emit air contaminants, the person planning the modification must obtain a permit amendment from the commission. This permit application is for a permit amendment of Air Quality Permit Number 38754, PSDTX324M15, and GHGPSDTX211.

The permit application was received on September 30, 2021 and declared administratively complete on October 5, 2021. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for this permit application was published in English on October 14, 2021, in the *Caller Times*, and in Spanish on October 15, 2021 in *Tejano Y Grupero News*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) was published on June 1, 2022, in English in the *Caller Times* and in Spanish on June 01, 2022, in *Tejano Y Grupero News*. A public meeting was held on July 11, 2022 at the Atrium Hotel & Convention Center, 5549 Leopard Street, Corpus Christi, Texas 78408. The public comment period ended on July 11, 2022. Because this application was received after September 1, 2015, it is subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

COMMENTS AND RESPONSES

COMMENT 1: Health Effects / Air Quality / Cumulative Effects

Commenters expressed concern about the effect of the emissions from the proposed project on the air quality and health of people, particularly sensitive populations such as the elderly, children, and people with existing medical conditions. Elida Castillo expressed concern that the proposed project would cause negative health effects, including heart disease, cardiovascular and renal disease, and birth defects. Commenters are concerned that the proposed project would cause or contribute to exceedances of NAAQS, threatening the health and safety of nearby residents. Commenters questioned whether cumulative impacts were considered, and question if the Air Quality Analysis (AQA) was conducted correctly. Commenters stated the facility emits foul odors. EIP expressed concerns about the quantity of emissions that will result from the project, specifically questioning whether the proposed emissions will exceed the allowable Prevention of Significant Deterioration (PSD) increments thresholds. Eduardo Canales expressed concerns over the release of greenhouse gases.

(EIP, Elida Castillo, Lamont Taylor, Eduardo Canales)

RESPONSE 1: The Applicant is modifying its existing permit to add new refining units to change the type if crude oil it can receive and process. The Executive Director is required to review permit applications to ensure they will be protective of human health and the environment. For this type of air permit application, potential impacts to human health and welfare or the environment are determined by comparing the Applicant's proposed air emissions to appropriate state and federal standards and guidelines. These standards and guidelines include the National Ambient Air Quality

Standards (NAAQS), TCEQ Effects Screening Levels (ESLs), and TCEQ rules. As described in detail below, the Executive Director determined that the emissions authorized by this permit are protective of both human health and welfare and the environment.

NAAQS

The U.S. Environmental Protection Agency (EPA) created and continues to evaluate the NAAQS, which include both primary and secondary standards, for pollutants considered harmful to public health and the environment.[1] Primary standards protect public health, including sensitive members of the population such as children, the elderly, and those individuals with preexisting health conditions. Secondary NAAQS protect public welfare and the environment, including animals, crops, vegetation, visibility, and buildings, from any known or anticipated adverse effects from air contaminants. The EPA has set NAAQS for criteria pollutants, which include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}), and PM less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$).

The Applicant conducted a NAAQS analysis for NO_2, CO, PM_{10}, $PM_{2.5}$, and SO_2. The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations (GLCmax[2]) below the de minimis level are considered to be so low that they do not require further NAAQS analysis. Table 1 contains the results of the de minimis analysis.

Table 1. Modeling Results for PSD De Minimis Analysis

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
NO_2	1-hr	30.2	7.5
NO_2	Annual	2	1
CO	1-hr	362	2000
CO	8-hr	319	500
PM_{10}	24-hr	4.8	5
PM_{10}	Annual	0.9	1
$PM_{2.5}$ (NAAQS)	24-hr	4	1.2
$PM_{2.5}$ (NAAQS)	Annual	0.8	0.2
$PM_{2.5}$ (Increment)	24-hr	4.7	1.2
$PM_{2.5}$ (Increment)	Annual	0.9	0.2
SO_2	1-hr	20	7.8
SO_2	3-hr	20	25
SO_2	24-hr	16	5
SO_2	Annual	2	1

1 40 CFR 50.2
2 The GLCmax is the maximum ground level concentration predicted by the modeling.

The pollutants below the de minimis level should not cause or contribute to an exceedance of the NAAQS and are protective of human health and the environment.

The Applicant conducted a full NAAQS analysis for those pollutants above de minimis to account for cumulative effects by including an evaluation of all on-property sources, applicable off-property sources, and representative monitored background concentrations. Results of the full NAAQS analysis are presented below in Table 2. The total concentration was determined by adding the GLCmax to the appropriate background concentration. Background concentrations are obtained from ambient air monitors across the state and are added to the modeled concentration (both on-property and off-property sources) to account for sources not explicitly modeled. The ambient air monitors were selected to ensure that they are representative of the proposed site. The total concentration was then compared to the NAAQS to ensure that the concentration is below the standard. For any subsequent projects submitted pertaining to this or any other facility in the area, the air quality analysis for that project will have to include the emissions authorized by this project, as well as other applicable off-property sources, if a full impacts analysis is required.

Table 2. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total Conc. = [Background + GLCmax] ($\mu g/m^3$)	Standard ($\mu g/m^3$)
NO_2	1-hr	121	34	155	188
NO_2	Annual	23	5	28	100
$PM_{2.5}$	24-hr	15	19	34	35
$PM_{2.5}$	Annual	3.6	7.7	11.3	12
SO_2	1-hr	151	14.5	166	196

The NAAQS analysis results are below the standard for each pollutant, should not cause or contribute to violation of the NAAQS, and are protective of human health and the environment.

PSD Increment Analysis

The PSD program limits the extent to which air quality may be allowed to deteriorate in areas where pollutant concentrations are below the NAAQS (attainment areas). Increases in pollutant concentrations over the background are limited to certain increments, which are values specified by EPA at 40 CFR § 52.21(c). When the de minimis analysis modeling indicates that a criteria pollutant exceeds its respective de minimis concentration, a PSD increment analysis is necessary for those criteria pollutants for which EPA has established an increment.

The De Minimis analysis modeling results indicate 24-hr and annual SO_2, 24-hr and annual $PM_{2.5}$, and annual NO_2 exceed the respective de minimis concentrations and required a PSD increment analysis to be conducted. The results of the PSD Increment Analysis are shown in Table 3 below.

Table 3. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Increment ($\mu g/m^3$)
NO_2	Annual	23	25
$PM_{2.5}$	24-hr	8.9	9
$PM_{2.5}$	Annual	2.9	4
SO_2	24-hr	68	91
SO_2	Annual	11	20

Ozone Analysis

The Applicant performed an ozone (O_3) analysis as part of the PSD Air Quality Analysis (AQA). The Applicant evaluated project emissions of O_3 precursor emissions (NO_x and VOC). The results of the ozone analysis are below De Minimis levels, as shown in Table 4 below.

Table 4. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O_3	8-hr	0.42	1

Additional Impact 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.

Health Effects Analysis

ESLs are specific guideline concentrations used in TCEQ's evaluation of certain pollutants. These guidelines are derived by the TCEQ's Toxicology Division and are based on a pollutant's potential to cause adverse health effects, odor nuisances, and effects on vegetation. Health-based ESLs are set below levels reported to produce adverse health effects, and are set to protect the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions.

The TCEQ's Toxicology Division specifically considers the possibility of cumulative and aggregate exposure when developing the ESL values that are used in air permitting, creating an additional margin of safety that accounts for potential cumulative and aggregate impacts. Adverse health or welfare effects are not expected to occur if the air concentration of a pollutant is below its respective ESL. If an air concentration of a pollutant is above the screening level, it is not necessarily indicative that an adverse effect will occur, but rather that further evaluation is warranted.

The Applicant conducted a health effects analysis using the Modeling and Effects Review Applicability (MERA) guidance.[3] The MERA is a tool to evaluate impacts of non-criteria pollutants. It is a step-by-step process, evaluated on a chemical species by chemical species basis, in which the potential health effects are evaluated against the ESL for the chemical species. The initial steps are simple and conservative, and as the review progresses through the process, the steps require more detail and result in a more refined (less conservative) analysis. If the contaminant meets the criteria of a step, the review of human health and welfare effects for that chemical species is complete and is said to "fall out" of the MERA process at that step because it is protective of human health and welfare. All pollutants, with the exception of ammonia and petroleum distillates satisfy the MERA criteria and therefore are not expected to cause adverse health effects. The following pollutants did not meet the "fall out" criteria of the MERA guidance document and required further analysis. Site-wide modeling was performed and demonstrated that the predicted concentrations will not exceed 10 % of the ESL (Table 5 below).

Table 5. Project-Related Modeling Results for State Property Line

Pollutant	CAS #	Averaging Time	GLCmax (µg/m^3)	10% ESL (µg/m^3)
Ammonia	7664-41-7	1-hr	5	18
Distillates (petroleum), light catalytic cracked	64741-59-9	1-hr	195	350

The potential for odor nuisance is reviewed through the use of ESLs. The short-term ESL for 1,3-butadiene is odor-based. As described above, the Applicant performed a health effects analysis and the short-term GLCmax was less than the short-term ESL for 1,3-butadiene. Therefore, no further analysis was required based on MERA guidance and the 1,3-butadiene emissions would not be expected to cause an odor nuisance.

[3] See APDG 5874 guidance document.

State Property Line Analysis (30 TAC Chapter 112)

Because this application has sulfur emissions, the Applicant conducted a state property line analysis to demonstrate compliance with TCEQ rules for net ground-level concentrations for sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and sulfuric acid (H_2SO_4), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard, as shown in Tables 6 and 7 below.

Table 6. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
H_2S	1-hr	0.38	2.16

Table 7. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m³)	Standard (µg/m³)
SO_2	1-hr	18	1,021
H_2SO_4	1-hr	9	50
H_2SO_4	24-hr	3	15

The proposed emissions increases have been adequately represented and included in the impact analysis. Additionally, TCEQ staff and the Air Dispersion Modeling Team (ADMT) have reviewed the proposed emissions from sources, represented source parameters and locations, point and area source representations, and background concentrations. Based on the data and representations, TCEQ staff and ADMT determined that the modeling analysis was acceptable. Please see Response 3 for additional information regarding BACT, and Response 4 for additional information regarding emissions sources and calculations used to support the application.

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project.

Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no NAAQS or PSD increment for GHGs. The EPA Administrator has recognized that human-induced climate change has the potential to be far-reaching and multi-dimensional. *See* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 75 Fed. Reg. 66496, 66497 (Dec. 15, 2009). 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 permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible with current climate change modeling.[4] Thus, EPA has concluded 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 for GHG emissions would provide no meaningful data and has not required the Applicant to perform one. As stated in the preamble to the 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 and 30 Tex. Reg. 2629, 2904 (April 11, 2014).

COMMENT 2: Environmental Concerns

EIP questioned whether the proposed project would be protective of wildlife and the environment.

RESPONSE 2: The secondary NAAQS are those the EPA Administrator determines are necessary to protect public welfare and the environment, including animals, crops, vegetation, visibility, and structures, from any known or anticipated adverse effects associated with the presence of a contaminant in the ambient air. Because the emissions from this facility should not cause an exceedance of the NAAQS, air emissions from this facility are not expected to adversely impact land, livestock, wildlife, crops, or visibility, nor should emissions interfere with the use and enjoyment of surrounding land or water. Please see Response 1 for an evaluation of this project's impacts in relation to the NAAQS. In addition, 30 TAC § 101.4 prohibits the discharge of contaminants which may be injurious to, or adversely affect, animal life.

COMMENT 3: BACT / LAER

Commenters questioned the control technology proposed in the application, as well as questioned whether Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) requirements have been met.

[4] EPA's PSD and Title V Permitting Guidance for Greenhouse Gases, March 2011 at p. 48. https://www.epa.gov/sites/production/files/2015-12/documents/ghgpermittingguidance.pdf

Heavy Oil Cracker – PM

EIP expressed concern that the Applicant failed to analyze or require BACT for particulate matter from the Heavy Oil Cracker (HOC), further stating that adequate supporting information for represented PM emissions reductions was not included in the application.

Heavy Oil Cracker - NOx

EIP expressed concern that the BACT analysis for control of NOx from the heavy oil cracker is deficient, specifically that the cost-effectiveness of and control efficiency of LoTOx was improperly calculated, and that the analysis dismisses selective catalytic reduction (SCR). EIP commented that the Applicant failed to analyze the cost of SCR.

EIP expressed concern that the cost analysis for the LoTOx was improperly calculated by assuming a 46 percent reduction rather than an 80-90 percent reduction that was represented in the emission reduction options portion of the Tier III evaluation. EIP commented that the Applicant should invest in protecting the community by updating its pollution controls and that the Applicant was more concerned about cost then implementing the best control technology.

(EIP, Elida Castillo, Eduardo Canales)

RESPONSE 3: TCEQ does not compare pollution controls between individual facilities (which can vary depending on plant configuration, scale of the plant, and production rates), rather it reviews each permit application in terms of meeting best available control technology, air quality standards, and all relevant and applicable rules and regulations within its jurisdiction. During the course of the technical review of a permit application, the permit reviewer evaluates air pollution control requirements and confirms that the applicant has proposed the appropriate air pollution controls and properly determined off-site impacts for the project facilities and associated sources. The Applicant's air pollution control review, along with the permit reviewer's air pollution control evaluation and final recommendation provide a record that demonstrates that the operation of a proposed facility will not cause or contribute to a condition of air pollution and will comply with all applicable federal regulations and state rules as well as with the intent of the TCAA. The site is located in Nueces County, which is classified as attainment or unclassifiable for all criteria pollutants. This project is not subject to nonattainment review, and thus LAER does not apply to the new or modified sources proposed in this project.

The TCAA and TCEQ rules require an evaluation of air quality permit applications to determine whether adverse effects to public health, general welfare, or physical property are expected to result from a facility's proposed emissions. As part of the evaluation of applications for new or amended permits, the permit reviewer audits all sources of air contaminants at the proposed facility and assures that the facility will be using the best available control technology (BACT) applicable for the sources and types of contaminants emitted. BACT is based upon control measures that are designed to minimize the level of emissions from specific sources at a facility. Applying BACT results in requiring technology that best controls air emissions with consideration

given to the technical practicability and economic reasonableness of reducing or eliminating emissions. *See* TCAA § 382.0518; 30 TAC § 116.111. BACT may be numerical limitations, the use of an add-on control technology, design considerations, the implementation of work practices, or operational limitations.

The TCEQ BACT evaluation is conducted using a "tiered" analysis approach. The evaluation begins at the first tier and continues sequentially through subsequent tiers only if necessary, as determined by the evaluation process described in agency guidance. In each tier, BACT is evaluated on a case-by-case basis for technical practicability and economic reasonableness. The three tiers are described in the following paragraphs:

- **Tier I:** Emission reduction performance levels accepted as BACT in recent permit reviews for the same process and/or industry continue to be acceptable.
- **Tier II:** Tier II BACT evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. For example, an applicant may propose to control volatile organic compound (VOC) emissions in one industry using technology already in use in another industry. A Tier II evaluation includes issues relating to stream comparison and possible differences in overall performance of a particular emission reduction option. In addition, the Tier II evaluation considers technical differences between the processes or industries in question. To demonstrate technical practicability, detailed technical analysis may be required to assess the cross-applicability of emission reduction options. In Tier II, economic reasonableness is established by historical and current practice.
- **Tier III:** A Tier III BACT evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review and is similar to EPA's top-down approach. Technical practicability is established through demonstrated success of an emission reduction option based on previous use, and/or engineering evaluation of a new technology. Economic reasonableness is determined solely by the cost-effectiveness of controlling emissions (dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics.

The Applicant conducted a Tier I BACT evaluation for all sources of air contaminants from the proposed new and modified facilities. The Applicant determined that Tier I was not appropriate for NO_X emissions from the HOC Unit and conducted a Tier II and Tier III BACT analysis. The use of appropriate control measures will decrease the amount of air contaminants emitted into the atmosphere by this refinery. The permit reviewer reviewed the proposed controls and determined that they met Tier I or Tier III BACT for all sources and facilities, as applicable.

A heavy oil cracker is a type of FCCU (fluid catalytic cracking unit) where a heavy hydrocarbon feed is catalytically cracked to lighter products by contacting the feed with a fluidized catalytic cracking catalyst. The cracking process deposits carbonaceous hydrocarbons, or coke, on the catalyst. A catalyst regenerator burns coke from the catalyst to reactivate the catalyst. Combustion of coke generates particulate

matter, carbon monoxide, nitrogen oxides, and hydrocarbon emissions, and the organic sulfur and nitrogen that were present in the FCC feed may also be converted to sulfur dioxide, nitrogen oxides, and hydrogen cyanide. Tier I BACT for PM for the heavy oil cracker is 1 lb/100 lb coke burn off and a maximum opacity of 15-20% (6-minute averaging time). The Applicant proposed a 1 lb/100 lb coke burn off and a maximum opacity of 15-20% (6-minute averaging time). BACT is not the lowest achievable limit, but rather control technology that considers technical practicability and economic reasonableness of reducing or eliminating emissions from the facility. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable.

The Applicant provided a detailed analysis demonstrating that there were compelling technical differences between its FCC unit and other FCC units which have met the Tier I BACT level of control for the NO_X emissions, and it proceeded to a Tier II BACT evaluation. The Applicant then demonstrated that there were no other industries where applicable controls could be applied and determined that a Tier III BACT evaluation was necessitated.

The Applicant therefore provided a Tier III technical and quantitative economic analysis for NOx emissions from the HOC Unit. The permit reviewer evaluated this information, including the emission reduction options available for the process/industry. While technical practicability is established through the demonstrated success of an emission reduction option based on previous use and/or an engineering evaluation of a new technology, economic reasonableness is determined by the cost-effectiveness of controlling emissions (expressed as dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics.

A separate cost analysis for selective catalytic reduction (SCR) was not conducted because the Applicant represented and provided documentation that capital costs for SCR are similar to low temperature oxidation (LoTOx).[5] Therefore a cost analysis was performed on LoTOx due to better data being available for LoTOx costs on full burn units. Based on this analysis, no additional controls are required for the HOC Unit. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable. The LoTOx cost analysis was not based on a percent recovery, but rather it was based on the difference between the resulting emission rate using LoTOx to reduce the NOx emissions to 20 ppmv and the emission rate using the current control technology.

COMMENT 4: Emission Rates and Calculations

Commenters questioned the accuracy and methodology for determining the emission rates for the proposed project, specifically questioning whether the calculation methodologies are flawed or outdated.

(EIP, EPA)

5 Sadeghbeigi, A. *Fluid Catalytic Cracking Handbook*. Elsevier, 2011. At § 15.6.7

RESPONSE 4: Accepted emission factors and methodologies are utilized to calculate emissions. These factors were determined to be correct and applicable by TCEQ staff during the technical review based on standard industry permitting practices.

The TCEQ ensures the conservative nature of these calculations by evaluating each emission point. The permit Special Conditions will require stack testing under worst case conditions. The stack tests that are required for this amendment are to determine compliance with the emission rates and limits, and to certify the Continuous Emissions Monitoring System (CEMS) when CEMS is required. The stack tests do not verify anything directly related to the calculations for this project. The Applicant represented the appropriate methodologies to control and minimize emissions and utilized corresponding control efficiencies when calculating the emission rates.

As provided in 30 TAC § 116.116(a), the Applicant is bound by these representations, including the represented performance characteristics of the control equipment. In addition, the permit holder must operate within the limits of the permit, including the emission limits as listed in the Maximum Allowable Emissions Rate Table (MAERT). Typically, MAERTs for air permits list pollutants in their general categories rather than as individual constituents.

Specifically, emissions for the heavy oil cracker regenerator are calculated by multiplying the maximum stack flow rate (on a dry, standard basis, corrected to 0% O_2) by the permitted emission limit for NO_X, CO, SO_2 and VOC. Particulate, HCN, and H_2SO_4 emissions are determined by multiplying the maximum coke burn rate by the applicable emission factor. Emissions of NO_X, particulate, and VOC from the boiler were calculated by multiplying the maximum fired duty of the boiler (HHV basis) by the appropriate emission factor (expressed in units of lb/MMBtu), based on the BACT analysis (NO_X) or AP-42 (Particulate, VOC). CO and NH_3 emissions were calculated based on the concentration in the stack gas (dry basis, corrected to 3% O_2). SO_2 was calculated based on the sulfur content of the fuel gas. Fugitive emissions from piping components were calculated in accordance with TCEQ APDG 6422 Guidance. The cooling tower VOC emissions were calculated using AP-42, Chapter 5.1. Particulate emissions are based on the drift rate, the total dissolved solids (TDS) of the circulating water, and the applicable particle size distribution for particulate fractions using the droplet distribution found in, "Calculating Realistic PM10 Emissions from Cooling Towers, Joel Reisman and Gordon Frisbie, 2002". Emissions calculations for the Merox Unit were calculated using a destruction efficiency of 99%. Emissions from the carbon absorption system (CAS) for the lift station were calculated based on the maximum vapor flow rates, and maximum benzene and VOC breakthrough concentrations.

COMMENT 5: Monitoring and Reporting Requirements

EIP questions whether the permit monitoring and reporting requirements contained in the permit Special Conditions are adequate to ensure compliance with the Clean Air Act and protect local residents.

Lamont Taylor questioned the reporting requirements contained in the draft permit.

(EIP, Lamont Taylor)

RESPONSE 5: The Special Conditions of the draft permit contains detailed monitoring requirements. In addition, the draft permit specifies applicable recordkeeping and reporting requirements to demonstrate compliance with the emissions limitations set forth in the permit. Records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. The monitoring and reporting requirements were reviewed and found to be protective of human health and the environment.

The Regional Office may perform investigations of the plant as required. The investigation may include an inspection of the site including all equipment, control devices, monitors, and a review of all calculations and required recordkeeping. The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Corpus Christi Regional Office at 361-881-6900 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. Citizen-collected evidence may be used in such an action. *See* 30 TAC § 70.4, Enforcement Action Using Information Provided by Private Individual, for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law. The information, if gathered according to agency procedures and guidelines, can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at http://www.tceq.texas.gov (under Publications, search for document number 278).

COMMENT 6: Air Monitors

Elida Castillo expressed concern that that there are only two EPA monitors in the area and none in San Patricio County.

RESPONSE 6: Due to cost and logistical constraints, the placement of air monitors is prioritized to provide data on regional air quality in areas frequented by the public. The existing air monitoring network is the result of a strategic balance of matching federal monitoring requirements with state and local needs. Consistent with federal air monitoring requirements, the TCEQ evaluates the placement of air quality monitors within the air monitoring network using trends in population, reported emissions inventory data, and existing air monitoring data for a given area. In addition, the TCEQ may prioritize monitor placement in areas with potential regional air quality issues, such as those related to increased oil and gas activity in the Barnett Shale and Eagle Ford Shale areas.

The TCEQ annually evaluates the number and location of air monitors within its network to assess compliance with federal monitoring requirements and the adequacy of monitoring coverage for identified monitoring objectives as a part of the Annual Monitoring Network Plan provided to EPA on July 1 of each year. This plan is made available on the TCEQ's website for public review and comment for 30 days beginning in mid-May. Requests for additional monitoring or the identification of additional monitoring needs may be made during this public comment period and will be considered along with other monitoring priorities across the state. To receive email announcements related to the ambient air monitoring network, including the availability of the Annual Monitoring Network Plan for public review and comment, please visit the following link https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new and select "Air Monitoring Network Announcements."

Stationary air monitors are sited to measure air quality that is representative of a broader area or region. Therefore, monitors are not typically placed to measure the impacts from specific industrial facilities.

COMMENT 7: Cooling Tower Drift Eliminators

EIP expressed concern that the Applicant did not provide publicly available proof that the drift eliminators are capable of meeting a performance level of 0.001%.

RESPONSE 7: The Applicant provided manufacturer's data on December 17, 2021 showing that the drift eliminators are designed to meet 0.001% drift or less, which is located in the public file.

COMMENT 8: Nuisance Conditions

EIP expressed concern regarding whether the proposed project would create nuisance conditions violating 30 Texas Administrative Code Chapter 101.4 (30 TAC § 101.4). EIP stated that its members have found black powder on their property.

RESPONSE 8: While nuisance conditions are not expected if the plant is operated in compliance with the terms of the permit, operators must also comply with 30 TAC § 101.4, which prohibits nuisance conditions.

The proposed permit contains the required control processes to minimize particulate matter. Special Condition No. 25 contains limitations on the pressure and monitoring of the pressure and pressure drop for the Caustic Scrubber Stack (EPN 121). Special Condition No. 30 requires that the cooling tower drift eliminators be maintained. The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Corpus Christi Regional Office at (361) 825-3100 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. Citizen-collected evidence may be used in such an action. *See* 30 TAC § 70.4 - Enforcement Action Using Information Provided by Private Individual,

for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law. The information, if gathered according to agency procedures and guidelines, can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at http://www.tceq.texas.gov (under Publications, search for document number 278).

COMMENT 9: Public Participation / Public Meetings

Elida Castillo commented that there was not a way for the community who has been impacted by Covid to submit comments online or participate in the public meeting virtually. Elida Castillo expressed concern regarding the scheduling of public meetings for other permits during the same week, specifically stating that "holding three meetings is overwhelming for the community when they are held in the same week".

RESPONSE 9: The TCEQ welcomes public participation in the permitting process. TCAA § 382.056 requires that an applicant publish notice. Notice must be published in a newspaper of general circulation in the municipality in which the proposed facility is located or proposed to be located. The notice must include a description of the facility, information on how an affected person may request a public hearing, pollutants the facility will emit, and any other information the TCEQ requires by rule. The commission also requires that notice be published in an alternative language if the elementary or middle school nearest the proposed facility offers a bilingual education program as required by Texas Education Code Chapter 29, Subchapter B. The TCEQ adopted rules for these public notice requirements in 30 TAC § 39.603, Public Notice of Air Quality Applications, Newspaper Notice.

To demonstrate compliance with public notice requirements, applicants are required to provide the Office of the Chief Clerk with copies of the published notice and a publisher's affidavit verifying facts related to the publication, including that the newspaper is a paper of general circulation in the municipality in which the proposed facility is located or proposed to be located.

As stated above, the Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice [NORI]) for this permit application was published in English on October 14, 2021, in the *Caller Times*, and in Spanish on October 14, 2021 in *Tejano Y Grupero News*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice [NAPD]) was published on June 01, 2022, in English in the *Caller Times* and in Spanish on June 01, 2022, in *Tejano Y Grupero News*.

The public notice contains instructions for submitting comments, getting on the mailing list, requesting a public meeting, and requesting a contested case hearing. An overview of public participation for applications filed after September 1, 2015 is available on the TCEQ website at: https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation/pub_part.html. Regarding the commenter concern that the public was unable to provide comments online, comments or requests to the TCEQ can be submitted online at our website: https://www.tceq.texas.gov/goto/comment. Utilizing online comments and the mailing list allows members of the public to participate in the permitting process even if they are unable to attend in person.

Title 30 TAC § 55.154(c)(2) requires that a public meeting be held if a member of the legislature who represents the general area in which the facility is located requests a public meeting or if the TCEQ Executive Director determines that there is substantial or significant degree of public interest. A public meeting was held on July 11, 2022 at the Atrium Hotel & Convention Center, 5549 Leopard Street, Corpus Christi, Texas, 78408. Public meetings are scheduled based on the availability of the applicant, the Executive Director's staff, and the venue.

COMMENT 10: Environmental Justice

Commenters raised concerns regarding the environmental justice implications of this project.

(EIP, EPA, Elida Castillo, Lamont Taylor)

RESPONSE 10: Air permits evaluated by the TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. The TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. A health effects review was conducted for the proposed facilities during the permit review and the permit was found to be protective of human health and the environment.

The TCEQ encourages participation in the permitting process. The Office of the Chief Clerk works to help the public and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that concerns are considered thoroughly and are handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300 for further information. More information may be found on the TCEQ website: Title VI Compliance at TCEQ - Texas Commission on Environmental Quality - www.tceq.texas.gov.

COMMENT 11: Corporate Profits

Elida Castillo commented on tax abatements and subsidies that the Applicant receives, stating that the community does not get their fair share from what they pay out. Eduardo Canales commented that with all the tax abatements and tax breaks, the Applicant is not putting in their fair share.

(Elida Castillo, Eduardo Canales)

RESPONSE 11: The TCEQ is not authorized to consider a company's financial status nor its profits in determining whether a permit should be issued. TCEQ's review of this company's application included analysis of health impacts and application of best available control technology (BACT), and based on this review, the facility should comply with all applicable health effects guidelines and emission control requirements. Continued compliance with health effects guidelines and BACT requirements is expected if the company operates in compliance with the permit terms and conditions. Individuals are encouraged to report any environmental concerns at the facility by contacting the Corpus Christi Regional Office at 361-881-6900 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. The TCEQ evaluates all complaints received. If the facility is found to be out of compliance with the terms and conditions of the permit, it will be subject to possible enforcement action.

COMMENT 12: Local Economy

Eduardo Canales expressed concern that the Applicant has a history of contributing to the economic degradation of the community.

RESPONSE 12: Issues related to the local economy are outside the scope of review of an air quality permit. The Executive Director has reviewed the permit application in accordance with the applicable law, policy, and procedures, in accordance with the agency's mission to protect our state's human and natural resources consistent with sustainable economic development. If an applicant meets the requirements for an air quality permit, the TCEQ must grant the permit.

COMMENT 13: TCEQs Responsibility / Public Opposition and Support

Commenters ask that the TCEQ consider residents and their wishes and choose not to approve the permit registration for the proposed plant. Elida Castillo asks that the TCEQ uphold their mission statement.

(Elida Castillo, Eduardo Canales)

Commenters expressed general support towards the Applicant and the proposed project.

(Maricela Cuevas, Mike Culbertson, John LaRue, Bea Hanson, Gretchen Arnold)

RESPONSE 13: The TCEQ appreciates the comments and interest from the public in environmental matters before the agency and acknowledges the comments in opposition and support of the project. The TCAA establishes the TCEQ's jurisdiction to

regulate air emission in the state of Texas. Accordingly, the Executive Director's staff has reviewed the applications in accordance with the applicable state and federal law, policy and procedures, and the agency's mission to protect the state's human and natural resources consistent with sustainable economic development. The TCEQ cannot deny authorization of a facility if a permit application contains a demonstration that all applicable statutes, rules, and regulations will be met.

COMMENT 14: Special Condition Number 5

EPA commented that while the permit contains continuous monitoring of the vapor combustor combustion chamber temperature, the application and permit did not indicate how that monitoring ensures compliance with the permit limit of 10 mg VOC per liter of gasoline loaded. EPA further commented that there is no mention of destruction efficiency of the vapor combustor or mention of how emissions are to be calculated per liter of gasoline loaded. EPA asks that TCEQ clarify for the record all monitoring requirements for the vapor combustor that will be used to ensure compliance with the emissions limits stated in the permit.

RESPONSE 14: This condition is outside the scope of the project and was not subject to revision in the draft permit.

COMMENT 15: Special Condition Number 8

EPA asks if the Marine VCU identified in Special Condition No. 8 is Emission Point Number (EPN) MRVUF. EPA further asks if TCEQ can clarify how one Vapor Recovery Unit (VRU) limits the emissions from another VRU, and asks what monitoring is performed to ensure the 5 mg/l VOC limit is met.

RESPONSE 15: This condition is outside the scope of the project and was not subject to amendment in the draft permit.

COMMENT 16: Special Condition Number 11

EPA questioned the condition language using the word "secured" with regard to marine loading, stating that they find the word "secured" to be confusing and requests that TCEQ explain what is intended and consider the use of a more clarifying language in the permit.

RESPONSE 16: While the Condition is outside the scope of the project, the Executive Director has clarified the wording in the Condition to use the term "suspended".

COMMENT 17: Special Condition Number 12.G

EPA requested clarification regarding the Acid Gas Flare, specifically asking under what circumstances the flare is used if not for routine emissions or planned Maintenance, Startup, and Shutdown (MSS) activities.

RESPONSE 17: While outside the scope of the project, the Acid Gas Flare is used for emergencies and process upsets, which are not authorized by the permit. The emissions that are authorized for the Acid Gas Flare are for the operation of the pilots.

COMMENT 18: Special Condition Number 14

EPA commented that while the special condition states no visible emissions are allowed from the heaters, monitoring has not been identified in the permit to ensure compliance with the requirement.

RESPONSE 18: This condition is outside the scope of the project and was not subject to amendment in the draft permit.

COMMENT 19: Special Condition Number 15

EPA asks which heater is subject to the requirements of Special Condition No. 15.

RESPONSE 19: The special condition applies to all heaters with a firing rate greater than 40 MMBtu/hr. While this Condition was outside of the scope of the review, the Executive Director has clarified the Special Condition by adding a list of subject heaters.

COMMENT 20: Special Condition Number 16

EPA commented that more information needs to be included to ensure the Applicant can meet the emission limits represented in the various tables of Special Condition No. 16.

EPA questioned representations in the first table of Special Condition No. 16. EPA asks that for units which show "stack test" as the compliance method, how the stack test data correlates to ongoing compliance with emission limits and how the data would be used to determine compliance with each averaging time. EPA further comments that it is unclear if the stack test is a one-time test or if it should be performed regularly. EPA asks that appropriate monitoring for units that do not have a NOx method listed in the table be identified. EPA asks how stack test results will be used to determine compliance with the emission limits of the permit.

EPA questioned the representations in the second table of Special Condition No. 16, specifically that the table does not include a column to show the CO compliance method. EPA asks that monitoring be identified to ensure compliance with the represented 1-hour block average emission limit. EPA further states that EPN 153 is identified in the table but is not given a CO 1-hour block average emission limit, asking what (if any) short-term CO limit is applicable to this EPN.

EPA questioned the third and final tables of Special Condition No. 16, asking if the represented limits are on an hourly average. EPA asks why a compliance method column is not included in this table, further asking what monitoring is required to ensure compliance with the represented emission limits.

EPA commented that it is unclear which units are equipped with a CO Continuous Emissions Monitoring System (CEMS) and asks that the permit be updated to include this information. Finally, EPA asks how emissions of non-routine operations can be determined for boilers and heaters that are not equipped with CEMS.

RESPONSE 20: In the first table, the units which show "stack test" as the compliance method are outside the scope of the project and are not subject to amendment in the draft permit. Additionally, all units that do not have a NOx method listed in the table are outside the scope of the project and not subject to amendment in the draft permit.

While the second table of Special Condition No. 16 does not include a column to show the CO compliance method, Special Condition No. 40 requires that a CEMS be installed, calibrated, and maintained that will record the in-stack concentration of CO, NOx, and O_2 from the heaters and boilers with firing rates greater than 100 MMBtu/hr.

EPN 153 (Boiler 30-B-05) is the only EPN modified by Special Condition 16. This boiler has a firing rate greater than 100 MMBtu/hr and will therefore have a CEMS. EPN 153 is outside the scope of the project and was not subject to amendment in the draft permit. Boiler 30-B-05 is equipped with CEMS.

For the third and final table, while the averaging times are not specified in the tables, Special Condition No. 42 specifies that the averaging time for those pollutants as follows:

Pollutant	Averaging Period
SO_2	1.0 hour
CO	1.0 hour
H_2S	1.0 hour
Opacity	6.0 minutes
NO_x	1.0 hour

Stack test results for Boiler 30-B-05 are used to certify the CEMS as required in Special Condition No. 40.C(1).

COMMENT 21: Special Condition Number 19.D

EPA asks what quality assured data Special Condition No. 19.D is referring to.

RESPONSE 21: While outside the scope of this project, the quality assured data Special Condition No. 19.D is referring to is the data generated from the fuel flow meter to measure the gas fuel usage for the desalter heater required in Special Condition No. 19.C. The desalter heater is not proposed to be modified, and is therefore outside the scope of this permit amendment.

COMMENT 22: Special Condition Number 22

EPA questioned why Special Condition No. 22 states that the equation relies on the values of the sulfur in the acid gas stream and value of sulfur in the incinerator stack. EPA asks where those numbers came from, asks how they are measured, and asks how they are calculated. EPA asks if the values are obtained from stack testing and if so, asks for justification for using a one-time test to determine ongoing compliance.

RESPONSE 22: Special Condition No. 22 requires that the data used in the calculation be obtained from the incinerator stack sulfur dioxide monitor and sulfur production records. The incinerator sulfur dioxide monitoring requirements are located in Special Condition No. 40. The values for this equation are not obtained from stack testing.

COMMENT 23: Special Condition Number 25

EPA asks at what frequency the opacity observation is performed, and asks if it will be a Method 9 or Method 22 test.

EPA commented that the permit does not appear to have conditions that are specific to the estimated emissions of hydrogen cyanide (HCN) for the Heavy Oil Cracker, further asking what monitoring will be performed to ensure that the unit meets the permitted emission limits as listed in on the Maximum Allowable Emission Rates Table (MAERT).

RESPONSE 23: Opacity is controlled by maintaining the liquid to the filtering modules at a pressure greater than 45 pounds per square inch (psi) and the flue gas pressure drop across the filtering modules and the cyclolabs at no less than 5 inches of water. Special Condition No. 25 of the permit requires that the liquid pressure and pressure drop be continuously recorded and maintained at the plant site for a period of five years. Additionally, provisions for quarterly opacity observations using Method 22 have been added to Special Condition No. 25.

For emissions of HCN from the Heavy Oil Cracker, the emission factor used to calculate the permit limit is applied to the actual calculated coke burn rate. The coke burn is limited by Special Condition No. 20 and calculated using Equation 6 from 40 CFR § 60.104a(d)(4)(iii). Special Condition No. 20 has been revised to specify this equation.

COMMENT 24: Special Condition Number 39.B(2)

EPA asks what the justification is for using the lower of the two testing results to demonstrate compliance, as well as asks TCEQ to clarify what emission limit this is used to determine compliance with.

RESPONSE 24: The special condition has been revised to remove the references to the specific test methods and to require that the appropriate test method be specified by the Region during the pre-stack test meeting. These stack test results are used to demonstrate compliance with the MAERT limits for sulfuric acid.

COMMENT 25: Special Condition Number 73

EPA commented on referenced confidential information within the permit special condition, stating that TCEQ need to be mindful of what information may be claimed as confidential in NSR and Title V permitting, as the NSR permit will be incorporated into the Title V permit. EPA further states that the Clean Air Act limits the types of information that may be treated as confidential in a Title V permit, expressing concern that information might be withheld from the public. EPA commented that TCEQ should assess if the referenced information should be treated as confidential or if it should be made available to the public.

EPA commented that there are "vague references" to permit applications within the draft permit, stating that the lack of a specific permit application makes it impossible to locate the information that is being referenced. EPA commented that the TCEQ should amend the permit to clearly incorporate the monitoring, emission factors, emission calculation methods, and other relevant data necessary to ensure compliance with the permit. EPA commented that they conducted an environmental justice analysis for the area and expressed concern that the lack of clarity in the permit makes it difficult for the local community, which is predominantly low income and people of color, to adequately comment on the "vague" permit conditions.

RESPONSE 25: No confidential material was submitted with this amendment application and none of the conditions relating to new/modified equipment reference confidential information. Therefore, topics related to confidential information are outside the scope of the review of this application. During the permit review process, TCEQ addressed and revised the special conditions modified by the application, however, some issues addressed by the comments from EPA are outside the scope of review of the permit. After completing the technical review, the TCEQ determined that the proposed controls for the permit modifications are protective of human health and the environment.

It is the policy of the state of Texas that each person is entitled, unless otherwise expressly provided by law, at all times to complete information about the affairs of government and the official acts of public officials and employees. TEX. GOV'T CODE § 552.001(a). While public information is available to members of the public at a minimum during the normal business hours of the TCEQ, information that is considered confidential by law is exempt from disclosure requirements. Id. At §§ 552.101 and 552.021.

The TCAA provides for confidential treatment of information submitted to the commission if it relates to secret processes, production rates, or methods of manufacture or production and is identified as confidential when submitted. *See* TCAA § 382.041(a). TCEQ rules also specify procedures for the handling of information claimed to be confidential. *See* 30 TAC § 1.5(d). An applicant may request that submitted information be designated as confidential. Regardless of whether the Executive Director agrees with an applicant's requested confidential designation, if the agency receives an open records request for the information marked confidential by an applicant, the agency may not release the information without first submitting a

request to the Texas Attorney General. The Attorney General will determine whether the requested information is subject to an exception to disclosure and whether the information must be withheld or disclosed to the requestor.

COMMENT 26: Comments to the Applicant

Elida Castillo asks the Applicant to communicate more with the communities.

(EIP, Elida Castillo)

RESPONSE 26: These comments or concerns are addressed to the Applicant and are therefore included for completeness, but not addressed by the Executive Director.

CHANGES MADE IN RESPONSE TO COMMENT

In response to public comment, the Executive Director has changed Special Conditions Nos. 11, 15, 20, 25, 39.B(2). These changes and the reasons for these changes are more fully described above.

Respectfully submitted,

Texas Commission on Environmental Quality

Toby Baker, Executive Director

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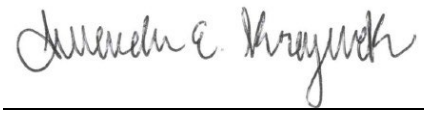
Charmaine Backens, Deputy Director
Environmental Law Division



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REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

TCEQ AIR QUALITY PERMIT NUMBERS 38754, PSDTX324M15, and GHGPSDTX211

APPLICATION BY	§	**BEFORE THE**
VALERO REFINING-TEXAS, L.P.	§	
VALERO CORPUS CHRISTI REFINERY	§	**TEXAS COMMISSION ON**
WEST PLANT	§	**ENVIRONMENTAL QUALITY**
CORPUS CHRISTI, NUECES COUNTY		

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the New Source Review Authorization application and Executive Director's preliminary decision.

As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received timely comments from the following persons: Aimee Wilson (on behalf of the Environmental Protection Agency, hereinafter "EPA"), Colin Cox (on behalf of the Environmental Integrity Project, Hillcrest Residents Association, and Citizens for Environmental Justice, hereinafter "EIP"), Elida Castillo, Lamont C. Taylor (on behalf of the Hillcrest Residents Association and Citizens Alliance for Fairness and Progress), John LaRue (on behalf of the Corpus Christi Chamber of Commerce), Mike Culbertson (on behalf of the Corpus Christi Regional Economic Development Corporation), Maricela Cuevas (on behalf of the Corpus Christi Community Advisory Council), Bea Hanson (on behalf of the Coastal Bend Food Bank), Eduardo Canales, Gretchen Arnold. This Response addresses all timely public comments received, whether or not withdrawn. If you need more information about this permit application or the permitting process please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.texas.gov.

BACKGROUND

Description of Facility

Valero Refining-Texas, L.P. (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the modification of an existing facility that may emit air contaminants.

This permit will authorize the Applicant to modify the Valero Corpus Christi Refinery West Plant. The plant is located at 5900 Up River Road, Corpus Christi, Nueces County. Contaminants authorized under this permit amendment include carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, ammonia, and hydrogen sulfide. The proposed plant will also emit greenhouses gas.

Procedural Background

Before work is begun on the modification of an existing facility that may emit air contaminants, the person planning the modification must obtain a permit amendment from the commission. This permit application is for a permit amendment of Air Quality Permit Number 38754, PSDTX324M15, and GHGPSDTX211.

The permit application was received on September 30, 2021 and declared administratively complete on October 5, 2021. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for this permit application was published in English on October 14, 2021, in the *Caller Times*, and in Spanish on October 15, 2021 in *Tejano Y Grupero News*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) was published on June 1, 2022, in English in the *Caller Times* and in Spanish on June 01, 2022, in *Tejano Y Grupero News*. A public meeting was held on July 11, 2022 at the Atrium Hotel & Convention Center, 5549 Leopard Street, Corpus Christi, Texas 78408. The public comment period ended on July 11, 2022. Because this application was received after September 1, 2015, it is subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

COMMENTS AND RESPONSES

COMMENT 1: Health Effects / Air Quality / Cumulative Effects

Commenters expressed concern about the effect of the emissions from the proposed project on the air quality and health of people, particularly sensitive populations such as the elderly, children, and people with existing medical conditions. Elida Castillo expressed concern that the proposed project would cause negative health effects, including heart disease, cardiovascular and renal disease, and birth defects. Commenters are concerned that the proposed project would cause or contribute to exceedances of NAAQS, threatening the health and safety of nearby residents. Commenters questioned whether cumulative impacts were considered, and question if the Air Quality Analysis (AQA) was conducted correctly. Commenters stated the facility emits foul odors. EIP expressed concerns about the quantity of emissions that will result from the project, specifically questioning whether the proposed emissions will exceed the allowable Prevention of Significant Deterioration (PSD) increments thresholds. Eduardo Canales expressed concerns over the release of greenhouse gases.

(EIP, Elida Castillo, Lamont Taylor, Eduardo Canales)

RESPONSE 1: The Applicant is modifying its existing permit to add new refining units to change the type if crude oil it can receive and process. The Executive Director is required to review permit applications to ensure they will be protective of human health and the environment. For this type of air permit application, potential impacts to human health and welfare or the environment are determined by comparing the Applicant's proposed air emissions to appropriate state and federal standards and guidelines. These standards and guidelines include the National Ambient Air Quality

Standards (NAAQS), TCEQ Effects Screening Levels (ESLs), and TCEQ rules. As described in detail below, the Executive Director determined that the emissions authorized by this permit are protective of both human health and welfare and the environment.

NAAQS

The U.S. Environmental Protection Agency (EPA) created and continues to evaluate the NAAQS, which include both primary and secondary standards, for pollutants considered harmful to public health and the environment.[1] Primary standards protect public health, including sensitive members of the population such as children, the elderly, and those individuals with preexisting health conditions. Secondary NAAQS protect public welfare and the environment, including animals, crops, vegetation, visibility, and buildings, from any known or anticipated adverse effects from air contaminants. The EPA has set NAAQS for criteria pollutants, which include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}), and PM less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$).

The Applicant conducted a NAAQS analysis for NO_2, CO, PM_{10}, $PM_{2.5}$, and SO_2. The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations (GLCmax[2]) below the de minimis level are considered to be so low that they do not require further NAAQS analysis. Table 1 contains the results of the de minimis analysis.

Table 1. Modeling Results for PSD De Minimis Analysis

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
NO_2	1-hr	30.2	7.5
NO_2	Annual	2	1
CO	1-hr	362	2000
CO	8-hr	319	500
PM_{10}	24-hr	4.8	5
PM_{10}	Annual	0.9	1
$PM_{2.5}$ (NAAQS)	24-hr	4	1.2
$PM_{2.5}$ (NAAQS)	Annual	0.8	0.2
$PM_{2.5}$ (Increment)	24-hr	4.7	1.2
$PM_{2.5}$ (Increment)	Annual	0.9	0.2
SO_2	1-hr	20	7.8
SO_2	3-hr	20	25
SO_2	24-hr	16	5
SO_2	Annual	2	1

1 40 CFR 50.2
2 The GLCmax is the maximum ground level concentration predicted by the modeling.

The pollutants below the de minimis level should not cause or contribute to an exceedance of the NAAQS and are protective of human health and the environment.

The Applicant conducted a full NAAQS analysis for those pollutants above de minimis to account for cumulative effects by including an evaluation of all on-property sources, applicable off-property sources, and representative monitored background concentrations. Results of the full NAAQS analysis are presented below in Table 2. The total concentration was determined by adding the GLCmax to the appropriate background concentration. Background concentrations are obtained from ambient air monitors across the state and are added to the modeled concentration (both on-property and off-property sources) to account for sources not explicitly modeled. The ambient air monitors were selected to ensure that they are representative of the proposed site. The total concentration was then compared to the NAAQS to ensure that the concentration is below the standard. For any subsequent projects submitted pertaining to this or any other facility in the area, the air quality analysis for that project will have to include the emissions authorized by this project, as well as other applicable off-property sources, if a full impacts analysis is required.

Table 2. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total Conc. = [Background + GLCmax] ($\mu g/m^3$)	Standard ($\mu g/m^3$)
NO_2	1-hr	121	34	155	188
NO_2	Annual	23	5	28	100
$PM_{2.5}$	24-hr	15	19	34	35
$PM_{2.5}$	Annual	3.6	7.7	11.3	12
SO_2	1-hr	151	14.5	166	196

The NAAQS analysis results are below the standard for each pollutant, should not cause or contribute to violation of the NAAQS, and are protective of human health and the environment.

PSD Increment Analysis

The PSD program limits the extent to which air quality may be allowed to deteriorate in areas where pollutant concentrations are below the NAAQS (attainment areas). Increases in pollutant concentrations over the background are limited to certain increments, which are values specified by EPA at 40 CFR § 52.21(c). When the de minimis analysis modeling indicates that a criteria pollutant exceeds its respective de minimis concentration, a PSD increment analysis is necessary for those criteria pollutants for which EPA has established an increment.

The De Minimis analysis modeling results indicate 24-hr and annual SO_2, 24-hr and annual $PM_{2.5}$, and annual NO_2 exceed the respective de minimis concentrations and required a PSD increment analysis to be conducted. The results of the PSD Increment Analysis are shown in Table 3 below.

Table 3. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax ($\mu g/m^3$)	Increment ($\mu g/m^3$)
NO_2	Annual	23	25
$PM_{2.5}$	24-hr	8.9	9
$PM_{2.5}$	Annual	2.9	4
SO_2	24-hr	68	91
SO_2	Annual	11	20

Ozone Analysis

The Applicant performed an ozone (O_3) analysis as part of the PSD Air Quality Analysis (AQA). The Applicant evaluated project emissions of O_3 precursor emissions (NO_x and VOC). The results of the ozone analysis are below De Minimis levels, as shown in Table 4 below.

Table 4. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O_3	8-hr	0.42	1

Additional Impact 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.

Health Effects Analysis

ESLs are specific guideline concentrations used in TCEQ's evaluation of certain pollutants. These guidelines are derived by the TCEQ's Toxicology Division and are based on a pollutant's potential to cause adverse health effects, odor nuisances, and effects on vegetation. Health-based ESLs are set below levels reported to produce adverse health effects, and are set to protect the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions.

The TCEQ's Toxicology Division specifically considers the possibility of cumulative and aggregate exposure when developing the ESL values that are used in air permitting, creating an additional margin of safety that accounts for potential cumulative and aggregate impacts. Adverse health or welfare effects are not expected to occur if the air concentration of a pollutant is below its respective ESL. If an air concentration of a pollutant is above the screening level, it is not necessarily indicative that an adverse effect will occur, but rather that further evaluation is warranted.

The Applicant conducted a health effects analysis using the Modeling and Effects Review Applicability (MERA) guidance.[3] The MERA is a tool to evaluate impacts of non-criteria pollutants. It is a step-by-step process, evaluated on a chemical species by chemical species basis, in which the potential health effects are evaluated against the ESL for the chemical species. The initial steps are simple and conservative, and as the review progresses through the process, the steps require more detail and result in a more refined (less conservative) analysis. If the contaminant meets the criteria of a step, the review of human health and welfare effects for that chemical species is complete and is said to "fall out" of the MERA process at that step because it is protective of human health and welfare. All pollutants, with the exception of ammonia and petroleum distillates satisfy the MERA criteria and therefore are not expected to cause adverse health effects. The following pollutants did not meet the "fall out" criteria of the MERA guidance document and required further analysis. Site-wide modeling was performed and demonstrated that the predicted concentrations will not exceed 10 % of the ESL (Table 5 below).

Table 5. Project-Related Modeling Results for State Property Line

Pollutant	CAS #	Averaging Time	GLCmax ($\mu g/m^3$)	10% ESL ($\mu g/m^3$)
Ammonia	7664-41-7	1-hr	5	18
Distillates (petroleum), light catalytic cracked	64741-59-9	1-hr	195	350

The potential for odor nuisance is reviewed through the use of ESLs. The short-term ESL for 1,3-butadiene is odor-based. As described above, the Applicant performed a health effects analysis and the short-term GLCmax was less than the short-term ESL for 1,3-butadiene. Therefore, no further analysis was required based on MERA guidance and the 1,3-butadiene emissions would not be expected to cause an odor nuisance.

[3] See APDG 5874 guidance document.

State Property Line Analysis (30 TAC Chapter 112)

Because this application has sulfur emissions, the Applicant conducted a state property line analysis to demonstrate compliance with TCEQ rules for net ground-level concentrations for sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and sulfuric acid (H_2SO_4), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard, as shown in Tables 6 and 7 below.

Table 6. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
H_2S	1-hr	0.38	2.16

Table 7. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m³)	Standard (µg/m³)
SO_2	1-hr	18	1,021
H_2SO_4	1-hr	9	50
H_2SO_4	24-hr	3	15

The proposed emissions increases have been adequately represented and included in the impact analysis. Additionally, TCEQ staff and the Air Dispersion Modeling Team (ADMT) have reviewed the proposed emissions from sources, represented source parameters and locations, point and area source representations, and background concentrations. Based on the data and representations, TCEQ staff and ADMT determined that the modeling analysis was acceptable. Please see Response 3 for additional information regarding BACT, and Response 4 for additional information regarding emissions sources and calculations used to support the application.

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project.

Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no NAAQS or PSD increment for GHGs. The EPA Administrator has recognized that human-induced climate change has the potential to be far-reaching and multi-dimensional. *See* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 75 Fed. Reg. 66496, 66497 (Dec. 15, 2009). 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 permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible with current climate change modeling.[4] Thus, EPA has concluded 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 for GHG emissions would provide no meaningful data and has not required the Applicant to perform one. As stated in the preamble to the 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 and 30 Tex. Reg. 2629, 2904 (April 11, 2014).

COMMENT 2: Environmental Concerns

EIP questioned whether the proposed project would be protective of wildlife and the environment.

RESPONSE 2: The secondary NAAQS are those the EPA Administrator determines are necessary to protect public welfare and the environment, including animals, crops, vegetation, visibility, and structures, from any known or anticipated adverse effects associated with the presence of a contaminant in the ambient air. Because the emissions from this facility should not cause an exceedance of the NAAQS, air emissions from this facility are not expected to adversely impact land, livestock, wildlife, crops, or visibility, nor should emissions interfere with the use and enjoyment of surrounding land or water. Please see Response 1 for an evaluation of this project's impacts in relation to the NAAQS. In addition, 30 TAC § 101.4 prohibits the discharge of contaminants which may be injurious to, or adversely affect, animal life.

COMMENT 3: BACT / LAER

Commenters questioned the control technology proposed in the application, as well as questioned whether Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) requirements have been met.

[4] EPA's PSD and Title V Permitting Guidance for Greenhouse Gases, March 2011 at p. 48. https://www.epa.gov/sites/production/files/2015-12/documents/ghgpermittingguidance.pdf

Heavy Oil Cracker – PM

EIP expressed concern that the Applicant failed to analyze or require BACT for particulate matter from the Heavy Oil Cracker (HOC), further stating that adequate supporting information for represented PM emissions reductions was not included in the application.

Heavy Oil Cracker - NOx

EIP expressed concern that the BACT analysis for control of NOx from the heavy oil cracker is deficient, specifically that the cost-effectiveness of and control efficiency of LoTOx was improperly calculated, and that the analysis dismisses selective catalytic reduction (SCR). EIP commented that the Applicant failed to analyze the cost of SCR.

EIP expressed concern that the cost analysis for the LoTOx was improperly calculated by assuming a 46 percent reduction rather than an 80-90 percent reduction that was represented in the emission reduction options portion of the Tier III evaluation. EIP commented that the Applicant should invest in protecting the community by updating its pollution controls and that the Applicant was more concerned about cost then implementing the best control technology.

(EIP, Elida Castillo, Eduardo Canales)

RESPONSE 3: TCEQ does not compare pollution controls between individual facilities (which can vary depending on plant configuration, scale of the plant, and production rates), rather it reviews each permit application in terms of meeting best available control technology, air quality standards, and all relevant and applicable rules and regulations within its jurisdiction. During the course of the technical review of a permit application, the permit reviewer evaluates air pollution control requirements and confirms that the applicant has proposed the appropriate air pollution controls and properly determined off-site impacts for the project facilities and associated sources. The Applicant's air pollution control review, along with the permit reviewer's air pollution control evaluation and final recommendation provide a record that demonstrates that the operation of a proposed facility will not cause or contribute to a condition of air pollution and will comply with all applicable federal regulations and state rules as well as with the intent of the TCAA. The site is located in Nueces County, which is classified as attainment or unclassifiable for all criteria pollutants. This project is not subject to nonattainment review, and thus LAER does not apply to the new or modified sources proposed in this project.

The TCAA and TCEQ rules require an evaluation of air quality permit applications to determine whether adverse effects to public health, general welfare, or physical property are expected to result from a facility's proposed emissions. As part of the evaluation of applications for new or amended permits, the permit reviewer audits all sources of air contaminants at the proposed facility and assures that the facility will be using the best available control technology (BACT) applicable for the sources and types of contaminants emitted. BACT is based upon control measures that are designed to minimize the level of emissions from specific sources at a facility. Applying BACT results in requiring technology that best controls air emissions with consideration

given to the technical practicability and economic reasonableness of reducing or eliminating emissions. *See* TCAA § 382.0518; 30 TAC § 116.111. BACT may be numerical limitations, the use of an add-on control technology, design considerations, the implementation of work practices, or operational limitations.

The TCEQ BACT evaluation is conducted using a "tiered" analysis approach. The evaluation begins at the first tier and continues sequentially through subsequent tiers only if necessary, as determined by the evaluation process described in agency guidance. In each tier, BACT is evaluated on a case-by-case basis for technical practicability and economic reasonableness. The three tiers are described in the following paragraphs:

- **Tier I:** Emission reduction performance levels accepted as BACT in recent permit reviews for the same process and/or industry continue to be acceptable.
- **Tier II:** Tier II BACT evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. For example, an applicant may propose to control volatile organic compound (VOC) emissions in one industry using technology already in use in another industry. A Tier II evaluation includes issues relating to stream comparison and possible differences in overall performance of a particular emission reduction option. In addition, the Tier II evaluation considers technical differences between the processes or industries in question. To demonstrate technical practicability, detailed technical analysis may be required to assess the cross-applicability of emission reduction options. In Tier II, economic reasonableness is established by historical and current practice.
- **Tier III:** A Tier III BACT evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review and is similar to EPA's top-down approach. Technical practicability is established through demonstrated success of an emission reduction option based on previous use, and/or engineering evaluation of a new technology. Economic reasonableness is determined solely by the cost-effectiveness of controlling emissions (dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics.

The Applicant conducted a Tier I BACT evaluation for all sources of air contaminants from the proposed new and modified facilities. The Applicant determined that Tier I was not appropriate for NO_X emissions from the HOC Unit and conducted a Tier II and Tier III BACT analysis. The use of appropriate control measures will decrease the amount of air contaminants emitted into the atmosphere by this refinery. The permit reviewer reviewed the proposed controls and determined that they met Tier I or Tier III BACT for all sources and facilities, as applicable.

A heavy oil cracker is a type of FCCU (fluid catalytic cracking unit) where a heavy hydrocarbon feed is catalytically cracked to lighter products by contacting the feed with a fluidized catalytic cracking catalyst. The cracking process deposits carbonaceous hydrocarbons, or coke, on the catalyst. A catalyst regenerator burns coke from the catalyst to reactivate the catalyst. Combustion of coke generates particulate

matter, carbon monoxide, nitrogen oxides, and hydrocarbon emissions, and the organic sulfur and nitrogen that were present in the FCC feed may also be converted to sulfur dioxide, nitrogen oxides, and hydrogen cyanide. Tier I BACT for PM for the heavy oil cracker is 1 lb/100 lb coke burn off and a maximum opacity of 15-20% (6-minute averaging time). The Applicant proposed a 1 lb/100 lb coke burn off and a maximum opacity of 15-20% (6-minute averaging time). BACT is not the lowest achievable limit, but rather control technology that considers technical practicability and economic reasonableness of reducing or eliminating emissions from the facility. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable.

The Applicant provided a detailed analysis demonstrating that there were compelling technical differences between its FCC unit and other FCC units which have met the Tier I BACT level of control for the NO_X emissions, and it proceeded to a Tier II BACT evaluation. The Applicant then demonstrated that there were no other industries where applicable controls could be applied and determined that a Tier III BACT evaluation was necessitated.

The Applicant therefore provided a Tier III technical and quantitative economic analysis for NOx emissions from the HOC Unit. The permit reviewer evaluated this information, including the emission reduction options available for the process/industry. While technical practicability is established through the demonstrated success of an emission reduction option based on previous use and/or an engineering evaluation of a new technology, economic reasonableness is determined by the cost-effectiveness of controlling emissions (expressed as dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics.

A separate cost analysis for selective catalytic reduction (SCR) was not conducted because the Applicant represented and provided documentation that capital costs for SCR are similar to low temperature oxidation (LoTOx).[5] Therefore a cost analysis was performed on LoTOx due to better data being available for LoTOx costs on full burn units. Based on this analysis, no additional controls are required for the HOC Unit. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable. The LoTOx cost analysis was not based on a percent recovery, but rather it was based on the difference between the resulting emission rate using LoTOx to reduce the NOx emissions to 20 ppmv and the emission rate using the current control technology.

COMMENT 4: Emission Rates and Calculations

Commenters questioned the accuracy and methodology for determining the emission rates for the proposed project, specifically questioning whether the calculation methodologies are flawed or outdated.

(EIP, EPA)

5 Sadeghbeigi, A. *Fluid Catalytic Cracking Handbook*. Elsevier, 2011. At § 15.6.7

RESPONSE 4: Accepted emission factors and methodologies are utilized to calculate emissions. These factors were determined to be correct and applicable by TCEQ staff during the technical review based on standard industry permitting practices.

The TCEQ ensures the conservative nature of these calculations by evaluating each emission point. The permit Special Conditions will require stack testing under worst case conditions. The stack tests that are required for this amendment are to determine compliance with the emission rates and limits, and to certify the Continuous Emissions Monitoring System (CEMS) when CEMS is required. The stack tests do not verify anything directly related to the calculations for this project. The Applicant represented the appropriate methodologies to control and minimize emissions and utilized corresponding control efficiencies when calculating the emission rates.

As provided in 30 TAC § 116.116(a), the Applicant is bound by these representations, including the represented performance characteristics of the control equipment. In addition, the permit holder must operate within the limits of the permit, including the emission limits as listed in the Maximum Allowable Emissions Rate Table (MAERT). Typically, MAERTs for air permits list pollutants in their general categories rather than as individual constituents.

Specifically, emissions for the heavy oil cracker regenerator are calculated by multiplying the maximum stack flow rate (on a dry, standard basis, corrected to 0% O_2) by the permitted emission limit for NO_X, CO, SO_2 and VOC. Particulate, HCN, and H_2SO_4 emissions are determined by multiplying the maximum coke burn rate by the applicable emission factor. Emissions of NO_X, particulate, and VOC from the boiler were calculated by multiplying the maximum fired duty of the boiler (HHV basis) by the appropriate emission factor (expressed in units of lb/MMBtu), based on the BACT analysis (NO_X) or AP-42 (Particulate, VOC). CO and NH_3 emissions were calculated based on the concentration in the stack gas (dry basis, corrected to 3% O_2). SO_2 was calculated based on the sulfur content of the fuel gas. Fugitive emissions from piping components were calculated in accordance with TCEQ APDG 6422 Guidance. The cooling tower VOC emissions were calculated using AP-42, Chapter 5.1. Particulate emissions are based on the drift rate, the total dissolved solids (TDS) of the circulating water, and the applicable particle size distribution for particulate fractions using the droplet distribution found in, "Calculating Realistic PM10 Emissions from Cooling Towers, Joel Reisman and Gordon Frisbie, 2002". Emissions calculations for the Merox Unit were calculated using a destruction efficiency of 99%. Emissions from the carbon absorption system (CAS) for the lift station were calculated based on the maximum vapor flow rates, and maximum benzene and VOC breakthrough concentrations.

COMMENT 5: Monitoring and Reporting Requirements

EIP questions whether the permit monitoring and reporting requirements contained in the permit Special Conditions are adequate to ensure compliance with the Clean Air Act and protect local residents.

Lamont Taylor questioned the reporting requirements contained in the draft permit.

(EIP, Lamont Taylor)

RESPONSE 5: The Special Conditions of the draft permit contains detailed monitoring requirements. In addition, the draft permit specifies applicable recordkeeping and reporting requirements to demonstrate compliance with the emissions limitations set forth in the permit. Records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. The monitoring and reporting requirements were reviewed and found to be protective of human health and the environment.

The Regional Office may perform investigations of the plant as required. The investigation may include an inspection of the site including all equipment, control devices, monitors, and a review of all calculations and required recordkeeping. The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Corpus Christi Regional Office at 361-881-6900 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. Citizen-collected evidence may be used in such an action. *See* 30 TAC § 70.4, Enforcement Action Using Information Provided by Private Individual, for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law. The information, if gathered according to agency procedures and guidelines, can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at http://www.tceq.texas.gov (under Publications, search for document number 278).

COMMENT 6: Air Monitors

Elida Castillo expressed concern that that there are only two EPA monitors in the area and none in San Patricio County.

RESPONSE 6: Due to cost and logistical constraints, the placement of air monitors is prioritized to provide data on regional air quality in areas frequented by the public. The existing air monitoring network is the result of a strategic balance of matching federal monitoring requirements with state and local needs. Consistent with federal air monitoring requirements, the TCEQ evaluates the placement of air quality monitors within the air monitoring network using trends in population, reported emissions inventory data, and existing air monitoring data for a given area. In addition, the TCEQ may prioritize monitor placement in areas with potential regional air quality issues, such as those related to increased oil and gas activity in the Barnett Shale and Eagle Ford Shale areas.

The TCEQ annually evaluates the number and location of air monitors within its network to assess compliance with federal monitoring requirements and the adequacy of monitoring coverage for identified monitoring objectives as a part of the Annual Monitoring Network Plan provided to EPA on July 1 of each year. This plan is made available on the TCEQ's website for public review and comment for 30 days beginning in mid-May. Requests for additional monitoring or the identification of additional monitoring needs may be made during this public comment period and will be considered along with other monitoring priorities across the state. To receive email announcements related to the ambient air monitoring network, including the availability of the Annual Monitoring Network Plan for public review and comment, please visit the following link https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new and select "Air Monitoring Network Announcements."

Stationary air monitors are sited to measure air quality that is representative of a broader area or region. Therefore, monitors are not typically placed to measure the impacts from specific industrial facilities.

COMMENT 7: Cooling Tower Drift Eliminators

EIP expressed concern that the Applicant did not provide publicly available proof that the drift eliminators are capable of meeting a performance level of 0.001%.

RESPONSE 7: The Applicant provided manufacturer's data on December 17, 2021 showing that the drift eliminators are designed to meet 0.001% drift or less, which is located in the public file.

COMMENT 8: Nuisance Conditions

EIP expressed concern regarding whether the proposed project would create nuisance conditions violating 30 Texas Administrative Code Chapter 101.4 (30 TAC § 101.4). EIP stated that its members have found black powder on their property.

RESPONSE 8: While nuisance conditions are not expected if the plant is operated in compliance with the terms of the permit, operators must also comply with 30 TAC § 101.4, which prohibits nuisance conditions.

The proposed permit contains the required control processes to minimize particulate matter. Special Condition No. 25 contains limitations on the pressure and monitoring of the pressure and pressure drop for the Caustic Scrubber Stack (EPN 121). Special Condition No. 30 requires that the cooling tower drift eliminators be maintained. The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Corpus Christi Regional Office at (361) 825-3100 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. Citizen-collected evidence may be used in such an action. *See* 30 TAC § 70.4 - Enforcement Action Using Information Provided by Private Individual,

for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law. The information, if gathered according to agency procedures and guidelines, can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at http://www.tceq.texas.gov (under Publications, search for document number 278).

COMMENT 9: Public Participation / Public Meetings

Elida Castillo commented that there was not a way for the community who has been impacted by Covid to submit comments online or participate in the public meeting virtually. Elida Castillo expressed concern regarding the scheduling of public meetings for other permits during the same week, specifically stating that "holding three meetings is overwhelming for the community when they are held in the same week".

RESPONSE 9: The TCEQ welcomes public participation in the permitting process. TCAA § 382.056 requires that an applicant publish notice. Notice must be published in a newspaper of general circulation in the municipality in which the proposed facility is located or proposed to be located. The notice must include a description of the facility, information on how an affected person may request a public hearing, pollutants the facility will emit, and any other information the TCEQ requires by rule. The commission also requires that notice be published in an alternative language if the elementary or middle school nearest the proposed facility offers a bilingual education program as required by Texas Education Code Chapter 29, Subchapter B. The TCEQ adopted rules for these public notice requirements in 30 TAC § 39.603, Public Notice of Air Quality Applications, Newspaper Notice.

To demonstrate compliance with public notice requirements, applicants are required to provide the Office of the Chief Clerk with copies of the published notice and a publisher's affidavit verifying facts related to the publication, including that the newspaper is a paper of general circulation in the municipality in which the proposed facility is located or proposed to be located.

As stated above, the Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice [NORI]) for this permit application was published in English on October 14, 2021, in the *Caller Times*, and in Spanish on October 14, 2021 in *Tejano Y Grupero News*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice [NAPD]) was published on June 01, 2022, in English in the *Caller Times* and in Spanish on June 01, 2022, in *Tejano Y Grupero News*.

The public notice contains instructions for submitting comments, getting on the mailing list, requesting a public meeting, and requesting a contested case hearing. An overview of public participation for applications filed after September 1, 2015 is available on the TCEQ website at: https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation/pub_part.html. Regarding the commenter concern that the public was unable to provide comments online, comments or requests to the TCEQ can be submitted online at our website: https://www.tceq.texas.gov/goto/comment. Utilizing online comments and the mailing list allows members of the public to participate in the permitting process even if they are unable to attend in person.

Title 30 TAC § 55.154(c)(2) requires that a public meeting be held if a member of the legislature who represents the general area in which the facility is located requests a public meeting or if the TCEQ Executive Director determines that there is substantial or significant degree of public interest. A public meeting was held on July 11, 2022 at the Atrium Hotel & Convention Center, 5549 Leopard Street, Corpus Christi, Texas, 78408. Public meetings are scheduled based on the availability of the applicant, the Executive Director's staff, and the venue.

COMMENT 10: Environmental Justice

Commenters raised concerns regarding the environmental justice implications of this project.

(EIP, EPA, Elida Castillo, Lamont Taylor)

RESPONSE 10: Air permits evaluated by the TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. The TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. A health effects review was conducted for the proposed facilities during the permit review and the permit was found to be protective of human health and the environment.

The TCEQ encourages participation in the permitting process. The Office of the Chief Clerk works to help the public and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that concerns are considered thoroughly and are handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300 for further information. More information may be found on the TCEQ website: Title VI Compliance at TCEQ - Texas Commission on Environmental Quality - www.tceq.texas.gov.

COMMENT 11: Corporate Profits

Elida Castillo commented on tax abatements and subsidies that the Applicant receives, stating that the community does not get their fair share from what they pay out. Eduardo Canales commented that with all the tax abatements and tax breaks, the Applicant is not putting in their fair share.

(Elida Castillo, Eduardo Canales)

RESPONSE 11: The TCEQ is not authorized to consider a company's financial status nor its profits in determining whether a permit should be issued. TCEQ's review of this company's application included analysis of health impacts and application of best available control technology (BACT), and based on this review, the facility should comply with all applicable health effects guidelines and emission control requirements. Continued compliance with health effects guidelines and BACT requirements is expected if the company operates in compliance with the permit terms and conditions. Individuals are encouraged to report any environmental concerns at the facility by contacting the Corpus Christi Regional Office at 361-881-6900 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. The TCEQ evaluates all complaints received. If the facility is found to be out of compliance with the terms and conditions of the permit, it will be subject to possible enforcement action.

COMMENT 12: Local Economy

Eduardo Canales expressed concern that the Applicant has a history of contributing to the economic degradation of the community.

RESPONSE 12: Issues related to the local economy are outside the scope of review of an air quality permit. The Executive Director has reviewed the permit application in accordance with the applicable law, policy, and procedures, in accordance with the agency's mission to protect our state's human and natural resources consistent with sustainable economic development. If an applicant meets the requirements for an air quality permit, the TCEQ must grant the permit.

COMMENT 13: TCEQs Responsibility / Public Opposition and Support

Commenters ask that the TCEQ consider residents and their wishes and choose not to approve the permit registration for the proposed plant. Elida Castillo asks that the TCEQ uphold their mission statement.

(Elida Castillo, Eduardo Canales)

Commenters expressed general support towards the Applicant and the proposed project.

(Maricela Cuevas, Mike Culbertson, John LaRue, Bea Hanson, Gretchen Arnold)

RESPONSE 13: The TCEQ appreciates the comments and interest from the public in environmental matters before the agency and acknowledges the comments in opposition and support of the project. The TCAA establishes the TCEQ's jurisdiction to

regulate air emission in the state of Texas. Accordingly, the Executive Director's staff has reviewed the applications in accordance with the applicable state and federal law, policy and procedures, and the agency's mission to protect the state's human and natural resources consistent with sustainable economic development. The TCEQ cannot deny authorization of a facility if a permit application contains a demonstration that all applicable statutes, rules, and regulations will be met.

COMMENT 14: Special Condition Number 5

EPA commented that while the permit contains continuous monitoring of the vapor combustor combustion chamber temperature, the application and permit did not indicate how that monitoring ensures compliance with the permit limit of 10 mg VOC per liter of gasoline loaded. EPA further commented that there is no mention of destruction efficiency of the vapor combustor or mention of how emissions are to be calculated per liter of gasoline loaded. EPA asks that TCEQ clarify for the record all monitoring requirements for the vapor combustor that will be used to ensure compliance with the emissions limits stated in the permit.

RESPONSE 14: This condition is outside the scope of the project and was not subject to revision in the draft permit.

COMMENT 15: Special Condition Number 8

EPA asks if the Marine VCU identified in Special Condition No. 8 is Emission Point Number (EPN) MRVUF. EPA further asks if TCEQ can clarify how one Vapor Recovery Unit (VRU) limits the emissions from another VRU, and asks what monitoring is performed to ensure the 5 mg/l VOC limit is met.

RESPONSE 15: This condition is outside the scope of the project and was not subject to amendment in the draft permit.

COMMENT 16: Special Condition Number 11

EPA questioned the condition language using the word "secured" with regard to marine loading, stating that they find the word "secured" to be confusing and requests that TCEQ explain what is intended and consider the use of a more clarifying language in the permit.

RESPONSE 16: While the Condition is outside the scope of the project, the Executive Director has clarified the wording in the Condition to use the term "suspended".

COMMENT 17: Special Condition Number 12.G

EPA requested clarification regarding the Acid Gas Flare, specifically asking under what circumstances the flare is used if not for routine emissions or planned Maintenance, Startup, and Shutdown (MSS) activities.

RESPONSE 17: While outside the scope of the project, the Acid Gas Flare is used for emergencies and process upsets, which are not authorized by the permit. The emissions that are authorized for the Acid Gas Flare are for the operation of the pilots.

COMMENT 18: Special Condition Number 14

EPA commented that while the special condition states no visible emissions are allowed from the heaters, monitoring has not been identified in the permit to ensure compliance with the requirement.

RESPONSE 18: This condition is outside the scope of the project and was not subject to amendment in the draft permit.

COMMENT 19: Special Condition Number 15

EPA asks which heater is subject to the requirements of Special Condition No. 15.

RESPONSE 19: The special condition applies to all heaters with a firing rate greater than 40 MMBtu/hr. While this Condition was outside of the scope of the review, the Executive Director has clarified the Special Condition by adding a list of subject heaters.

COMMENT 20: Special Condition Number 16

EPA commented that more information needs to be included to ensure the Applicant can meet the emission limits represented in the various tables of Special Condition No. 16.

EPA questioned representations in the first table of Special Condition No. 16. EPA asks that for units which show "stack test" as the compliance method, how the stack test data correlates to ongoing compliance with emission limits and how the data would be used to determine compliance with each averaging time. EPA further comments that it is unclear if the stack test is a one-time test or if it should be performed regularly. EPA asks that appropriate monitoring for units that do not have a NOx method listed in the table be identified. EPA asks how stack test results will be used to determine compliance with the emission limits of the permit.

EPA questioned the representations in the second table of Special Condition No. 16, specifically that the table does not include a column to show the CO compliance method. EPA asks that monitoring be identified to ensure compliance with the represented 1-hour block average emission limit. EPA further states that EPN 153 is identified in the table but is not given a CO 1-hour block average emission limit, asking what (if any) short-term CO limit is applicable to this EPN.

EPA questioned the third and final tables of Special Condition No. 16, asking if the represented limits are on an hourly average. EPA asks why a compliance method column is not included in this table, further asking what monitoring is required to ensure compliance with the represented emission limits.

EPA commented that it is unclear which units are equipped with a CO Continuous Emissions Monitoring System (CEMS) and asks that the permit be updated to include this information. Finally, EPA asks how emissions of non-routine operations can be determined for boilers and heaters that are not equipped with CEMS.

RESPONSE 20: In the first table, the units which show "stack test" as the compliance method are outside the scope of the project and are not subject to amendment in the draft permit. Additionally, all units that do not have a NOx method listed in the table are outside the scope of the project and not subject to amendment in the draft permit.

While the second table of Special Condition No. 16 does not include a column to show the CO compliance method, Special Condition No. 40 requires that a CEMS be installed, calibrated, and maintained that will record the in-stack concentration of CO, NOx, and O_2 from the heaters and boilers with firing rates greater than 100 MMBtu/hr.

EPN 153 (Boiler 30-B-05) is the only EPN modified by Special Condition 16. This boiler has a firing rate greater than 100 MMBtu/hr and will therefore have a CEMS. EPN 153 is outside the scope of the project and was not subject to amendment in the draft permit. Boiler 30-B-05 is equipped with CEMS.

For the third and final table, while the averaging times are not specified in the tables, Special Condition No. 42 specifies that the averaging time for those pollutants as follows:

Pollutant	Averaging Period
SO_2	1.0 hour
CO	1.0 hour
H_2S	1.0 hour
Opacity	6.0 minutes
NO_x	1.0 hour

Stack test results for Boiler 30-B-05 are used to certify the CEMS as required in Special Condition No. 40.C(1).

COMMENT 21: Special Condition Number 19.D

EPA asks what quality assured data Special Condition No. 19.D is referring to.

RESPONSE 21: While outside the scope of this project, the quality assured data Special Condition No. 19.D is referring to is the data generated from the fuel flow meter to measure the gas fuel usage for the desalter heater required in Special Condition No. 19.C. The desalter heater is not proposed to be modified, and is therefore outside the scope of this permit amendment.

COMMENT 22: Special Condition Number 22

EPA questioned why Special Condition No. 22 states that the equation relies on the values of the sulfur in the acid gas stream and value of sulfur in the incinerator stack. EPA asks where those numbers came from, asks how they are measured, and asks how they are calculated. EPA asks if the values are obtained from stack testing and if so, asks for justification for using a one-time test to determine ongoing compliance.

RESPONSE 22: Special Condition No. 22 requires that the data used in the calculation be obtained from the incinerator stack sulfur dioxide monitor and sulfur production records. The incinerator sulfur dioxide monitoring requirements are located in Special Condition No. 40. The values for this equation are not obtained from stack testing.

COMMENT 23: Special Condition Number 25

EPA asks at what frequency the opacity observation is performed, and asks if it will be a Method 9 or Method 22 test.

EPA commented that the permit does not appear to have conditions that are specific to the estimated emissions of hydrogen cyanide (HCN) for the Heavy Oil Cracker, further asking what monitoring will be performed to ensure that the unit meets the permitted emission limits as listed in on the Maximum Allowable Emission Rates Table (MAERT).

RESPONSE 23: Opacity is controlled by maintaining the liquid to the filtering modules at a pressure greater than 45 pounds per square inch (psi) and the flue gas pressure drop across the filtering modules and the cyclolabs at no less than 5 inches of water. Special Condition No. 25 of the permit requires that the liquid pressure and pressure drop be continuously recorded and maintained at the plant site for a period of five years. Additionally, provisions for quarterly opacity observations using Method 22 have been added to Special Condition No. 25.

For emissions of HCN from the Heavy Oil Cracker, the emission factor used to calculate the permit limit is applied to the actual calculated coke burn rate. The coke burn is limited by Special Condition No. 20 and calculated using Equation 6 from 40 CFR § 60.104a(d)(4)(iii). Special Condition No. 20 has been revised to specify this equation.

COMMENT 24: Special Condition Number 39.B(2)

EPA asks what the justification is for using the lower of the two testing results to demonstrate compliance, as well as asks TCEQ to clarify what emission limit this is used to determine compliance with.

RESPONSE 24: The special condition has been revised to remove the references to the specific test methods and to require that the appropriate test method be specified by the Region during the pre-stack test meeting. These stack test results are used to demonstrate compliance with the MAERT limits for sulfuric acid.

COMMENT 25: Special Condition Number 73

EPA commented on referenced confidential information within the permit special condition, stating that TCEQ need to be mindful of what information may be claimed as confidential in NSR and Title V permitting, as the NSR permit will be incorporated into the Title V permit. EPA further states that the Clean Air Act limits the types of information that may be treated as confidential in a Title V permit, expressing concern that information might be withheld from the public. EPA commented that TCEQ should assess if the referenced information should be treated as confidential or if it should be made available to the public.

EPA commented that there are "vague references" to permit applications within the draft permit, stating that the lack of a specific permit application makes it impossible to locate the information that is being referenced. EPA commented that the TCEQ should amend the permit to clearly incorporate the monitoring, emission factors, emission calculation methods, and other relevant data necessary to ensure compliance with the permit. EPA commented that they conducted an environmental justice analysis for the area and expressed concern that the lack of clarity in the permit makes it difficult for the local community, which is predominantly low income and people of color, to adequately comment on the "vague" permit conditions.

RESPONSE 25: No confidential material was submitted with this amendment application and none of the conditions relating to new/modified equipment reference confidential information. Therefore, topics related to confidential information are outside the scope of the review of this application. During the permit review process, TCEQ addressed and revised the special conditions modified by the application, however, some issues addressed by the comments from EPA are outside the scope of review of the permit. After completing the technical review, the TCEQ determined that the proposed controls for the permit modifications are protective of human health and the environment.

It is the policy of the state of Texas that each person is entitled, unless otherwise expressly provided by law, at all times to complete information about the affairs of government and the official acts of public officials and employees. TEX. GOV'T CODE § 552.001(a). While public information is available to members of the public at a minimum during the normal business hours of the TCEQ, information that is considered confidential by law is exempt from disclosure requirements. Id. At §§ 552.101 and 552.021.

The TCAA provides for confidential treatment of information submitted to the commission if it relates to secret processes, production rates, or methods of manufacture or production and is identified as confidential when submitted. *See* TCAA § 382.041(a). TCEQ rules also specify procedures for the handling of information claimed to be confidential. *See* 30 TAC § 1.5(d). An applicant may request that submitted information be designated as confidential. Regardless of whether the Executive Director agrees with an applicant's requested confidential designation, if the agency receives an open records request for the information marked confidential by an applicant, the agency may not release the information without first submitting a

request to the Texas Attorney General. The Attorney General will determine whether the requested information is subject to an exception to disclosure and whether the information must be withheld or disclosed to the requestor.

COMMENT 26: Comments to the Applicant

Elida Castillo asks the Applicant to communicate more with the communities.

(EIP, Elida Castillo)

RESPONSE 26: These comments or concerns are addressed to the Applicant and are therefore included for completeness, but not addressed by the Executive Director.

CHANGES MADE IN RESPONSE TO COMMENT

In response to public comment, the Executive Director has changed Special Conditions Nos. 11, 15, 20, 25, 39.B(2). These changes and the reasons for these changes are more fully described above.

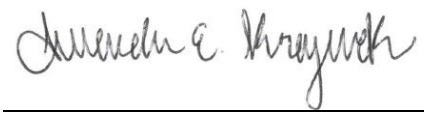
Respectfully submitted,

Texas Commission on Environmental Quality

Toby Baker, Executive Director

Erin E. Chancellor, Director
Office of Legal Services

Charmaine Backens, Deputy Director
Environmental Law Division



Amanda Kraynok, Staff Attorney
Environmental Law Division
State Bar Number 24107838
PO Box 13087, MC 173
Austin, Texas 78711-3087

REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Hearing Requestors - Valero Refining 38754

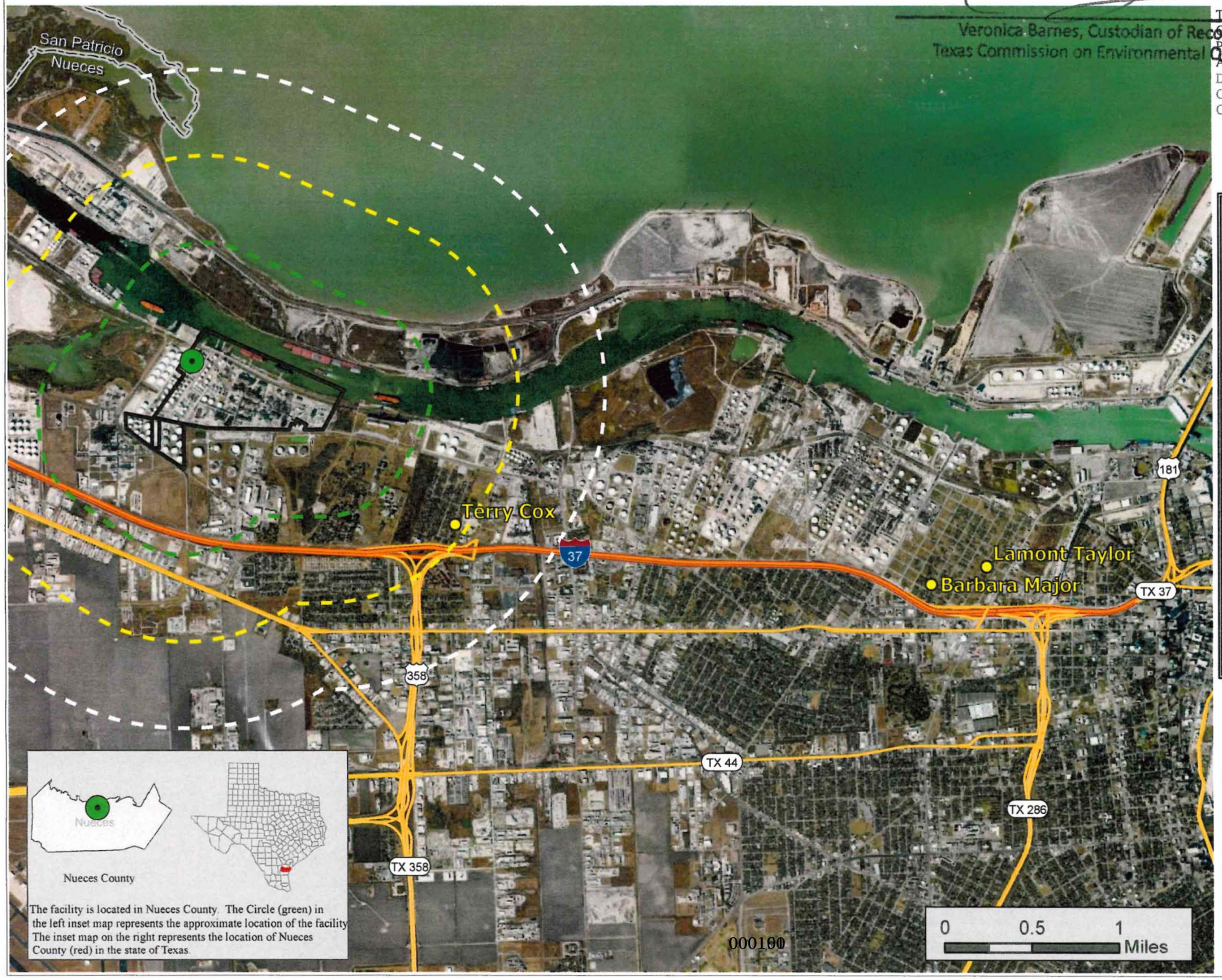
Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda

State of Texas
County of Travis
MAR 2 0 2023
I hereby certify this is a true and correct copy of a Texas Commission on Environmental Quality (TCEQ) document, which is filed in the Records of the Commission. Given under my hand and the seal of office.

Veronica Barnes, Custodian of Records
Texas Commission on Environmental Quality

Protecting Texas by Reducing and Preventing Pollution

Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087
Date: 9/6/2022
CRF 0077091
Cartographer: cschrade



- Requestors
- Facility Point
- Facility Permit Boundary
- 0.5 Mi Radius
- 1.0 Mi Radius
- 1.5 Mi Radius

Distance between requestor and facility permit boundary:

Terry Cox: 0.93 Mi
Barbara Major: 3.55 Mi
Lamont Taylor: 3.83 Mi
Elida Castillo : 11.78 Mi

The facility is located in Nueces County. The Circle (green) in the left inset map represents the approximate location of the facility. The inset map on the right represents the location of Nueces County (red) in the state of Texas.

000100

Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information from the applicant and the requestor information from the requestor.

This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.