

Texas Commission on Environmental Quality
INTEROFFICE MEMORANDUM

TO: Office of Chief Clerk DATE: March 2, 2023

FROM: Amanda Kraynok
Staff Attorney
Environmental Law Division

SUBJECT: Transmittal of Documents of Administrative Record
Applicant: Valero Refining-Texas, L.P. Bill Greehey Refinery East
Plant
Proposed Permit No. 2937
Program: Air
Docket Nos.: TCEQ Docket No. 2022-1632-AIR
SOAH Docket No. 582-23-10365

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



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.

Sharon J. Jones
Alternative Custodian of Records

Texas Commission on Environmental Quality Air Quality Permit

Texas Commission on Environmental Quality

A Permit Is Hereby Issued To
Valero Refining-Texas, L.P.
Authorizing the Continued Operation of
Bill Greehey Refinery East Plant
Located at **Corpus Christi, Nueces County, Texas**
Latitude 27° 49' 13" Longitude -97° 26' 6"

Permits: 2937 and PSDTX1023M3

Issuance Date: _____

Expiration Date: _____

_____ 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	GLC _{max} = maximum (predicted) ground-level concentration
°F = Temperature in degrees Fahrenheit	gpm = gallon per minute
°K = Temperature in degrees Kelvin	gr/1000scf = grain per 1000 standard cubic feet
µg = microgram	gr/dscf = grain per dry standard cubic feet
µg/m ³ = microgram per cubic meter	H ₂ CO = formaldehyde
acfm = actual cubic feet per minute	H ₂ S = hydrogen sulfide
AMOC = alternate means of control	H ₂ SO ₄ = sulfuric acid
AOS = alternative operating scenario	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
AP-42 = Air Pollutant Emission Factors, 5th edition	HC = hydrocarbons
APD = Air Permits Division	HCl = hydrochloric acid, hydrogen chloride
API = American Petroleum Institute	Hg = mercury
APWL = air pollutant watch list	HGB = Houston/Galveston/Brazoria
BPA = Beaumont/ Port Arthur	hp = horsepower
BACT = best available control technology	hr = hour
BAE = baseline actual emissions	IFR = internal floating roof tank
bbl = barrel	in H ₂ O = inches of water
bbl/day = barrel per day	in Hg = inches of mercury
bhp = brake horsepower	IR = infrared
BMP = best management practices	ISC3 = Industrial Source Complex, a dispersion model
Btu = British thermal unit	ISCST3 = Industrial Source Complex Short-Term, a dispersion model
Btu/scf = British thermal unit per standard cubic foot or feet	K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
CAA = Clean Air Act	LACT = lease automatic custody transfer
CAM = compliance-assurance monitoring	LAER = lowest achievable emission rate
CEMS = continuous emissions monitoring systems	lb = pound
cfm = cubic feet (per) minute	hp = horsepower
CFR = Code of Federal Regulations	hr = hour lb/day = pound per day
CN = customer ID number	lb/hr = pound per hour
CNG = compressed natural gas	lb/MMBtu = pound per million British thermal units
CO = carbon monoxide	LDAR = Leak Detection and Repair (Requirements)
COMS = continuous opacity monitoring system	LNG = liquefied natural gas
CPMS = continuous parametric monitoring system	LPG = liquefied petroleum gas
DFW = Dallas/ Fort Worth (Metroplex)	LT/D = long ton per day
DE = destruction efficiency	m = meter
DRE = destruction and removal efficiency	m ³ = cubic meter
dscf = dry standard cubic foot or feet	m/sec = meters per second
dscfm = dry standard cubic foot or feet per minute	MACT = maximum achievable control technology
ED = (TCEQ) Executive Director	MAERT = Maximum Allowable Emission Rate Table
EF = emissions factor	MERA = Modeling and Effects Review Applicability
EFR = external floating roof tank	mg = milligram
EGU = electric generating unit	mg/g = milligram per gram
EI = Emissions Inventory	mL = milliliter
ELP = El Paso	MMBtu = million British thermal units
EPA = (United States) Environmental Protection Agency	MMBtu/hr = million British thermal units per hour
EPN = emission point number	MSDS = material safety data sheet
ESL = effects screening level	MSS = maintenance, startup, and shutdown
ESP = electrostatic precipitator	MW = megawatt
FCAA = Federal Clean Air Act	NAAQS = National Ambient Air Quality Standards
FCCU = fluid catalytic cracking unit	NESHAP = National Emission Standards for Hazardous Air Pollutants
FID = flame ionization detector	NGL = natural gas liquids
FIN = facility identification number	NNSR = nonattainment new source review
ft = foot or feet	NO _x = total oxides of nitrogen
ft/sec = foot or feet per second	
g = gram	
gal/wk = gallon per week	
gal/yr = gallon per year	
GLC = ground level concentration	

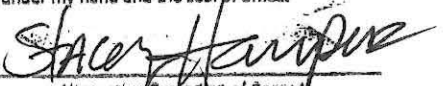
NSPS = New Source Performance Standards
PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ = 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
SO₂ = 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

DEC 22 2022

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.

Special Conditions

Permit Numbers 2937 and PSDTX1023M3


Alternative Custodian of Records
Texas Commission on Environmental Quality

Emission Limitations

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 conditions specified in this permit.

Federal Applicability

2. 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 in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(xx/22)**
 - A. Subpart A, General Provisions.
 - B. Subpart Db, Industrial-Commercial-Institutional Steam Generating Units,
 - C. Subpart J, Petroleum Refineries,
 - D. Subpart Ja, Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007,
 - E. Subpart K, Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978,
 - F. Subpart Kb, Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984,
 - G. Subpart VV, 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,
 - H. Subpart XX, Bulk Gasoline Terminals,
 - I. Subpart GGG, Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or Before November 7, 2006, and
 - J. Subpart QQQ, VOC Emissions from Petroleum Refinery Wastewater Systems.
3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61: **(xx/22)**
 - A. Subpart A, General Provisions.
 - B. Subpart J, Equipment Leaks (Fugitive Emission Sources) of Benzene,
 - C. Subpart M, Asbestos,
 - D. Subpart V, Equipment Leaks (Fugitive Emission Sources),
 - E. Subpart BB, Benzene Emissions from Benzene Transfer Operations, and
 - F. Subpart FF, Benzene Waste Operations.

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63: **(xx/22)**
 - A. Subpart A, General Provisions.
 - B. Subpart F, Organic Hazardous Air Pollutants from SOCM I,
 - C. Subpart G, Organic Hazardous Air Pollutants from SOCM I Process Vents, Storage Vessels, Transfer Operations, and Wastewater,
 - D. Subpart H, Organic Hazardous Air Pollutants for Equipment Leaks,
 - E. Subpart R, Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations),
 - F. Subpart Y, Marine Tank Vessel Loading Operations,
 - G. Subpart CC, Petroleum Refineries,
 - H. Subpart UUU, Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units
 - I. Subpart DDDDD, Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, and
 - J. Subpart GGGGG, Site Remediation.

Loading Controls

5. 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 authorized. **(6/10)**
6. Unless specified otherwise in these permit conditions, emissions resulting from the tank truck and railcar loading of materials with a vapor pressure greater than 0.5 pound per square inch, absolute (psia) shall be routed to the Thermal Oxidizer (Emission Point No. [EPN] TO-2) for final abatement.
The Liquefied Petroleum Gas (LPG) truck loading lines and trucks shall be purged to the Complex 7 Main Flare (EPN WP FLARE1). **(6/06)**
7. The permittee shall not allow a gasoline tank truck to be filled unless the tank truck has passed a leak-tight test within the past 12 months. A certificate of testing shall be obtained for each tank truck which demonstrates that the tank truck passed a leak test conforming to the requirements of Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart R. All tank trucks loading other materials with a vapor pressure greater than 0.5 psia at this facility shall be leak-tight tested a minimum of once per year using the method described in the U.S. Environmental Protection Agency (EPA) regulations in 40 CFR Part 60, Subparts A and XX on Standards of Performance for New Stationary Sources promulgated for Bulk Gasoline Terminals.
8. All tank truck and railcar loading of materials with a vapor pressure less than or equal to 0.5 psia, except for asphalt, shall be conducted using submerged loading procedures.

9. All marine loading emissions of liquids with vapor pressures greater than 0.5 psia must be vented to an enclosed flare (EPN TO-3). Benzene may only be loaded into barges. A blower system shall be installed which will produce a vacuum in the barge hold being filled with benzene during all benzene loading operations. A pressure/vacuum gauge shall be installed on the suction side of the loading rack blower system adjacent to the barge being loaded to verify a vacuum in that vessel. Loading shall not occur unless there is a vacuum of at least 0.5 inch water column being maintained by the vacuum-assist vapor collection system when loading barges. The vacuum shall be recorded every hour during loading. Crude oil or condensate may be loaded onto ships or barges, but when loaded onto barges, the requirements for vacuum loading apply. Ships to be loaded with crude oil or condensate ships must pass an annual vapor tightness test as specified in 40 CFR § 63.565(c) or 40 CFR § 61.304(f). **(11/12)**

Combustion Controls

10. Elevated Flares (EPNs EP-FLARE1, HCU-FL1, REF2-FL1, SRU1-FLARE, SRU2 FLARE, SWS-FLARE, and WP-FLARE1) and thermal oxidizer (enclosed flare) 2 (EPN TO-2) shall be designed and operated in accordance with the following requirements, and in conformity with 40 CFR 63 Subpart CC: **(08/20)**
 - A. The flare systems shall be designed such that the combustion zone gas as defined in 40 CFR § 63.641 or gas being combusted, as applicable, in each flare meets the 40 CFR § 63.670 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 63.670(g)-(n) may be requested by the appropriate Texas Commission on Environmental Quality (TCEQ) Regional Office to demonstrate compliance with these requirements. **(08/20)**
 - B. The flares 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 thermocouple, an ultraviolet sensor, or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. The flares shall be monitored in accordance with 40 CFR § 63.671. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications. **(08/20)**
 - C. The flares shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. **(6/10)**
 - D. Flares EP- FLARE1, HCU-FL1, REF2-FL1, and WP-FLARE1 are subject to the requirements of 40 CFR Part 60, Subpart Ja. **(04/16)**
11. The firebox exit temperature for the thermal oxidizer (enclosed flare) 3 (EPN TO-3) shall be maintained at not less than 1400°F while waste gas is being fed into the oxidizer. The temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 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 $\pm 2.5^\circ\text{C}$.

Quality assured (or valid) data must be generated when the oxidizer 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 oxidizer operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. **(11/12)**

12. No visible emissions are allowed from the heaters.
13. All heaters and boilers are subject to 40 CFR Part 60, Subpart J. **(04/16)**
 - A. The hydrogen sulfide (H₂S) content of the fuel gas used in the heaters and boilers covered in this permit shall not exceed 0.10 grain per dry standard cubic foot averaged over a one hour period. The permittee shall install and operate one or more continuous H₂S monitoring system(s) in portions of the refinery fuel gas system providing fuel to refinery combustion units. The instrument(s) shall be installed according to the fuel sulfur monitoring specifications set out in 40 CFR § 60.105(a)(4). 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 sulfur content greater than 0.05% by weight. **(08/16)**
 - B. Following resumption of normal operations after modifications associated with the Coker Debottlenecking Project the following restrictions shall apply to the Coker Charge Heater (EPN 7-H-2), except where otherwise provided under Special Condition 55: **(01/22)**
 - (1) The hydrogen sulfide (H₂S) content of the fuel gas fired in EPN 7-H-2 shall not exceed 162 ppmv determined hourly on a 3-hour rolling average basis and 60 ppmv determined daily on a 365 successive calendar day rolling average basis.
 - (2) Emissions of NO_x shall not exceed 0.06 lb / MMBtu higher heating value basis determined daily on a 30-day rolling average basis. Alternatively, the permit holder may elect to restrict the discharge of NO_x to the atmosphere to 60 ppmvd (parts per million dry basis) corrected to 0 percent excess air determined daily on a 30-day rolling average basis.
 - (3) Except where provided in Paragraph (4) of this Special Condition, emissions of Carbon Monoxide (CO) shall not discharge to the atmosphere in excess of 100 ppmvd on an hourly average and 50 ppmvd on a 365-day rolling average, both on a 3% O₂ basis.
 - (4) Reduced load operation defined as when the heater is firing at no greater than 50% of the maximum rated head duty of the heater or boiler not associated with planned MSS, is authorized and not subject to the CO emission concentration limits in (3) of this paragraph provided the emission rates specified in the MAERT are not exceeded. Records of heater and boiler reduced load operation shall specify the time and duration of the event.
14. Heaters and boilers are subject to the requirements identified below: **(01/22)**
 - A. Records shall be kept and maintained to demonstrate that NO_x emissions from the following combustion units shall not exceed those specified below.

EPN	Facility	NO _x lb/MMBtu	NO _x Compliance Method ³
EP-B-5	Boiler No. 5	0.03 ¹	CEMS
EP-B-1	Boiler No. 1	0.03 ¹	CEMS
EP-B-2	Boiler No. 2	0.03 ¹	CEMS
39-H-3B	No. 4 Platformer Interheater	0.025 ¹	stack test
39-H-3A	No. 4 Platformer Charge Heater	0.025 ¹	stack test
39-H-7	No. 4 Platformer Stabilizer Reboiler ⁴	0.035	
8-H-6	Crude Charge	0.025 ¹	CEMS
Q10-H-1	SMR Heater	0.035 (03/18)	CEMS
8-H-4	Crude Charge	0.035 (xx/22)	CEMS
7-H-2	Coker Charge	Per 13. B (06/19)	CEMS
B-4	West Boiler	0.03 ² (08/16)	stack test
B-5	East Boiler	0.03 ² (08/16)	stack test
QL-10	Splitter Reboiler Heater	0.025	stack test
Q11-H-301	HCU Rx Charge	0.025	stack test
QH-125	#2 Reformer Heater A	0.022	stack test
	#2 Reformer Heater B	0.022	stack test
	#2 Reformer Heater C	0.022	stack test
44-H-1	DHDS Frac Tower Preheat	0.035 ¹	CEMS
148H-01-02	Reactor Charge Heater	0.035 ¹	stack test
148H-01-02	Stripper Reboiler	0.035 ¹	stack test
SMR2	Hydrogen Reformer Heater	0.035 ¹	CEMS
8-H-5	No. 4 Vacuum Charge Heater	0.025	stack test
44-H-2	West Plant GOT Frac. Reboiler	0.120 (08/16)	stack test (04/16)
39-H-1	West Plant #4 Hydrobon	0.100 (08/16)	stack test (04/16)

¹ - Permit limit is 0.035 lb NO_x/MMBtu on an hourly averaging period.

² - Permit limit is 0.030 lb NO_x/MMBtu on an hourly averaging period.

³ - The standards for units with CEMS are stated in terms of a 365 day rolling average and in terms of a three hour averaging period for those subject only to a stack test. **(04/16)**

⁴ - The NO_x performance standard must be met on an hourly averaging period. **(04/16)**

- B. Except where provided in paragraph C of this Special Condition, the CO concentration in the exhaust of the Gas Oil Treater (GOT) charge heater, No. 2 Diesel Hydro Treater (DHT) charge heater, No. 2 DHT reboiler, and the No. 2 Steam Methane Reformer (SMR) heater shall not exceed 100 parts per million by volume, dry (ppmvd) on an hourly average.

- C. Reduced load operation defined as when the heater is firing at no greater than 50% of the maximum rated head duty of the heater or boiler not associated with planned MSS, is authorized and not subject to the CO emission concentration limits in item B of this condition provided the emission rates specified in the MAERT are not exceeded. Records of heater and boiler reduced load operation shall specify the time and duration of the event.
15. 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.

Sulfur Recovery Units (SRUs)

16. The minimum sulfur recovery efficiency for the sulfur recovery unit and tail gas unit combinations shall be 99.8 percent. The sulfur recovery efficiency shall be determined by calculation as follows:

$$\text{Efficiency} = \frac{[(\text{sulfur recovered})(100)]}{[(\text{sulfur recovered}) + (\text{sulfur stack 1}) + (\text{sulfur stack 2})]}$$

Where: Efficiency	=	sulfur recovery efficiency, percent
Sulfur Recovered	=	sulfur produced, pound per hour (lb/hr)
Sulfur Stack 1	=	sulfur in incinerator stack 1, lb/hr
Sulfur Stack 2	=	sulfur in Incinerator stack 2, 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. **(12/20)**

17. 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. In the event that the 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. The Claus Sulfur Recovery Plants are subject to the requirements of 40 CFR Part 60, Subpart J. **(xx/22)**
18. Gases displaced during sulfur loading operations shall be captured and routed to a Scot Tail Gas Incinerator (TGI).
19. The Scot TGI(s) shall be operated with no less than 3.0 percent oxygen (O₂) in the incinerator stack and at no less than 1200°F incinerator firebox exit temperature. The incinerator shall achieve a minimum H₂S destruction efficiency of 99.9 percent or a reduced sulfur compound exit concentration of no more than 5 parts per million by volume (ppmv) [corrected to 3 percent excess O₂] on a one hour average. **(xx/22)**
20. If stack testing indicates that a higher temperature or O₂ concentration is necessary to obtain a minimum H₂S destruction efficiency of 99.9 percent or a 5 ppmv corrected to 3 percent excess O₂ reduced sulfur compound exit concentration, then the temperature and O₂ maintained during the

stack test will become the new minimum operating limits. The O₂ and temperature requirements do not apply when performing stack testing on the incinerator.

21. Storage and Loading of Volatile Organic Compounds (VOC)

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.5 psia at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons.
- B. An internal floating roof (IFR) or equivalent control shall be installed on all tanks.
- C. An open-top tank containing a floating roof which uses double seal or secondary seal technology shall be an approved control alternative to an IFR 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.
- D. For any tank equipped with a floating roof, the integrity of the floating roof seals shall be verified annually and records maintained to describe dates, seal integrity, and corrective actions taken.
- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute (API) Code 650, Appendix C, or an equivalent degree of flotation except that an internal floating cover need not be designed to meet rainfall support requirements.
- F. Uninsulated tank exterior surfaces exposed to the sun shall be white.
- G. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in barrels, name of the material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit (F), VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month, and total tons of emissions including controls for the previous month. This record shall be maintained at the plant site for at least two years and be made available to representatives of the TCEQ upon request.
- H. Emissions from storage tanks shall be calculated using: (a) AP-42, A Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 7 - Liquid Storage Tanks including Supplement D pages dated September 1997 and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks." Emissions from loading operations shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids" dated January 1995 and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations."

VOC Releases

22. Non-Fugitive Emissions

- A. 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 MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than one weight percent are not consistent with good practice for minimizing emissions.

- B. The coke drums associated with EPNs CSV1 and CSV2 shall not be depressurized or drained to the atmosphere until the average drum pressure is reduced to 2 psig or less, or the average temperature measured at the top of the drum is reduced to 220 °F. In order to demonstrate compliance with this paragraph, the permit holder shall adhere to the monitoring requirements specified at 40 CFR § 63.657, and shall retain the records specified at 40 CFR § 63.655(i)(7). **(06/19)**

Cooling Towers

23. The VOC associated with cooling tower water shall be monitored monthly utilizing the El Paso method or an air stripping system or equivalent which has been previously approved by the TCEQ. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling tower. 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. The results of the monitoring and maintenance efforts shall be recorded.

Emission rates of VOC shall be calculated using the measured strippable VOC concentration 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. **(xx/22)**

24. The cooling towers (EPNs 83-CT1, 83-CT7, Q-CT4, Q-CT5, Q-CT8) shall be operated and monitored in accordance with the following: **(xx/22)**
- A. Cooling towers shall each be equipped with drift eliminators having manufacturer's design assurance of 0.005% drift or less. Drift eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.
- B. Total dissolved solids (TDS) shall not exceed 4,500 parts per million by weight (ppmw) for EPNs 88-CT7, Q-CT5, and Q-CT8, 4,400 ppmw for EPN 83-CT1, and 4,450 ppmw for EPN Q-CT4. Dissolved solids in the cooling water drift are considered to be emitted as PM, PM₁₀, and PM_{2.5} as represented in the permit application calculations.
- C. Dissolved solids in the cooling water drift are considered to be emitted as PM, PM₁₀, and PM_{2.5}. The data shall result from collection of water samples from the cooling tower return water and represent the water being cooled in the tower. Cooling towers shall be analyzed for particulate emissions using one of the following methods:
- (1) The cooling water shall be sampled at least once a month for total dissolved solids (TDS); or
 - (2) TDS monitoring may be reduced to quarterly if conductivity is monitored daily and TDS is calculated using a correlation factor established for each cooling tower. The correlation factor shall be the average of nine consecutive weekly TDS-to-conductivity ratios provided the highest ratio is not more than 10% larger than the smallest ratio. The ratio of TDS-to-conductivity shall be determined by concurrently monitoring TDS and conductivity on a weekly basis. The permit holder may use the average of two consecutive TDS-to-conductivity ratios to calculate daily TDS. The permit holder shall

validate the TDS-to-conductivity correlation factor once each calendar quarter. If the ratio of concurrently sampled TDS and conductivity is more than 10% higher or lower than the established factor, the permit holder shall increase TDS monitoring to weekly until a new correlation factor can be established.

- (3) The analysis method for TDS can be EPA Method 160.1, ASTM D5907, or SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. The analysis method for conductivity can be ASTM D1125-95A or SM2510 B. Alternatively, conductivity can be determined by using an instrument with an error not exceeding 1% of reading. Use of another method shall be approved by the TCEQ Regional Director prior to its implementation.

Emission rates of PM, PM₁₀ and PM_{2.5} from the cooling towers shall be calculated using the methods that were used to determine the MAERT limits in the permit application, PI-1 received January 20, 2016 and updates. Sample calculations from the application shall be attached to a copy of this permit at the plant site. In lieu of using the monitored circulation rate, the design maximum circulation rate may be used for all calculations. Emission records shall be updated monthly.

Fugitive Emissions Control

25. Piping, Valves, Connectors, Pumps, Agitators, and Compressors in Contact with VOC Intensive Directed Maintenance - 28MID

Except as may be provided for in the special conditions of this permit, the following requirements apply to the components in the following EPNs: BTX1-FE, QBTX FE, QNAPSPL FE, and QSULFO-FE.

- A. The requirements of paragraphs F and G 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) operating pressure is at least 5 kilopascals (0.725 pound per square inch [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 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, agitators, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (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 (30 TAC) Chapter 115, shall be identified in a list to be made 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.
- 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 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.

- F. Accessible valves shall be monitored by leak checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. 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.

An approved 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.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. Replaced components shall be re monitored within 15 days of being placed back into VOC service.

- G. All new and replacement pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and 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.

All other pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

- H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. 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. 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.

- I. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of valves 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 this paragraph.

- J. The percent of valves leaking used in paragraph I shall be determined using the following formula:

$$(VI + Vs) \times 100/Vt = Vp$$

Where:

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

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

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

Vp = the percentage of leaking valves for the monitoring period.

- K. 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.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations. **(6/10)**

26. Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP

Unless monitored per Special Condition No. 25, the following requirements apply to components in EPNs QREF2-FE, SULF01-FE, TKFMEPN-FE, and TKFMQPN-FE.

- 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) 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), American Petroleum Institute (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 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 piping 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 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.

- 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.

Replacements for leaking 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, compressor, and agitator 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 parts per million by volume (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, compressor, and agitator 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.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.
(6/10)

27. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28VHP

Unless monitored per Special Condition Nos. 25, 26, or 29, the following requirements apply to the equipment authorized by this permit:

- 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) to piping and valves two inches nominal size and smaller or (3) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
- 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.
- 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. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments 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 a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- 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.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

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.

- 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, 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. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.

- 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.

- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable NESHAPS, and does not constitute approval of alternative standards for these regulations. **(6/10)**

28. In addition to the weekly physical inspection required by Item E of Special Condition Nos. 25 and 26, all accessible valve connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items F through J of Special Condition Nos. 25 and 26. **(28CNTQ)**

- A. 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 this paragraph.

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

$$(Cl + Cs) \times 100/Ct = Cp$$

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. **(6/10)**

29. **Process Piping, Valves, Pumps, and Compressors in H₂S and Ammonia (NH₃) Service –AVO**

This condition shall apply to all process streams with greater than 2 weight percent H₂S or ammonia. **(xx/22)**

- A. Audio, visual, and olfactory (AVO) checks for H₂S and ammonia leaks within the operating area shall be made once a shift.
- 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) Use a leak collection / containment system to prevent the leak until repair or replacement is possible. Containment can include adjustment of bolts, fittings, packing glands, and pump or compressor seals to contain the leak.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

Compliance Testing

30. The holder of this permit shall perform stack sampling or 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 million British thermal units per hour (MMBtu/hr) and less than 100 MMBtu/hr, Scot TGIs (EPNs SRU1-INCIN and SRU2-INCIN), No. 2 Reformer

Regeneration Vent (EPNREF2 V1), No. 4 Platformer Regeneration Vent (EPN REF4-V1), FIN V116T202 vent to splitter heater, FIN V154T010 vent to splitter heater, Marine Loading Thermal Oxidizer (EPN TO-3), and Truck and Railcar Thermal Oxidizer (EPN TO-2). Sampling shall be performed upstream and downstream of the SMR condensate stripper vent condenser to demonstrate compliance with Special Condition No. 37. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their expense. **(04/16)**

- A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled but not less than 30 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) 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.

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 submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

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

- B. Air contaminants to be tested for include (but are not limited to) the following for the various units:

- (1) Heaters and boilers - NO_x and CO;
- (2) FIN V116T202 and FIN V154T010 - VOC;
- (3) Scot TGIs - NO_x, CO, PM (both front and back-half of the sampling train), and total reduced sulfur;
- (4) No. 2 Reformer Vent and No. 4 Platformer Caustic Scrubber Vent- HCl and Cl₂;
- (5) Thermal oxidizers - VOC, NO_x, and CO; and
- (6) SMR condensate stripper vent condenser – methanol.

- C. Sampling of air contaminants not monitored by continuous emission monitoring system (CEMS) or predictive emission monitoring system (PEMS) as previously outlined shall occur as follows: **(06/20)**

- (1) For the No. 2 Reformer Regeneration Vent (EPN 2REGENVENT), at the first regeneration cycle following issuance of the permit.
- (2) For the No. 4 Platformer Regeneration Vent (EPN REF4-V1), within 180 days of the installation of the caustic scrubber pursuant to the emission reduction conditions section of these conditions.
- (3) For heaters/boilers, compressor engines, and the SMR condensate stripper vent condenser, each emission point shall be sampled within 60 days of achieving maximum operation, not to exceed 180 days after initial operation, if a physical change has been made, such as the installation of new burners in a heater or boiler, or if an operational change has been made allowing emissions to increase more than 10 percent greater than determined by the last stack sample. For the FCCU Regenerator/CO Boiler, Scot TGIs, and thermal oxidizers, each emission point shall be sampled by May 15, 2005.
- (4) For the Complex 6 West and East Boilers (EPNs B-4 and B-5), no later than March 31, 2009 to determine NO_x contributions and compliance with the NO_x emissions cap. Stack sampling shall again be conducted within 60 days of the installation of low NO_x burners. **(xx/22)**
- (5) For FIN V116T202 and FIN V154T010, the benzene in the exhaust of these refrigeration units to the respective heater, EPNs Q3-H-4 and QL 10, and the benzene from the heater exhaust to demonstrate a 99 percent destruction efficiency. The sampling shall be within 60 days of achieving maximum operation, not to exceed 180 days after initial operation.
- (6) As may be required by the Executive Director of the TCEQ.
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, and requests shall be submitted to the TCEQ Regional Office.

- D. Each emission point subject to stack emission testing shall be tested when the facility (or facilities) directly associated with the emission point is operating at maximum emissions potential. For many types of facilities, this maximum emissions potential will occur at the maximum production, throughput, or firing rate associated with that facility. Primary operating parameters that enable determination of maximum emissions potential shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum emissions potential during testing, then future operations may be limited based on the rates established during testing. Additional stack testing may be required when operating rates with higher emissions potential are achieved.

The No. 4 Platformer Splitter and the No. 2 Reformer Splitter shall be operated to achieve the maximum purge gas when sampling FIN V116T202 and FIN V154T010, and the respective heater. The exhaust gas temperature, flow rate and any other primary operating parameters that affect the emission rate 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 the splitter purge flow rate 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. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Requests for additional time to submit the final sampling report shall be submitted to the TCEQ Corpus Christi Regional Office. 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. **(12/10)**

Continuous Determination of Compliance

31. The holder of this permit shall install, calibrate, and maintain CEMS to measure and record CO, NO_x, and O₂ from the heaters and boilers with firing rates greater than 100 MMBtu/hr; SO₂ and O₂ from the SRU Scot TGIs (EPNs SRU1-INCIN and SRU2-INCIN); and H₂S from the Complex 8 fuel gas drum. The monitoring system shall meet either the following section of "Requirements for CEMS," or the section "Requirements for PEMS," as applicable. **(xx/22)**

A. Requirements for CEMS: **(04/16)**

- (1) Each 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 Compliance Support Division in Austin for requirements to be met. **(04/16)**

- (2) Each system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 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 in accordance with 40 CFR Part 60, Appendix F, Procedure 1, 5.1.2. Cylinder Gas Audits (CGAs) conducted in all four calendar quarters may be used in lieu of relative accuracy test audits (RATA) for non-NSPS sources and for NSPS sources not subject to 40 CFR Part 60, Appendix F.

- (3) The CEMS 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 from each CEMS shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week and cumulative tons per year on a 12 month rolling average at least once every month. **(04/16)**

- (4) All monitoring data and quality-assurance data shall be maintained by the source for a period of two 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. **(04/16)**

- (5) All CGA exceedances of 15 percent accuracy and CEMS downtime shall be reported in Semiannual Excess Emission Reports. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director. **(04/16)**
- (6) For NSPS sources subject to Appendix F, the appropriate TCEQ Regional Office shall be notified at least 30 days prior to each annual RATA in order to provide them the opportunity to observe the testing.
- (7) For all heaters and boilers listed in the CEMS in Special Condition 14.A. In addition to the requirements of 30.A.(1)-(6), 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. **(08/16)**

B. Requirements for PEMS.

- (1) A PEMS may be used for demonstrating continuous compliance if it can be proven to have the same or better accuracy, precision, reliability, accessibility, and timeliness as that provided by a hardware CEMS. All PEMS shall be subject to the approval of the TCEQ Executive Director. Owners or operators must petition the TCEQ Executive Director for approval to use PEMS. The petition must include results of tests conducted beforehand to demonstrate equivalent accuracy and precision of PEMS to that of hardware CEMS. Demonstrating equivalency of PEMS to CEMS shall be met by instantaneously comparing data collected by PEMS with that collected by a certified hardware CEMS or an EPA reference method. For a PEMS replacing a CEMS, both systems shall remain in place for at least an operating quarter collecting valid information before the CEMS is removed.
- (2) For any unit at which the PEMS is installed, PEMS initial certification by the TCEQ shall occur while the unit is firing its primary fuel. The owner or operator shall:
 - (a) Conduct relative accuracy testing for NO_x, O₂, or carbon dioxide (CO₂), and CO per 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, and 4, respectively, at low, medium, and high levels of the most significant operating parameter affecting NO_x emissions.
 - (b) Conduct statistical test analysis at low, medium, and high levels of the most significant operating parameter affecting NO_x emissions. A minimum of 30 successive paired data points which are either 15 minute averages, 20 minute averages, or hourly averages must be collected at each tested level before a reliable statistical test can be performed.

Data collection must be continuous at all times except when calibration of the reference method must be conducted for the purpose of collecting data for RATA.

The following three tests must be conducted to demonstrate precision:

- i. A T-test for bias per Appendix A, 40 CFR § 75.76. The test shall be conducted using all paired data points collected at all three tested levels.
 - ii. An F-test per 40 CFR § 75.41(c)(1). The F-test must be conducted separately at the three tested levels.
 - iii. A correlation analysis per 40 CFR § 75.41(c)(2). Calculation of the correlation coefficient (Equation 27) shall be performed using all paired data points collected at all three tested levels.
 - (c) For either NO_x or CO and for the purpose of conducting an F test, if the standard deviation (SD) of the reference method is less than either 3 percent of the span or 5 parts per million (ppm), use a reference method SD of the greater of 5 ppm or 3 percent of span.
 - (d) For diluent CO₂ or O₂ and for the purpose of conducting an F-test, if the SD of the reference method is less than 3 percent of span, use a reference method SD of 3percent of span.
 - (e) For either NO_x or CO and at any one tested level, if the mean value of the reference method is less than either 10 ppm or 5 percent of the standard, all statistical tests are waived for that emission parameter at that specific tested level.
 - (f) For either O₂ or CO₂ and at any one tested level, if the mean value of the reference method is less than 3 percent of span, all the statistical tests are waived for that diluent parameter at that specific tested level.
- (3) The monitoring data shall be reduced to hourly average concentrations at least once every day, 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 lb/hr at least once every day and cumulative TPY on a 12-month rolling average at least once every month.
- (4) All monitoring data and quality-assurance data shall be maintained by the permit holder for a period of two years and shall be made available to the TCEQ Executive Director or his designated representative upon request.
- (5) Any PEMS downtime shall be reported to the appropriate TCEQ Regional Director within three days of any downtime, and necessary corrective action shall be taken. Owners or operators shall demonstrate that all missing data can be accounted for in accordance with the applicable missing data procedures of 40 CFR Part 75, Subpart D. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
- (6) The appropriate TCEQ Regional Office shall be notified at least 30 days prior to each annual RATA in order to provide them the opportunity to observe the testing.
- (7) The owner or operator shall perform daily sensor validation. The owner or operator shall develop and implement plans that will ensure proper functioning of the monitoring systems, ensure proper accuracy and calibration of all operational parameters that affect emissions and serve as input to the predictive monitoring system, and ensure continuous operation within the certified operating range.
- (8) In accordance with the procedure of 2.3.1, Appendix B of 40 CFR Part 60, a RATA must be performed every six months for each unit while firing its primary fuel. A RATA

may be performed annually if the relative accuracy of the previous audit is 7.5 percent or less.

- (9) For each of the three successive quarters following the quarter in which initial certification was conducted, RATA and statistical testing must be conducted for at least one unit in a category of units in accordance with the procedures outlined for initial certification under Section B.
- (10) Any RATA exceeding 20 percent or statistical test exceeding the applicable standard shall be reported to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken.
- (11) When an alternative fuel is fired in a unit, PEMS must be re-certified in accordance with the certification procedures outlined for initial certification under Section B. Owners or operators may justify to the satisfaction of the TCEQ Executive Director that slight changes in fuel composition do not constitute an alternative fuel. No additional recertification procedures are required if the unit meets the current monitoring requirements when switching back to the normal fuel from an alternate fuel.
- (12) The system is required to provide valid emission predictions for at least 95 percent of the time that the unit being monitored is operated. The following rules for tuning without recertification shall be followed:
 - (a) The model did not change fundamentally.
 - (b) The model continues to operate within the initially certified operating ranges. Otherwise, the system must be recertified. Any tuning must be documented, and the records must be made available during any future inspection.
- (13) All owners or operators shall develop a quality-assurance plan or manual that insures continuous and reliable performance of the PEMS. As part of the plan, owners or operators shall recommend a frequency for calibrating each sensor whose readout serves as an input to the model. All sensors, at a minimum, shall be calibrated as often as recommended by the manufacturer.

32. 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:

Pollutant	Averaging Period
SO ₂	1.0 hour
CO	1.0 hour
H ₂ S	1.0 hour
Opacity	6.0 minutes
NO _x	1.0 hour

Recordkeeping

33. The following records shall be maintained at the plant site on a five-year rolling retention basis and be made available at the request of personnel of the TCEQ or any air pollution control agency with jurisdiction. **(xx/22)**

- A. 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 (REFFUG, Tanks Subcap, Flares Subcap, SRUs Subcap, WWTP Subcap, WW-CAS Subcap, MSS subcap; 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.
- B. Emissions calculations for verifying compliance with the emission caps shall be performed at least once every month 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.
- C. The emissions contributing to the subcaps shall be determined using the following techniques:
- (1) Refinery Fugitives, REFFUG: Component counts using the emission factors and method specified in the revised permit application received January 20, 2016 and updates.
 - (2) Tanks subcap: As specified in these conditions.
 - (3) SRU subcap: CEMS or PEMS if they are installed. If stack tested, 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 permit application and the average value of the appropriate operating parameter for the period.
 - (4) Wastewater treatment plant subcap: As required by these conditions and using the wastewater volume processed and emission factors consistent with emission calculations represented in the revised permit application received January 20, 2016 and updates.
 - (5) Wastewater Carbon Adsorption subcap: As required by these conditions.
 - (6) Maintenance, Startup, and Shutdown subcap: As identified in Special Condition No. 45.
- D. Records showing compliance with concentration and MAERT limits for all Heaters and Boilers. If a CEMS or PEMS is installed, as specified in those conditions. If stack tested, using the most recent stack test result and recorded firing rate for the period
- E. Records showing compliance with MAERT limits for loading sources and their controls:
- Emissions from control devices shall be determined using the emission factor 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.
- Emissions from loading operations shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids" dated June 2008 and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations."
- F. Records showing compliance with MAERT limits for the No. 4 Platformer Splitter and No. 2 Reformer Splitter purge gas from flare (EPNs Q3-H4A/B, REF2-FL1, and QL-10): Emission calculations using the results from the most recent sample from the vents completed per Special Condition No. 30, or when routing to flare, emission calculations based on flow

volume and representation in revised permit application received January 20, 2016 and updates.

- G. Records showing compliance with MAERT limits for the SMR Condensate Stripper Vent (EPN SMR2-DG-V1): Emission calculations using the results from the most recent stack test.
- H. Records showing compliance with MAERT (VOC and particulate) limits for all cooling towers: emission calculations as described in Special Condition Nos. 23 and 24.

Permit References

- 34. 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.

Miscellaneous

- 35. The quantity of benzene concentrate (heartcut) imported to the Valero East Refinery shall not exceed 35,000 barrels per day (BPD) on a 30-day rolling average basis. **(11/20)**

The temperature of the No. 4 Platformer Splitter and the No. 2 Reformer Splitter purge gas exiting the refrigeration unit and going to the respective heaters, EPNs QL-10 and Q3-H-4, shall not exceed 55°F on an hourly average prior to the initial stack test required by Special Condition No. 30. Following the stack test, the temperature shall not exceed that maintained during the last satisfactory stack test. Emissions from this source shall be determined by using the stack test results and TCEQ flare emission factors.

The refrigeration unit exhaust gas temperature shall be continuously monitored and recorded when the either splitter 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 $\pm 2.5^\circ\text{C}$. **(6/10)**

- 36. This permit authorizes emissions from flares (EPNs WP-FLARE1, HCU-FL1, REF2-FL1, EP-FLARE1, SRU1-FLARE, SRU2-FLARE, SWS-FLARE) for the following planned maintenance, start-up, and shutdown activities: **(xx/22)**

Coker Unit drums start-up and shutdown

Scheduled routine maintenance on the hydrogen compressors

Scheduled maintenance and start-up of the potassium hydroxide (KOH) treaters

These emissions are subject to the Maintenance, Startup, and Shutdown (MSS) emission caps indicated on the MAERT. The performance of these activities and the emissions associated with each shall be recorded and the rolling 12 month emissions shall be updated on a monthly basis. **(9/10)**

37. 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 115°F prior to the first satisfactory stack sample and 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 $\pm 2.5^{\circ}\text{C}$. **(6/06)**

Wastewater Collection and Treatment (xx/22)

38. Process wastewater drains shall be equipped with water seals or equivalent; lift stations, 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 vapor to a control device.

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 corrective actions taken. **(xx/22)**

39. 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. **(xx/22)**
40. The minimum mixed liquor total suspended solids (MLSS) concentration in the aeration basins shall be sampled at least one 24 hour period per week. The MLSS average concentration shall not be less than 1000 milligrams per liter (mg/L) for any testing period. The MLSS concentration is the arithmetic average of all samples collected during the 24-hour period. The MLSS concentrations shall be monitored and recorded 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). **(xx/22)**
41. Wastewater treatment plant emissions shall be estimated every month using the following procedure. **(xx/22)**
- A. The permit holder shall sample the wastewater prior to API separators 194TK65 and 194TK85 monthly to determine the concentrations of all air contaminants. Samples shall be collected and analyzed using EPA Method 624.1 and 625.1 or equivalent. VOC calculations shall be prepared using the methodology as specified in the revised permit application received January 20, 2016 and updates. The influent wastewater flow rates shall be measured and recorded when a sample required by this condition is collected. Records of sampling results shall be maintained for all air contaminants.
 - B. The permit holder shall calculate short term loading rate in terms of pounds per hour (lb/hr) and rolling 12 month loading rate in terms of tons per year (tpy) for each air contaminant. The measured concentrations of each speciated air contaminant shall be converted to an equivalent mass emission rate based upon the flow rates during the sample collection period

using the calculation methods and assumptions in the revised permit application received January 20, 2016 and updates. The MLSS used in the emission calculation shall be either the minimum identified in Special Condition No. 40 or the measured concentration for the day the sampling required for this condition is completed. The short term emission rate calculations for such air contaminants shall be based on the concentrations and flow rates measured during sampling. The rolling 12 month emission rate calculation for each air contaminant shall be based on the rolling 12 month average contaminant concentration and the rolling 12 month wastewater flow. All other inputs into the calculation shall match those in the permit application for that averaging period (worst case). Total VOC mass emission rates shall be calculated as the sum of the individual speciated VOC mass emission rates.

- C. All air contaminants ascertained by the analytical methods shall be evaluated. Records of sampling location, sampling procedures, sample chain of custody forms, test methods, sampling results, calculated emission rates, and sample of calculations shall be maintained.

Wastewater Treatment Plant (WWTP) Carbon Adsorption System (WW-CAS)

- 42. Facilities within the WW-CAS subcap (identified in Attachment 1) shall vent through a carbon adsorption system (CAS) consisting of at least two activated carbon canisters that are connected in series. **(xx/22)**
 - A. The CAS shall be sampled every 2 weeks (or more often for particular facilities as represented in the January 2016 and March 2021 permit applications and updates) 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 operations reflecting maximum emission venting to the CAS such as during loading, tank filling, process venting.
 - B. 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:
 - (1) 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 100 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.
 - (2) 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.
 - (3) 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 operations reflecting maximum emission venting to the CAS such as during loading, tank filling, process venting.
 - C. Breakthrough shall be defined as the highest 1 minute average measured VOC at or exceeding 100 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 one week. 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.

- D. Records of the CAS monitoring maintained at the plant site, shall include (but are not limited to) the following:
- (1) Sample time and date.
 - (2) Monitoring results (ppmv).
 - (3) Corrective action taken including the time and date of that action.
 - (4) Process operations occurring at the time of sampling.
- E. 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.
43. Visual inspection for carbon build up around the stacks shall occur once a week. If carbon build up is noticed, it shall be recorded, the CAS shall be shut down, and corrective action shall be taken in accordance with the system maintenance manual. **(01/22)**

Maintenance, Startup, and Shutdown (MSS)

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

Planned startup and shutdown emissions due to the activities identified in MSS Special Condition No. 45 are authorized from facilities and emission points identified in Attachment 1 provided the facility and emissions are compliant with the routine emission caps and Special Condition No. 55 of this permit. **(xx/22)**

45. This permit authorizes the emissions for the planned MSS activities summarized Special Condition No. 36 and 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 Special Condition No. 56, 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:

- 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 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. **(9/10)**

46. Process units and facilities, with the exception of those identified in Special Condition Nos. 49 (related to Floating Roof Tanks), 48 (related to Fixed Roof Tanks), 50 (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 depressurizing 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 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 Special Condition No. 47. 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% 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 Special Condition No. 47 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 shutdown or startup, as applicable, except for maintenance activities for Complex 8 corrugated plate interceptor, which may emit up to 72 lb of air contaminants per 40 CFR 63, Subpart CC. **(xx/22)**

All instances of venting directly to atmosphere per MSS Special Condition No.46. E 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. **(9/10)**

47. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.
- A. 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:
$$\text{VOC Concentration} = \text{Concentration as read from the instrument} * \text{RF}$$
 - (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 five 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% 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% 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% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.
- D. For measuring benzene breakthrough on Carbon Adsorption Systems in Special Condition No. 56.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. **(9/10)**
48. 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:
- A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
 - B. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 20 ppmv above background and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. **(9/10)**
49. 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. Emissions from change of service tank landings shall not exceed 10 tons of VOC in any rolling 12 month period. 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 a vent stream sample may be used 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 Special Condition No. 47.
 - (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 1,000 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 1,000 ppmv through the procedure in Special Condition No. 47.
 - (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 Special Condition No. 65.
 - 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 Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Liquid Storage Tanks" dated March 2020 and the permit application. **(01/22)**
50. 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 Special Condition No. 49.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 MSS Special Condition No. 49.B(1)through 49.B(5) and records maintained per Special Condition No. 49.E(3)(c)through 49.E(3)(e), and 49.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. **(9/10)**

51. 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 95°F 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 Special Condition No. 56, measured using an instrument meeting the requirements of Special Condition No. 47.
 - (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 MSS Special Condition No. 51.A through 51.D do not apply. **(9/10)**

52. 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% 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 effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled.
 - 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 95°F, 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. **(9/10)**
53. The term "true vapor pressure (TVP)" is used in lieu of the term "partial pressure" in this permit. **(9/10)**
54. 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. **(9/10)**
55. 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.
 - (1) The routine maximum allowable emission limits (hourly and annual) per EPN are not exceeded.
 - (2) The startup period does not exceed 8 hours in duration and the firing rate does not exceed 75 percent of the design firing rate, except as indicated otherwise below. Except, however, that this requirement shall not be construed to conflict with the permit holder's written operating procedures specifying a staged heating schedule for the following operations: **(01/22)**
 - (a) Curing or dryout of refractory.

- (b) Catalyst sulfiding or other catalyst-specific conditioning requirements.
- (c) Management of tube temperature to minimize thermal cycling fatigue or otherwise maximize the remaining life of the tube, consistent with good engineering practice.

These exceptions to the 8 hour startup requirement shall not exceed 60 hours. For each startup with a duration exceeding 8 hours, the permit holder shall document the actual startup time during which operating requirements are waived as provided for under this Special Condition and a copy of each staged heating schedule indicating a need to extend the startup beyond 8 hours.

- (3) The time it takes to complete the shutdown does not exceed 4 hours.
 - (4) Control devices are started and operating properly when venting a waste gas stream.
- 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 SRU startup period shall not exceed 72 hours. The sulfur recovery requirements do not apply during SRU startup. The SRU tailgas shall be operated in accordance with Special Condition Nos. 16 and 17 during this period.
- 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. **(9/10)**
56. 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 of 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) 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 Special Condition No. 47.
- (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 24 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% 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.

- (1) The thermal oxidizer firebox six-minute average 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 exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. 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 $\pm 2.5^{\circ}\text{C}$.

- (3) As an alternative to Special Condition No. 56.B(1), the thermal oxidizer may be tested to confirm a minimum 99 wt% 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 EPA Reference Methods.

A copy of the test report shall be maintained with the thermal oxidizer and a summary of the testing results shall be included with the emission calculations.

- (4) As an alternative to Special Condition No. 56.B(1-2), the thermal oxidizer may be equipped with continuous VOC monitors (inlet and outlet). The VOC monitors shall be calibrated and maintained according to Special Condition No. 47, except 47.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 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 or propane to confirm the required destruction efficiency within the period specified in part (3) below. VOC shall be measured in accordance with the applicable 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 that 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 Special Condition No. 47.A are also acceptable for this documentation.
- (3) The engine shall be operated and monitored as specified below.
 - (a) If the engine is 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. The engine must have been stack tested within the past 12 months in accordance with part (2) of this condition.

The test period may be extended to 24 months if the engine exhaust is sampled once an hour when waste gas is directed to the engine using a detector meeting the requirements of Special Condition No. 47.A. 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 engine. The concentrations shall be recorded and the MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background.

- (b) If an oxygen sensor-based AFR controller is not used, the engine exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the

engine. 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 engine. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 47.A. 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 if 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. The engine must have been stack tested within the past 24 months in accordance with part (2) of this condition.

D. The plant flare system

- (1) The heating value and velocity requirements in 40 CFR § 63.670 shall be satisfied during operations authorized by this permit. **(08/20)**
- (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 thermocouple, an ultraviolet sensor, 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. **(5/14)**
- (3) Each flare shall be equipped with one of the following by December 31, 2011:
 - (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 $\pm 2.0\%$ 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 40 CFR § 63.670. **(08/20)**

- 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 Special Condition No. 47 except 47.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 Special Condition 47.
- (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. **(9/10)**

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

- A. Either 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 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.

or

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 the position of the valves and the condition of the car seals that prevent flow out the bypass.

These requirements do not apply to high point vent and low point drain valves. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when required to be in service per this permit.

C. If any of the above inspections 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 above. **(9/10)**

58. 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. **(9/10)**

59. 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 (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 $\mu\text{g}/\text{m}^3$; or
- (2) The emission rate of the compound in pounds per hour is less than the ESL for the compound times 0.0148 ($\text{ER} < 0.0148\text{ESL}$).

D. The permit holder shall maintain records of the information below and the demonstrations in steps A through 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. **(9/10)**

60. No visible emissions shall leave the property due to painting or abrasive blasting. **(9/10)**

61. 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 $ESL_{\text{metal}}/1000$.
 - C. The MSDS for each media used shall be maintained on site.
- Blasting media usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated. **(9/10)**
62. All spent dry abrasive blast media shall be collected daily from each abrasive blasting area and placed in either an enclosed container, in an enclosed building, or in a pile that is covered with either a tarp or shroud material to prevent wind erosion. The tarp or shroud material that is used to cover piles shall not have any holes or tears which would allow the leakage of PM.
- Spent dry abrasive blast media that is not reused shall be removed from the plant site in accordance with all applicable waste rules. **(xx/22)**
63. 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 Special Condition Nos. 44 through 62, 64, and 65 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. **(9/10)**
64. 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 Special Condition Nos. 51 and 52 are cleaned in lieu of maintaining cleaning records for those items. **(9/10)**
65. The following requirements ensure satisfactory impacts off-site.
- A. The following apply to MSS performed on facilities in gasoline and naphtha service (greater than 10 weight percent):
 - (1) The hourly uncontrolled purge rate shall not exceed 35,000 scf in any one-hour period.
 - (2) No more than 6,000 gallons shall be transferred to a frac tank in any one-hour period while uncontrolled purging is occurring at a rate greater than 30,000 scfh.
 - (3) These limits do not apply to storage tank MSS.
 - B. Only one tank with a landed roof may be filled with liquid with a VOC vapor pressure greater than 0.50 psia without emission control at any time.

- C. Emissions from refilling a tank with a landed roof with a liquid with a vapor pressure greater than 0.50 psia shall be routed to a control device meeting the requirements of Special Condition No. 56 unless the tank has been cleaned and degassed.
 - D. Floating roof tanks undergoing controlled degassing shall not be initially vented without control while a landed floating roof tank is being filled after being degassed and cleaned unless the tank being filled is vented to a control device meeting the requirements of Special Condition No. 56.
 - E. 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 Special Condition No. 56 if the liquid has a vapor pressure greater than 0.50 psia. **(9/10)**
66. Heater decoking shall be performed in a manner to minimize the duration of the activity. Water spray shall be used to minimize decoking emissions. **(xx/22)**

Permit by Rule Authorizations (xx/22)

67. The following facilities at this site are authorized by Permit by Rule (PBR) under 30 TAC Chapter 106. This authorization is listed here for reference purposes only. This list is not intended to be all inclusive and can be altered at the site without modifications to this permit.

Facilities	Rule No.	Registration No.
Groundwater Remediation Recovery Wells	106.533	Unregistered

Date: xxxxxx

Attachment 1

Permit Numbers 2937 and PSDTX1023M3

Emission Point Numbers under Subcaps with Source Names

This table lists the subcap name, emission point numbers (EPNs), and source names for EPNs contained within emission subcaps authorized by this permit. EPNs and activities under the MSS cap are found in Attachment 4. Note that other EPNs not within the subcaps have individual emission rate limits as specified on the MAERT.

Cap Name	EPN	Source Name
Flare Subcap	EP-FLARE1	Complex 8 Flare
	HCU-FL-1	HCU Area Flare
	REF2-FL1	No. 2 Reformer Area Flare
	SRU1-FLARE	SRU No. 1 Flare
	SRU2-FLARE	SRU No. 2 Flare
	SWS-FLARE	Sour H ₂ O Strip Flare
	WP-FLARE1	Complex 7 Flare
SRUs Subcap	SRU1-INCIN	SRU No. 1 Incinerator
	SRU2-INCIN	SRU No. 2 Incinerator
Tanks controlled by TO-2	TO-2	T-102 Tank 102
	TO-2	T-108 Tank 108
	TO-2	T-138 Tank 138
	TO-2	T-201 Tank 201
Tanks Subcap	175-TK-001	Asphalt Blending Unit Wetting Tank
	175-TK-002	Asphalt Blending Unit Mixing Tank
	175-TK-003	Asphalt Blending Unit Mixing Tank
	TK-2	Benzene Water Tank
	SWS1-T3	Sour Water Surge Tank
	TK-113	Tank 113
	TK-114	Tank 114
	TK-122	Tank 122
	TK-128	Tank 128
	TK-202	Tank 202
	TK-210	Tank 210
	TK-211	Tank 211
	TK-212	Tank 212
	TK-213	Tank 213
	TK-22	Tank 22
	29-TK-18	MDEA Tank
	TK-310	Tank 310
	TK-311	Tank 311
	TK-312	Tank 312
	TK-325	Tank 325
	TK-332	Tank 332
	TK-354	Tank 354
	TK-500	Tank 500
TK-9	Tank 9	

Cap Name	EPN	Source Name	
Wastewater Carbon Adsorption Canisters (WW-CAS)	107-01	S Side C7 Coker	
	108-01	C7 Crude Pump Alley	
	108-02	N Side of C7 Crude	
	112-01	N Side of C8 FCCU	
	112-02	E Side of C8 FCCU	
	116-01	Quintana Process Water Canister	
	116-02	Quintana Benzene Hub System	
	120-01	C8 Sulfolane Solvent Sump Canister	
	124-01	C8 HAD Hub System Canister	
	127-01	C8 Benzene Hub System Canister	
	127-02	East Plant Tetramer	
	139-01	E Side of C7 Platformer	
	139-02	West Side of C7 Platformer	
	143-01	C7 OWS Lift Station	
	143-02	C7 Benzene Stripper Canister	
	151C-02	N of C8 Main Cooling Tower	
	151C-03	SE Corner C8 HDA	
	151C-04	W Side of C8 FCCU	
	176-01	AP Docks #3 and #4 Sumps	
	176-02	AP Dock #7 Sump	
	176-03	AP Dock #11 Sump	
	176-04	Dock #6 (McBride Lane)	
	177-01	Oil/Water Separator 177-v-059	
	179-01	C8 Thermal Oxidizer Canister	
	192-01	East Plant CPI Effluent Canister	
	192-02	East Plant OPI Oil Canister	
	192-03	C8 OPI Oil Tank 3	
	192-04	C8 Oil Solids Tanks 217/218	
	192-05	East Plant Interceptor Canister	
	194L011	C7 WWT Feed Sump	
	194L012	C7 WWT TK 61, new APIs	
	194L006	C7 WWT Interceptor Pit	
	Wastewater Treatment Unit Subcap (WWTP)	192TK3	CPI Oil Storage Tank
		194TK109	Surge Tank
		194TK74	Equalization Tank
		194V014A	DAF or grit separator
194V014B		DAF or grit separator	
194V015		Skimmed API Oil Tank	
90-TK-60		WAS Storage Tank	
90-TK-61		Storage Tank (194TK61) (Coker Feed)	
90-TK-62		Caustic Tank	
90-TK-63		Caustic Tank	
90-TK-65		API Separator (194TK65)	
90-TK-66		Bioreactor Tank	
90-TK-67		Bioreactor Tank	
90-TK-68		Clarifier Tank	
90-TK-69		Clarifier Tank	

Cap Name	EPN	Source Name	
	90-TK-78	WWTP Clarified Act. Biosludge Skim Tank	
	90-TK-85	API Separator (194TK85)	
	91-D-1	Slurry Tank (Sludge Conc)	
	91-D-2	Make-Up Tank (Sludge Conc)	
	91-D-3	Charge Tank (Sludge Conc)	
	91-D-4	WP Sludge Concentration Tank	
	91-D-5	WP Sludge Concentration Tank	
	LS-1	Complex 7 Interceptor Pit	
	QP-SUMP1	QP Oily Water System Coll. Sump/Pump Out Sys.	
	SUMP-1	Feed Sump	
	SUMP-12	DNF Effluent Sump	
	SUMP-2	API Effluent Sump	
	SUMP-3	EP CPI Inlet Sump and Excess Inflow Pump	
	SUMP-4	WP Oily Water System Coll. Sump/Pump Out Sys.	
	TK 217	CPI Sludge Storage Tank	
	TK 218	CPI Sludge Storage Tank	
	WWS-EP	CPI Separator	
	Refinery Fugitives Subcap (REFFUG)	90-WWT	Wastewater Piping Fugitives
		BLRHSE-FE	Boiler House (170) Fugitives
BTX1-FE		Sulfolane Btx. Unit Fugitives	
COKER1-FE		Delayed Coker Unit Fugitives	
CRUVAC4-FE		No. 4 Crude & Vacuum Unit Fugitives	
DEOCT-FE		No. 4 Plat. Splt. Fugitives	
DIST1-FE		Kerosene Hds Fugitives	
DIST2-FE		ULSD Hydrotreater (148) Fugitives	
DOCK11-FE		Marine Loading (Dock 11) Fugitives	
DOCK3-FE		Marine Loading (Dock 3) Fugitives	
DOCK4-FE		Marine Loading (Dock 4) Fugitives	
DOCK6-FE		Marine Loading (Dock 6) Fugitives	
DOCK7-FE		Marine Loading (Dock 7) Fugitives	
EPDRN-FE		Complex 8 Misc. Drains	
GOT1-FE		Diesel HDS Fugitives	
H2BOOST-FE		Hydrogen Boosters (124)	
HCU-FE		Hydrocracker Unit Fugitives	
KERO1-FE		Kerosene H.D.S. Fugitives	
LEU1-FE		No. 1 L.E.U. Fugitives	
LEU2-FE		No. 2 L.E.U. Fugitives	
PMA-FE		Asphalt Blending Unit Fugitives	
QBTX-FE		Sulfolane & Btx. Unit Fugitives	
QHDS2-FE		No. 2 Naphtha H.D.S. Fugitives	
QNAPSPL-FE		No. 2 Naphtha (No. 2 Reformer). Splitter Fugitives	
QREF2-FE		No. 2 Reformer Fugitives	

Cap Name	EPN	Source Name
	QSULFO-FE	Sulfocane Fugitives
	REF4-FE	No. 4 Hydrobon & Platformer Fugitives
	SMR2-FE	SMR2 (130) Fugitives
	SRU1-FE	SRU No. 1 Fugitives
	SRU2-FE	SRU No. 2 Fugitives
	SULF01-FE	Sulfolane Fugitives
	SWS1-FE	S.W.S. Unit Fugitives
	SWS2-FE	Benzene S.W.S. Fugitives
	TKFMEPN-FE	Complex 8 North Tank Farm Fugitives
	TKFMPS-FE	Complex 8 South Tank Farm Fugitives
	TKFMQPN-FE	Complex 6 North Tank Farm Fugitives
	TKFMWP-FE	Complex 7 Tank Farm Fugitives
	TRUCKRK-FE	Truck Loading Rack Fugitives

Date: ____ xxxx

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Attachment 2

Permit Numbers 2937 and PSDTX1023M3

Inherently Low Emitting Activities

Activity	Emissions				
	VOC	NO _x	CO	PM / PM ₁₀ / PM _{2.5}	H ₂ S / 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			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: xxxxx

Attachment 3

Permit Numbers 2937 and PSDTX1023M3

Routine Maintenance Activities

Pump repair/replacement

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

Compressor repair/replacement

Heat exchanger repair/replacement

Vessel repair/replacement

Date: xxxxx

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Attachment 4

Permit Numbers 2937 and PSDTX1023M3

MSS Activities within MSS Subcap

Facilities	Description	Emissions Activity	EPN
all process units and tanks	shutdown/depressurize/drain/startup (includes SRU shutdowns, Enterprise MSS activities)	Vent to control	Annual: MSS-TA MSS-MA
all process units and tanks	process unit purge/degas/drain/startup (except SRU)	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
Vacuum Trucks	removal and transfer of process and/or waste liquids	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
Process units and tanks	Painting	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
Process units and tanks	Miscellaneous chemical usage	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
FRAC tanks	Temporary storage of process liquids and/or waste liquids	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
Cleaning Slab	Washing of portable or mobile MSS or process equipment	vent to atmosphere	Annual: MSS-TA UNCONTROLLED MSS-MA UNCONTROLLED
Process units and tanks	Abrasive blasting	Vent to atmosphere	Annual: MSS-TA UNCONTROLLED
Coker unit drums Hydrogen compressor KOH treaters	SUSD, maintenance	Vent to flares	Flares cap
Heaters	Pigging and Decoking	Vent to atmosphere	MSS-MA UNCONTROLLED
Complex 8 CPI	maintenance, loading with bladder equipped vacuum truck or traditional vacuum truck with CAS	Vent to atmosphere or control	MSS-MA, MSS-MA UNCONTROLLED

MSS-TA = MSS associated with tanks

MSS-MA = MSS associated with maintenance

Date: xxxxx

DEC 22 2022

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.

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 2937 and PSDTX1023M3

Stacey Hopper
Alternative Custodian of Records
Texas Commission on Environmental Quality

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)
REFFUG	Refinery Fugitives Subcap (5)	VOC	63.25	277.00
		NH ₃	0.04	0.15
		H ₂ S	1.41	6.19
Various	Tanks Subcap	VOC	198.61	42.15
		H ₂ S	0.03	0.04
EP-FLARE-1, HCU-FL1, REF2-FL1, WP-FLARE1, SRU1-FLARE, SRU2-FLARE, SWS-FLARE	Flares Subcap	NO _x	25.99	33.52
		CO	187.87	172.78
		VOC	613.85	116.20
		SO ₂	7.79	6.65
		H ₂ S	0.08	0.07
SRU1-INCIN, SRU2-INCIN	SRUs Subcap	NO _x	5.35	23.44
		CO	4.41	19.30
		VOC	0.29	1.26
		SO ₂	66.77	292.47
		H ₂ S	0.67	2.92
		PM	2.50	8.12
		PM ₁₀	2.50	8.12
		PM _{2.5}	2.50	8.12
Various	Wastewater Treatment Unit Subcap	VOC	7.66	33.53
Various	Wastewater Carbon Adsorption Canisters	VOC	0.61	2.67

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS Caps (6)	MSS caps	NO _x	71.02	7.19
		CO	350.30	32.93
		VOC	539.33	45.41
		SO ₂	1031.57	41.40
		H ₂ S	10.96	0.24
		PM	17.50	2.34
		PM ₁₀	3.50	0.40
		PM _{2.5}	1.22	0.23
		NH ₃	4.46	0.51
		Exempt Solvents	1.76	0.60
FU-1	DCU Coke Handling Fugitives	PM	0.62	2.74
		PM ₁₀	0.30	1.29
		PM _{2.5}	0.04	0.20
EP-B-1	Boiler - C8 Boiler No. 1 (EP-B-1)	NO _x	5.90	18.05
		CO	12.28	21.90
		VOC	0.91	3.24
		SO ₂	4.40	5.81
		PM	1.26	4.48
		PM ₁₀	1.26	4.48
		PM _{2.5}	1.26	4.48
		NH ₃	0.05	0.19
EP-B-2	Boiler - C8 Boiler No. 2 (EP-B-2)	NO _x	5.90	18.05
		CO	12.28	21.90
		VOC	0.91	3.24
		SO ₂	4.40	5.81
		PM	1.26	4.48
		PM ₁₀	1.26	4.48
		PM _{2.5}	1.26	4.48
		NH ₃	0.05	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)
EP-B-5	Boiler - C8 Boiler No. 5 (EP-B-5) 331 MMBtu/hr	NO _x	11.58	31.73
		CO	24.08	38.50
		VOC	1.78	5.70
		SO ₂	8.62	10.21
		PM	2.46	7.17
		PM ₁₀	2.46	7.17
		PM _{2.5}	2.46	7.17
		NH ₃	0.10	0.33
B-4	Boiler - C6B Boiler No. 4 (West) (169-B-4)	NO _x	2.70	11.83
		CO	6.55	14.35
		VOC	0.49	2.13
		SO ₂	2.34	3.80
		PM	0.67	2.94
		PM ₁₀	0.67	2.94
		PM _{2.5}	0.67	2.94
		NH ₃	0.03	0.12
B-5	Boiler - C6B Boiler No. 5 (East) (169-B-5)	NO _x	2.70	11.83
		CO	6.55	14.35
		VOC	0.49	2.13
		SO ₂	2.34	3.80
		PM	0.67	2.94
		PM ₁₀	0.67	2.94
		PM _{2.5}	0.67	2.94
		NH ₃	0.03	0.12

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
EP-B-6	Complex 8 No. 6 Boiler	NO _x	5.01	20.02
		NO _x MSS	33.40	0.67
		CO	12.16	48.57
		CO MSS	121.55	2.43
		VOC	1.80	7.20
		SO ₂	8.70	12.88
		PM	2.49	9.94
		PM ₁₀	2.49	9.94
		PM _{2.5}	2.49	9.94
		NH ₃	1.47	5.87
8-H-3	Heater - C7 No. 4 Vacuum Chrg. (108-H-3)	NO _x	3.50	12.00
		CO	2.47	4.23
		VOC	0.19	0.65
		SO ₂	0.90	1.15
		PM	0.26	0.89
		PM ₁₀	0.26	0.89
		PM _{2.5}	0.26	0.89
		NH ₃	0.01	0.04
8-H-4	Heater - C7 No. 4 Crude Chrg. (108-H-4)	NO _x	6.78	19.16
		CO	13.66	19.30
		VOC	1.04	2.95
		SO ₂	5.00	5.24
		PM	1.44	4.08
		PM ₁₀	1.44	4.08
		PM _{2.5}	1.44	4.08
		NH ₃	0.06	0.17

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
8-H-5	Heater - C7 No. 4 Vacuum Chrg. (108-H-5)	NO _x	1.72	7.53
		CO	4.85	10.62
		VOC	0.37	1.62
		SO ₂	1.78	2.88
		PM	0.51	2.25
		PM ₁₀	0.51	2.25
		PM _{2.5}	0.51	2.25
		NH ₃	0.02	0.10
8-H-6	Heater - C7 No. 4 Crude Chrg. (108-H-6)	NO _x	10.01	21.90
		CO	20.17	30.89
		VOC	1.54	4.72
		SO ₂	7.38	8.38
		PM	2.13	6.53
		PM ₁₀	2.13	6.53
		PM _{2.5}	2.13	6.53
		NH ₃	0.09	0.28
7-H-2	Heater - C7 Coker Chrg. (107-H-2)	NO _x	9.10	31.54
		CO	10.69	18.53
		VOC	0.82	2.83
		SO ₂	3.91	5.03
		PM	1.13	3.92
		PM ₁₀	1.13	3.92
		PM _{2.5}	1.13	3.92
		NH ₃	0.05	0.17

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
27-H-1	Heater - C8 BTX Clay Twr (127-H-1)	NO _x	1.43	2.58
		CO	0.87	0.78
		VOC	0.06	0.12
		SO ₂	0.31	0.21
		PM	0.09	0.16
		PM ₁₀	0.09	0.16
		PM _{2.5}	0.09	0.16
		NH ₃	< 0.01	0.01
37-H-1	Heater - C7 Kero HDS Chrg. (137-H-1)	NO _x	3.98	8.65
		CO	2.81	3.05
		VOC	0.21	0.47
		SO ₂	1.03	0.83
		PM	0.30	0.64
		PM ₁₀	0.30	0.64
		PM _{2.5}	0.30	0.64
		NH ₃	0.01	0.03
37-H-3	Heater - C7 Kero HDS Frac.Reb. (137-H-3)	NO _x	3.39	11.17
		CO	2.39	3.94
		VOC	0.18	0.60
		SO ₂	0.88	1.07
		PM	0.25	0.83
		PM ₁₀	0.25	0.83
		PM _{2.5}	0.25	0.83
		NH ₃	0.01	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
39-H-1	Heater - C7 No. 4 Hydrobon Charge (139-H-1)	NO _x	3.99	17.48
		CO	2.81	6.16
		VOC	0.22	0.94
		SO ₂	1.03	1.67
		PM	0.30	1.30
		PM ₁₀	0.30	1.30
		PM _{2.5}	0.30	1.30
		NH ₃	0.01	0.06
39-H-2	Heater - C7 No. 4 Hydrobon Reb. (139-H-2)	NO _x	3.78	16.57
		CO	2.67	5.84
		VOC	0.20	0.89
		SO ₂	0.98	1.59
		PM	0.28	1.23
		PM ₁₀	0.28	1.23
		PM _{2.5}	0.28	1.23
		NH ₃	0.01	0.05
44-H-1	Heater - C7 GOT Chrg. (144-H-1)	NO _x	4.19	16.10
		CO	8.44	16.22
		VOC	0.65	2.48
		SO ₂	3.09	4.40
		PM	0.89	3.43
		PM ₁₀	0.89	3.43
		PM _{2.5}	0.89	3.43
		NH ₃	0.04	0.15

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
44-H-2	Heater - C7 GOT Frac. Reb. (144-H-2)	NO _x	4.79	20.97
		CO	2.81	6.16
		VOC	0.22	0.94
		SO ₂	1.03	1.67
		PM	0.30	1.30
		PM ₁₀	0.30	1.30
		PM _{2.5}	0.30	1.30
		NH ₃	0.01	0.06
44-H-3	Heater - C7 GOT Stabilizer (144-H-3)	NO _x	1.97	6.28
		CO	2.32	3.69
		VOC	0.18	0.56
		SO ₂	0.85	1.00
		PM	0.25	0.78
		PM ₁₀	0.25	0.78
		PM _{2.5}	0.25	0.78
		NH ₃	0.01	0.03
148H-01-02	ULSD Heaters	NO _x	5.00	17.48
		CO	10.08	17.60
		VOC	0.77	2.69
		SO ₂	3.69	4.78
		PM	1.07	3.72
		PM ₁₀	1.07	3.72
		PM _{2.5}	1.07	3.72
		NH ₃	0.05	0.16

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
Q11-H-301	Heater - C6B HCU Rx Chrg. (129-H-301)	NO _x	2.25	8.21
		CO	6.55	11.95
		VOC	0.49	1.77
		SO ₂	2.36	3.19
		PM	0.67	2.45
		PM ₁₀	0.67	2.45
		PM _{2.5}	0.67	2.45
		NH ₃	0.03	0.10
Q11-H-3001	Heater - C6B HCU Deb. Reb. (129-H-3001)	NO _x	3.84	16.82
		CO	2.33	5.10
		VOC	0.17	0.76
		SO ₂	0.84	1.36
		PM	0.24	1.04
		PM ₁₀	0.24	1.04
		PM _{2.5}	0.24	1.04
		NH ₃	0.01	0.04
Q11-H-3002	Heater - C6B HCU Fract.Reb. (129-H-3002)	NO _x	3.84	16.82
		CO	2.33	5.10
		VOC	0.17	0.76
		SO ₂	0.84	1.36
		PM	0.24	1.04
		PM ₁₀	0.24	1.04
		PM _{2.5}	0.24	1.04
		NH ₃	0.01	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
Q3-H-3	No. 2 Reformer HDS Heaters	NO _x	8.87	25.45
		CO	6.46	9.26
		VOC	0.48	1.37
		SO ₂	2.31	2.45
		PM	0.66	1.90
		PM ₁₀	0.66	1.90
		PM _{2.5}	0.66	1.90
		NH ₃	0.03	0.08
QH-125	No. 2 Reformer Heaters	NO _x	3.60	15.27
		CO	11.91	25.27
		VOC	0.88	3.74
		SO ₂	4.26	6.69
		PM	1.22	3.25
		PM ₁₀	1.22	3.25
		PM _{2.5}	1.22	3.25
		NH ₃	0.05	0.22
Q3-H-4A/B	Heater - C6B No. 2 Ref. Split. (116-H-4A/B)	NO _x	3.99	17.30
		CO	2.91	6.30
		VOC	0.78	3.39
		SO ₂	1.04	1.67
		PM	0.30	1.29
		PM ₁₀	0.30	1.29
		PM _{2.5}	0.30	1.29
		NH ₃	0.01	0.05

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
QL-10	Heater - C6B No. 4 Plat. Splitter (154-H-10)	NO _x	2.09	5.80
		CO	6.10	8.45
		VOC	1.49	5.81
		SO ₂	2.18	2.24
		PM	0.62	1.73
		PM ₁₀	0.62	1.73
		PM _{2.5}	0.62	1.73
		NH ₃	0.03	0.07
Q10-H-1	Heater - C6B SMR Heater (129-H-1)	NO _x	8.28	36.26
		CO	17.21	37.69
		VOC	1.28	5.59
		SO ₂	6.21	10.07
		PM	1.76	7.72
		PM ₁₀	1.76	7.72
		PM _{2.5}	1.76	7.72
		NH ₃	0.07	0.33
SMR2	SMR2 Heater	NO _x	26.25	103.34
		CO	53.66	105.67
		VOC	4.04	15.92
		SO ₂	19.16	27.93
		PM	5.59	22.00
		PM ₁₀	5.59	22.00
		PM _{2.5}	5.59	22.00
		NH ₃	0.24	0.93
83-CT1	Complex 8 Cooling Tower	VOC	1.14	5.00
		PM	3.02	12.22
		PM ₁₀	1.04	4.20
		PM _{2.5}	0.01	0.02
Q-CT4		VOC	0.41	1.81

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
	Hydrocracker Cooling Tower	PM	1.10	4.43
		PM ₁₀	0.38	1.52
		PM _{2.5}	< 0.01	0.01
Q-CT5	No. 2 Reformer Cooling Tower	VOC	0.27	1.17
		PM	0.72	2.86
		PM ₁₀	0.24	0.97
		PM _{2.5}	< 0.01	0.01
88-CT7	Complex 7 Cooling Tower	VOC	1.75	7.66
		PM	4.69	18.72
		PM ₁₀	1.59	6.33
		PM _{2.5}	0.01	0.04
Q-CT8	BTX Cooling Tower	VOC	0.29	1.26
		PM	0.77	3.08
		PM ₁₀	0.26	1.04
		PM _{2.5}	<0.01	0.01
PD-6	Marine Loading (Dock 6) Fugitives	VOC	54.05	3.20
MARINE-LDG	Marine Loading	VOC	347.43	45.79
PMA-LOAD	Asphalt Blending Unit Loading	VOC	1.02	1.83
		H ₂ S	<0.01	<0.01
TO-2	Thermal Oxidizer	NO _x	3.29	8.81
		CO	1.75	4.70
		VOC	0.34	1.27
		SO ₂	0.02	0.05
		PM	0.16	0.44
		PM ₁₀	0.16	0.44
		PM _{2.5}	0.16	0.44
TO-3	Marine Loading Thermal Oxidizer	NO _x	5.99	19.45
		CO	27.27	88.61
		VOC	69.90	23.53

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	0.15	0.23
		PM	0.71	2.32
		PM ₁₀	0.71	2.32
		PM _{2.5}	0.71	2.32
TT-RACK1	Truck Loading Rack	VOC	3.58	1.41
2REGENVENT	No. 2 Reformer Regen Vent	VOC	0.01	0.01
CSV1	Coke Stream Vent 1	VOC	55.00	---
		PM	2.95	---
		PM ₁₀	1.98	---
		PM _{2.5}	1.98	---
		H ₂ S	5.43	---
CSV2	Coke Stream Vent 2	VOC	55.00	---
		PM	2.95	---
		PM ₁₀	1.98	---
		PM _{2.5}	1.98	---
		H ₂ S	5.43	---
CSV1/CSV2	Coke Stream Vents 1/2 Combined Cap	VOC	---	20.08
		PM	---	1.08
		PM ₁₀	---	0.72
		PM _{2.5}	---	0.72
		H ₂ S	---	1.98
SMR2-DG V1	DG Vent Condenser	VOC	0.01	0.03
		CO	0.56	2.45
		NH ₃	0.01	0.04

- (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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented

Emission Sources - Maximum Allowable Emission Rates

- PM₁₀ - 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
- CO - carbon monoxide
- H₂S - hydrogen sulfide
- NH₃ - ammonia

- (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.
- (6) The maintenance, startup, and shutdown (MSS) emission caps are independent of the routine operating emission limits. The emission points and activities authorized under the MSS emission caps are identified in Attachment 4 to this permit.

Date: _____ XXXX

DRAFT

DEC 22 2022

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.

Permit Renewal & Amendment Source Analysis & Technical Review

Stacey Kerper
Alternative Custodian of Records
Texas Commission on Environmental Quality
2937 and PSDX1023M3

Company	Valero Refining Texas LP	Permit Number	220450
City	Corpus Christi	Project Numbers	220450
County	Nueces	Regulated Entity Number	RN100211663
Project Types	Renewal and Amendment	Customer Reference Number	CN600127468
Project Reviewer	Laura Gibson, P.E.	Received Date	October 31, 2014, revised application received 1/20/2016
Site Name	Bill Greehey Refinery East Plant		

Project Overview

The applicant has requested a renewal of the referenced refinery permit. Sources are being modified and PSD review is triggered for CO and VOC. Overall annual caps on the permit are being removed with this project. Other details are found in the Project Scope below.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)
PM	150.03	163.78	+13.75
PM ₁₀	148.22	132.78	-15.44
PM _{2.5}	147.13	117.55	-29.58
VOC	693.69	717.48	+23.79
NO _x	665.40	659.27	-6.13
CO	761.54	844.57	+83.03
SO ₂	468.04	479.97	+11.93
H ₂ S	2.21	11.45	+9.24
NH ₃	0.51	10.73	+10.22
HAPs (Benzene)	0.24	0	-0.24

The above table does not include overall emission caps (which are being removed with this project) because individual EPN emission rates are limiting. Benzene speciation is allowed to be removed from the MAERT because it is within VOC and the area is no longer an APWL for benzene.

Federal Applicability

Nonattainment review is not applicable because this county is in attainment or unclassified for all NAAQS. The applicant investigated federal applicability for potential PSD review. This project is aggregated with Permit 135622, Project 247318 since sources on that permit were on NSR Permit 2937 at the time renewal was due. The table below includes EPNs from both permits / projects.

PSD Triggers

Pollutant	Project Increase* (tpy)	PSD Netting Trigger (tpy)	Netting Triggered (Y/N)	Net Contemporaneous Change (tpy)	PSD Major Mod Trigger (tpy)	PSD Review Triggered (Y/N)
CO	172.4	100	Y	178.9	100	Y
PM	9.8	25	N	NA	25	N
PM ₁₀	9.8	15	N	NA	15	N
PM _{2.5}	9.6	10	N	NA	10	N
NO _x	31.6	40	N	NA	40	N
SO ₂	7.8	40	N	NA	40	N
VOC as ozone	194.2	40	Y	271.4	40	Y
H ₂ S	3.5	7	N	NA	7	N

* Baseline actuals (or permitted allowable if actual was greater than allowed) to proposed allowables.

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 2

Regulated Entity No. RN100211663

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	February 10, 2022
Site rating & classification:	1.65 / 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	
	Renewal	Amendment
Legislator letters mailed	11/6/2014	
Date 1 st notice published	11/20/2014	11/20/2014
Publication Name:	Corpus Christi Caller Times	
Pollutants:	Organic compounds, nitrogen oxides, sulfur dioxide, carbon monoxide, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, hydrogen sulfide and hazardous air pollutants.	
Date 1 st notice Alternate Language published	NA, applicant certified that they could not find an alternative language publication. Alternative language publication will be required for NAPD.	
Publication Name (Alternate Language):	NA	
1 st public notice tearsheet(s) received	12/1/2014	12/1/2014
1 st public notice affidavit(s) received	12/1/2014	12/1/2014
1 st public notice certification of sign posting/application availability received	8/25/2015	8/25/2015
SB709 Notification mailed	NA, project received prior to 9/1/2015, which is when notice to legislators prior to PN2 began to be required.	
Date 2 nd notice published	3/15/2022	3/15/2022
Publication Name:	Corpus Christi Caller Times	
Pollutants:	Carbon monoxide, organic compounds, ammonia, exempt solvents, hazardous air pollutants, hydrogen sulfide, nitrogen oxides, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide	
Date 2 nd notice published (Alternate Language)	3/15/2022	3/15/2022
Publication Name (Alternate Language):	Tejano y Grupero News	
2 nd public notice tearsheet(s) received	3/24/2022	3/24/2022

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 3

Regulated Entity No. RN100211663

Requirement	Date	
	Renewal	Amendment
2 nd public notice affidavit(s) received	3/24/2022	3/24/2022
2 nd public notice certification of sign posting/application availability received	4/20/2022	4/20/2022

Public Interest

Public Interest Information	
Number of comments received	0
Number of meeting requests received	0
Number of hearing requests received	1
Date meeting held	NA
Date response to comments filed with OCC	7/12/2022
Date of SOAH hearing	

Renewal Requirements

Requirement	
Date of permit expiration:	11/18/2014
Date written notice of review was mailed:	2/10/2014
Was there a condition of air pollution that had to be addressed during this project review?	No
If yes, explain:	
Permit Renewal Fee: \$	\$10,000

Federal Rules Applicability

Requirement	
Subject to NSPS?	Yes
Subparts A, Db, J, Ja, K, Kb, VV, XX, GGG, & QQQ	
Subject to NESHAP?	Yes
Subparts A, J, V, M, BB & FF	
Subject to NESHAP (MACT) for source categories?	Yes
Subparts A, F, G, H, R, Y, CC, UUU, DDDDD, & GGGGG	
Nonattainment review applicability	This county is designated attainment or unclassified with regard to all NAAQS, so nonattainment review is not applicable.
PSD review applicability	See Federal Applicability discussion above.

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 4

Regulated Entity No. RN100211663

Title V Applicability

Requirement

Title V applicability: The facility operates under Title V permit no. O2238.

Periodic Monitoring (PM) applicability: The site is major source and is subject to PM. The site performs the following regarding currently affected sources:

- For heaters, periodic monitoring of fuel composition and heating value when varied. Data used with stack testing results. Continuous monitoring of H₂S in refinery fuel for combustion units. Record periods of operation of Q3-H-4, SMR2, QL-10.
- Inspect internal floating roofs and seals of tanks annually.
- Monitor pilot flame on flares once hourly. Quarterly visible emissions monitoring.
- 28MID, 28VHP, 28CNTQ LDAR requirements are present for VOC fugitives, along with 28AVO for units in H₂S and NH₃ service.
- WW-CAS sampling every 2 weeks, with weekly inspections for carbon build up.
- Recordkeeping for floating roof tank roof landings, degassing and change of service updated monthly.
- Measure and record outlet gas temperature from condenser systems (chillers) once per week.
- Monthly emissions records of VOCs from tanks, loading, and cooling towers. Monthly emissions records of PM species from cooling towers.
- Monthly recordkeeping showing compliance with short term & annual emission limits for all facilities authorized by subcaps: REFFUG, Tanks Subcap, Flares Subcap, WWTP Subcap, WW-CAS subcap, MSS subcap
- Quarterly inspections of WWTP water seals. Weekly sampling of minimum mixed liquor total suspended solids in WWTP.

Compliance Assurance Monitoring (CAM) applicability: Loading emissions have potential to emit > 100 tpy if uncontrolled, so their control device (TO-3) is subject to CAM. CEMS for SO₂ and 4 times per hour monitoring of combustion temperature of SRU1 and SRU2 incinerators. Continuous monitoring of TO-3 combustion chamber outlet temperature is performed. NO_x and CO CEMs are present from several heaters and boilers (> 100 MMBtu/hr and SRU incinerators).

Process Description

The main process at this site is refining of crude oil into various fuel products and sending those products out to market. Emission points authorized include storage tanks, boilers and heaters, cooling towers, marine and truck loading, thermal oxidizers at loading points, flares, sulfur recovery units, coke handling, process vents, recovery wells, and wastewater treatment and carbon adsorption canisters.

Project Scope

Below is a summary of the proposed changes to the permit:

- 1) Removal of all emission caps for routine refinery operations – Since the sum of the annual allowables for all EPNs for routine refinery operations was less than the permit caps, the caps have been removed.
- 2) Reduce NO_x factor on selected heaters: EPNs Q10-H-1, QL-10 as required by (previously numbered) SC 11 and Consent Decree.
- 3) Increase hourly and annual emissions on Heater - C6B HCU Rx Chrg. EPN Q11-H-301 to design capacity.
- 4) Authorize Ammonia emissions from all boilers and heaters. These emissions have always been present but were detected in testing at the refinery, so are being quantified with this action.
- 5) Authorized CAS to control select WWTP sources to comply with NESHAP for benzene waste (EPN WW-CAS)
- 6) Authorize emissions from previously authorized benzene wastewater stripper that were omitted during deflex (EPN WP-FLARE1)
- 7) Authorize the use of the #2 Reformer Flare as an alternate means of control for the VOC – Currently VOC emissions from the #2 Reformer and the #4 Platformer are routed to process heaters. The flare will be used as an

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 5

Regulated Entity No. RN100211663

alternate means of control. (EPNs QL-10, Q3-H-4A/B, REF-FL2)

- 8) Authorize Heater 130-H-01 as a secondary control device (EPN SMR2) for the existing Steam Methane Reformer (SMR)
- 9) Authorize emissions from Coker drums associated with the existing delayed coker unit (EPNs CSV1 and CSV2)
- 10) Update emissions from the following flares – EPNs WP-FLARE1, EP-FLARE1, HCU-FL1, and REF-FL2) – Applicant has requested to update flare emissions based on recently measured flow and composition data.
- 11) Update PM/PM₁₀/PM_{2.5} emissions from SRU Incinerators (EPNs SRU1-INCIN, SRU2-INCIN)
- 12) Increase amount of gas oil loaded into barges at Dock 6 (EPN PD-6)
- 13) Increase emissions from loading of asphalt (EPN PMA-LOAD)
- 14) Change basis of Cooling Tower emissions to maximum TDS and VOC content – This will affect five cooling towers (EPNs 83-CT1, Q-CT4, Q-CT5, 88-CT7, Q-CT8)
- 15) Update fugitive emission rates because of full incorporation of thirteen PBRs (EPN REFUG)
- 16) Authorize MSS for the Complex 8 Corrugated Plate Interceptor (within MSS Subcap)
- 17) Authorize MSS heater pigging and decoking activities (within MSS Subcap)
- 18) Authorize MSS activities – meter maintenance and purging at a neighboring industrial facility (within MSS Subcap)
- 19) Authorize increased annual abrasive blasting (within MSS Subcap)
- 20) Remove EPNs that have been permanently shut down: 39-H-3A, 39-H-3B, 39-H-3C, 39-H-7,
- 21) Remove EPNs that have been renamed ASPH-RCLDG, ASPH-TLDG, LATEX-TLDG, RC-RACK1, SULF-RCLDG, SULF-TLDG, 4REGENVENT
- 22) Move EPNs from individual emission rates on MAERT to Wastewater Treatment Plant (EPN WWTP), which controls emissions from WW sources. Some were renamed due to addition of covers, etc., others were incorporated by consolidation from previous PBR authorization.
- 21) Remove tank heater EPNs that are authorized by NSR Permit 135622: H-TK-54, H-TK-70

Heaters and boilers had slight corrections to emission rates with respect to incorrect representations when amending the permit from a flexible permit to an NSR non flexible permit (previous deflex permit action, Project 159115). At the time of that action, individual emission rates were mistakenly not represented as maximum potential to emit based on maximum firing rate, short term emission rate factors, and short term sulfur limits in the fuel. Also with this renewal, ammonia emissions of 0.00032 lb/MMBtu that have always been emitted from these sources but not previously quantified are now being quantified on the MAERT, per TNRCC Victoria Hsu Memo, March 10, 1997.

Special Conditions were reviewed to ensure they accurately described the current process at the site. Month/year references within the Special Conditions are left based on applicant request. Other changes are described below:

Previous CND No.	New CND No.	Description of Change
---	2, 3, 4	Applicable NSPS, NESHAP, and MACT standards specifically identified
11	14	Update NOx concentration limit for EPN 8-H-4 to current 0.035 lb/MMBtu. Delete heaters that are no longer authorized by this permit or permanently removed
14	17	Delete Consent Decree reference due to it being terminated. Rest of Special Condition remains.
18, 19, 20, 29B(3), 32, 53B(1)	---	Removal of Reserved blank CNDs
16	19	Specify 1 hour average for Scot TGI per applicant request.
23	23	Add details re calculating monthly VOC emissions from cooling towers from measured strippable VOC concentration and measured recirculation rates, or design maximum recirculation rate.
--	24	New CND for PM from cooling towers, similar to that used for Valero Pmt 39142 / Project 319167 Renewal / Amendment issued 8/31/2021.
27	29	Swapping olfactory and visual in description such that acronym AVO may be defined. Remove AVO monitoring for hydrogen fluoride since the equipment generating HF is no longer present at the site.
28	30C(4)	Delete reference to burner replacement requirement condition since it has been

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 6

Regulated Entity No. RN100211663

Previous CND No.	New CND No.	Description of Change
		completed and that CND is being removed with this action.
29	31	Remove requirement for CEMS monitoring to be installed by 11/18/2004 or 11/18/2008 since CEMS has been installed per those requirements.
33	33	Rewrite CND regarding demonstration with capped emission limits to appropriate recordkeeping re sources because overall emission cap is being removed. Move recordkeeping for heaters and boilers outside of caps. Add recordkeeping for cooling towers outside of caps.
34-36	--	Applicant represented on 11/18/21 draft permit review that HF Alkylation Unit being demolished so these CND no longer needed.
38	36	Added SRU-1FLARE, SRU-2FLARE, SWS-FLARE as possible flares for identified MSS activities
39	--	Delete CND requiring alteration within 90 days of reducing sulfur concentration to flare header, because this CND was added to replace the requirement that flares operate in accord with 40 CFR 60 Subpart J as part of a Consent Decree, which has expired and compliance with NSPS Subparts is in new CND 2.
--	38-41	WW Collection and Treatment CNDs. Language based on Pmt 124662 which is consistent with current boilerplate aside from allowing MLSS sampling weekly instead of daily.
41	42	Identify WW-CAS subcap and current application representation.
43	44	remove reference to COGEN-1 and COGEN-2 authorized by Pmt 9344 because this permit was voided by project 169862 on 9/14/2011.
45E(3)	46E(3)	Add allowance for up to 72 lb contaminants from maintenance of Complex 8 CPI as permitted by 40 CFR 63, Subpart CC.
--	62	additional CND to ensure collection of spent abrasive blast media
--	66	New CND to ensure BACT for Heater decoking (water spray as represented).
64	--	Deleted upon applicant request since burner replacement has been completed & emission concentrations specified elsewhere.
--	67	Add referenced PBR
Attachment 1 to MAERT	Attachment 1 to CND	Move attachment to CND. Reworked to identify EPNs and source names under subcaps. Contaminants no longer included because these are identified in the MAERT for each subcap.
Attachment 4	Attachment 4	Add additional MSS activities being quantified: Complex 8 CPI, Enterprise MSS activities, heater pigging and decoking. Add activities previously mentioned in SC 39 but not included in this attachment: coker unit drums SUSL, hydrogen compressor maintenance, KOH treaters maintenance and SU. Identify acronyms. Delete reference to Air Liquide MSS which was included in error previously.
	throughout	Revise PSDTX1023M2 to PSDTX1023M3. Special Conditions renumbered, SC references updated, acronyms identified and used

Best Available Control Technology

As part of the BACT review process, the Texas Commission on Environmental Quality (TCEQ) evaluates information from the EPA's RACT/BACT/LAER Clearinghouse (RBLC), on-going permitting in Texas and other states, and the TCEQ's continuing review of emissions control developments for pollutants triggering a PSD review. PSD review is triggered for CO and VOC, and state level review is triggered for all other regulated pollutants.

In addition to a review of control technology for steady state operations, the Best Available Control Technology (BACT) analysis includes startup and shutdown emissions and the numerical emission limits in the draft permit reflect this analysis. BACT for each pollutant is reflected in the numerical limits in the MAERT.

For a renewal of an existing air permit, the commission may not impose conditions more stringent than the existing permit unless more stringent conditions are necessary to avoid a condition of air pollution or to ensure compliance with other

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 7

Regulated Entity No. RN100211663

state and federal air quality control requirements. BACT is addressed below for modified units only, and is consistent with the results of the RBLC search for applicable facilities.

Table 1: BACT for Modified Sources

Source Name	EPN	Best Available Control Technology Description
Refinery Fugitives	REFFUG	28VHP or 28AVO as applicable. BACT is met.
Tanks Subcap	175-TK-001, TK-123, TK-2, TK-235, 175-TK-002, TK-124, TK-202, TK-310, 175-TK-003, TK-125, TK-210, TK-311, 29-TK-18, TK-126, TK-211, TK-312, SWS1-T3, TK-128, TK-212, TK-325, TK-10, TK-131, TK-213, TK-332, TK-109, TK-132, TK-22, TK-354, TK-11, TK-133, TK-231, TK-500, TK-113, TK-134, TK-232, TK-55, TK-114, TK-135, TK-233, TK-86, TK-122, TK-138, TK-234, TK-9	7 internal floating roof tanks with mechanical shoe primary seal, painted white. 1 external floating roof tank, painted white with primary mechanical shoe seal and a secondary rim-mounted seal. Vertical fixed roof tanks storing low vp products (vp < 0.5 psia) with submerged fill, painted white. BACT is met.
Marine Loading and Thermal Oxidizer	MARINE-LDG, TO-3, PD-6	Materials with vp > 0.5 psia are collected with an efficiency of 95% and are routed to thermal oxidizer. Ships loaded with crude or condensate pass an annual vapor tightness test. BACT is met.
Asphalt Loading	PMA-LOAD	Materials w/ vp < 0.5 psia typically require submerged loading. Applicant stated that submerged fill is not technically feasible for polymer-modified asphalt because it is thixotropic (shear thinning). Splash filling of asphalt is avoided to the extent practicable. Even under shear, it has limited ability to form suspended droplets in a vessel's vapor space. Using the splash loading factor will overstate emissions but this will also be included within the AQA / health effects to ensure acceptable impacts. The asphalt has ultra-low vapor pressure (maximum of 0.018 psia) and high viscosity, with an average of 2500 centipoise (cP) and a minimum of 890 cP. Due to these physical properties, these ultra-low vapor pressure materials will be splash loaded. BACT is satisfied.
Truck loading and thermal oxidizer	TT-RACK1, TO-2	Materials with vp > 0.5 psia are collected with an efficiency of 95% and are routed to thermal oxidizer or flare (EPNs TO-2 or WP- FLARE1). Materials w/ vp < 0.5 psia use submerged loading. Gasoline tank trucks pass a leak-tight test annually. BACT is met.
Thermal Oxidizer	TO-2	Tank EPNs T-102, T-108, T-138, T-201, and recovery wells are routed to this oxidizer, that must meet MACT CC (40 CFR 63.670, 671) requirements. BACT is met.
Flares subcap	EP-FLARE1 HCU-FL-1 REF2-FL1 SRU1-FLARE SRU2-FLARE SWS-FLARE WP-FLARE1	98% VOC DRE represented. Flares meet MACT CC requirements in 40 CFR 63.670/671 which suffice to meet BACT as defined in 40 CFR 60.18.

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 8

Regulated Entity No. RN100211663

Source Name	EPN	Best Available Control Technology Description
SRUs Subcap	SRU1-INCIN, SRU2-INCIN	PM being quantified and added to MAERT with this action, other pollutants unchanged. Proposed collateral increase from this control device is due to combustion of waste gas in incinerators that was not previously accounted for. Sulfur > 10 LTPD, SRU and Tail Gas Incinerators. 99.8% sulfur recovery. SO ₂ CEMS for incinerators. BACT of good combustion practices and use of gaseous fuel is acceptable for this source and permitting action.
Wastewater Treatment Unit Subcap	WWTP	Uncontrolled site-wide wastewater emissions > 5 tpy VOC: stripped gases from pretreatment routed to a control device, collection system hard piped/covered conveyance to biological treatment unit vented to a control device, wastewater treatment system must be at least 90 percent efficient. Benzene wastewater stripper emissions routed to Complex 7 Flare (EPN WP-FLARE1) Gas Recovery unit, which removes H ₂ S via amine treatment and recovers gas to the fuel gas system. BACT is met.
Wastewater Carbon Adsorption Canisters: Disposable (non-regenerative)	WW-CAS	Minimum of two carbon canisters in series; periodic monitoring before the last canister which is acceptable for these low use rate systems. Breakthrough concentration 20-100 ppm based on vendor representations for specific compounds. Monitoring frequency every 2 weeks. Breakthrough concentration is 100 ppmv for VOC. BACT is met.
MSS: Process Units and Tanks Shutdown / Depressurize / Drain / Startup	MSS Caps	Process vessel purge gases routed to flares. Process vessels containing liquids with vp > 0.5 psia purged until one of the following (or similar) is met: VOC pp < 0.5 psia, 34,000 ppmv or less, measured as methane, 50% or less of lower explosive limit, and/or 3x the volume of the vessel has been nitrogen or steam purged. Remaining process fluid reduced through process fluid recovery and flaring, followed by testing with a gas sensor. BACT is met.
MSS: SRU Maintenance Shutdown	MSS Caps	Sweep natural gas through SRU to carry residual sulfur compounds to SRU incinerator, which has DRE of sulfur compounds of 99.9%. BACT is met.
MSS: Atmospheric Tank Cleaning and Refilling	MSS Caps	Drain and degas landed volume for floating roof tanks taken out of service. No more than six floating roof tanks taken out of service and drained and degassed per year. For change of service, land roof, drain tank, and begin refill within 24 hours. Only 3 gasoline tanks in service at any one time. Two roof landings per season (March and September) per tank. Maintain fixed roof tanks only when warranted by inspection. BACT is met.
MSS: Vacuum Trucks	MSS Caps	Slop oil or WW. Static loading or CAS with 95% control efficiency. BACT is met.
MSS: Heater decoking	MSS Caps	Limiting the frequency and duration of activities. Water spray to minimize decoking emissions. BACT is satisfied.
MSS: Abrasive blasting	MSS Caps	Collection and removal of spent or waste abrasive blast media in such a manner to minimize emissions and placing the waste in covered containers prior to removal from the site. Use of low dusting abrasives with a free silica content < 1%. No visible emissions crossing property line. This meets BACT for this source.
MSS: Complex	MSS Caps	These are MSS operations for a process unit. Degassing to the

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 9

Regulated Entity No. RN100211663

Source Name	EPN	Best Available Control Technology Description
8 Corrugated Plate Interceptor (CPI)		atmosphere will be limited to MACT CC levels (72 lb VOC, which will require adjustment of the 50 lb VOC limit in the MSS Special Conditions). Vacuum truck operations will otherwise be used as control, subject to appropriate MSS special conditions for these operations already within the permit. This meets BACT.
MSS: Meter maintenance and purging at a neighboring industrial facility (Enterprise)	MSS Caps	Emissions from truck venting, propane loading line clearing and meter maintenance purging performed at the neighboring Enterprise facility will be vented to a flare. Venting to a flare with 98% control efficiency is considered BACT for these MSS activities.
C8 No. 6 Boiler	EP-B-6 334 MMBtu/hr	Boiler authorized by Standard Permit being consolidated. Low NO _x burners and SCR are present resulting in NO _x emissions of 0.015 lb/MMBtu. CO 50 ppm average annual at 3% O ₂ . Natural or refinery fuel gas ≤ 60 ppmvd H ₂ S average annual (162 ppmvd H ₂ S maximum). The use of gaseous fuels limits PM emissions to values consistent with the AP-42 value for natural gas of 7.6 lb/MMscf. The NH ₃ level of 0.00032 lb/MMBtu is low enough that further controls (for this pollutant) are impractical. NO _x and CO CEMS are present. This meets Tier I BACT for refinery gas fired boilers.
Heater – C7 Kero HDS	37-H-3 34 MMBtu/hr	Consolidation of unregistered PBR 106.183, replacement heater for previous EPN 37-H-2. Increases are not being requested with respect to the PBR previously claimed. NO _x 0.1 lb NO _x /MMBtu, CO 100 ppm max, 50 ppm average annual. Low NO _x burners, good combustion practices, natural or refinery fuel gas ≤ 60 ppmvd H ₂ S average annual. Ammonia emissions of 0.00032 lb/MMBtu (as detected in stack testing) are being added. This NH ₃ level is low enough that further controls are impractical. For unit of this size being consolidated, this level of control is reasonable.

The project also included emission rate corrections for physically unmodified heaters and boilers. As specified in the TCEQ's BACT guidance document, APDG 6110v2 dated January 2011, "*Applications for projects subject to air pollution control evaluations are those with new and modified facilities or sources of emissions of air contaminants.*" These facilities are not new and are not being physically modified with this project. However, these sources are proposed to have allowable emission rates increases to correct representations in the permit. Therefore, the previous BACT evaluations were reviewed to ensure that the original BACT determinations would not have been different if the correct emission rates had been known at the time that they were originally evaluated for BACT. None of the allowable emission rate changes would have changed the BACT determinations.

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 10

Regulated Entity No. RN100211663

Permits Incorporation

Permit by Rule (PBR) / Standard Permit / Permit Nos.	Description (include affected EPNs)	Action (Reference / Consolidate / Void)
Unregistered 106.183	Replace existing EPN 37-H-2 Heater with EPN 38-H-1 heater, rename EPN 38-H-1 to 37-H-3	Consolidate
75588 106.261	LPG Truck Loading (EPN WP-FLARE1, REFFUG)	Consolidate
78481, 84566, 92232, 95585, 101863, 109202, and 118780 106.261	PBRs documenting annual fugitive additions - Additional fugitive components added to EPN REFFUG	Consolidate
101544 106.262	SRU Reliability, adding piping & components affecting EPN REFFUG	Consolidate
102329 106.532	Crude Tank Water Draws and oil/water separator (EPNs REFFUG, CAS177-01)	Consolidate
Unregistered 106.533	Groundwater Remediation Recovery Wells (EPN RWELLS)	Reference
Unregistered 106.472 and 106.532	Wastewater Treatment Plant Emission update (EPNs WWTP and WW-CAS)	Consolidate
107521 PCP Std Pmt	TO-2 Backup Carbon (T-108, T-201, TO-2, REFUG)	Consolidate
114571 Boiler Std Pmt	550 MMBtu/hr Boiler, refinery fuel gas. (EPN EP-B-6, REFFUG)	Consolidate
120625 Std Pmt (oil & gas)	Flare Gas Recovery (EPNs WP-FLARE1, REFFUG)	Consolidate

Impacts Evaluation

Was modeling conducted? **Yes** Type of Modeling: **AERMOD Version 19191**

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

Additional site/land use information: The area is industrial, with tank farms and Corpus Christi Industrial Canal to the north, and I-37 to the south with residential areas south of that.

The air quality analysis is acceptable all review types and pollutants. The results are summarized below. The WCC document number for the ADMT audit is 5629482.

**Table 1. Modeling Results for PSD De Minimis Analysis
in Micrograms Per Cubic Meter ($\mu\text{g}/\text{m}^3$)**

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
CO	1-hr	240	2000
CO	8-hr	221	500

**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	0.18	1

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 11

Regulated Entity No. RN100211663

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Significance ($\mu\text{g}/\text{m}^3$)
CO	8-hr	221	575

Table 4. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	289	715
H ₂ S	1-hr	30	108

Table 5. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	17	7.8
SO ₂	3-hr	246	25
PM ₁₀	24-hr	5.4	5
PM _{2.5}	24-hr	3.1	1.2
PM _{2.5}	Annual	0.6	0.2
NO ₂	1-hr	18	7.5
NO ₂	Annual	4.5	1

Table 6. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total Conc. = [Background + GLCmax] ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
SO ₂	1-hr	127	15	142	196
SO ₂	3-hr	264	25	289	1300
PM ₁₀	24-hr	8	79	87	150
PM _{2.5}	24-hr	11.3	23	34.3	35
PM _{2.5}	Annual	1	8	9	12

Permit Renewal & Amendment Source Analysis & Technical Review

Permit No. 2937
Page 12

Regulated Entity No. RN100211663

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total Conc. = [Background + GLCmax] ($\mu\text{g}/\text{m}^3$)	Standard ($\mu\text{g}/\text{m}^3$)
NO ₂	1-hr	63	57	120	188
NO ₂	Annual	6	8	14	100

The applicant provided a health effects review as specified in the TCEQ's March 2018 Modeling and Effects Review Applicability (MERA) guidance for project emission increases of non-criteria pollutants. A summary of the review for the pollutants with allowable emissions increases is included below in Table 7 below.

Table 7. Health Effects Review - Minor NSR Project-Related Modeling Results

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	ESL ($\mu\text{g}/\text{m}^3$)	Modeling and Effects Review Applicability (MERA) Step in Which Pollutant Screened Out
Ammonia 7664-41-7	1-hr	3	180	Step 4 – Production project-related results since most recent site-wide modeling GLCmax \leq 25% of ESL, and Production Project GLCmax \leq 10% of ESL
	Annual	N/A	92	Step 0 – long-term ESL \geq 10% of short-term ESL
Refinery light 8006-61-9	1-hr	108	3500	Step 4 – Production project-related results since most recent site-wide modeling GLCmax \leq 25% of ESL, and Project Production GLCmax \leq 10% of ESL
		704 (MSS)		Step 4 - GLCmax \leq 50% ESL site-wide MSS modelling, GLCmax \leq 25% ESL project MSS only
	Annual	NA	350	Step 0 – long-term ESL \geq 10% of short-term ESL
Refinery heavy 64741-88-4	1-hr	100	1000	Step 4 – Production project-related results since most recent site-wide modeling GLCmax \leq 25% of ESL, and Project Production GLCmax \leq 10% of ESL
		108 (MSS)		Step 4 - GLCmax \leq 50% ESL site-wide MSS modelling, GLCmax \leq 25% ESL project MSS only
	Annual	NA	100	Step 0 – long-term ESL \geq 10% of short-term ESL

Thus, the applicant has demonstrated that the proposed project's emissions will not adversely affect public health and welfare, which includes NAAQS, additional impacts, minor new source review of regulated pollutants without a NAAQS, and air toxics review. The proposed increases in health effects pollutants will not cause or contribute to any federal or state exceedances. Therefore, emissions from the facility are not expected to have an adverse impact on public health or the environment.

Project Reviewer
Laura Gibson, P.E.

Date


Team Leader
Matthew Ray

Date

DEC 22 2022

TCEQ Interoffice Memorandum

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.


Alternative Custodian of Records
Texas Commission on Environmental Quality

To: Laura Gibson, P.E.
Energy Section

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

From: Robert Scalise
ADMT

Date: May 12, 2021

Subject: Air Quality Analysis Audit – Valero Refining-Texas, L.P. (RN100211663)

1. Project Identification Information

Permit Application Number: 2937
NSR Project Number: 220450
ADMT Project Number: 7241
County: Nueces
Project Map: <\\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\7241\7241.pdf>

Air Quality Analysis: Submitted by Disorbo Consulting, LLC, February 2021, on behalf of Valero Refining-Texas L.P. Additional information provided March and April 2021.

2. Report Summary

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results for 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms Per Cubic Meter ($\mu\text{g}/\text{m}^3$)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
CO	1-hr	240	2000
CO	8-hr	221	500

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

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	0.18	1

TCEQ Interoffice Memorandum

The applicant performed an O₃ analysis as part of the PSD AQA. The applicant evaluated project emissions of O₃ 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 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 worst-case Texas source, the applicant estimated an 8-hr O₃ concentration of 0.18 ppb. When the estimate 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 8-hr CO is below its monitoring significance level.

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax (µg/m ³)	Significance (µg/m ³)
CO	8-hr	221	575

The GLCmax represents the maximum predicted concentration over five years of meteorological data.

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 O₃ monitoring data to satisfy requirements in 40 CFR 52.21 (i)(5)(i)(f).

A background concentration for O₃ was obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd, Corpus Christi, Nueces County. A three-year average (2017-2019) of the annual fourth highest daily maximum 8-hr concentrations (61 ppb) was used in the analysis. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. The use of this monitor for a background concentration of ozone is reasonable based on its proximity (<5 kilometers [km]) to the project site.

C. 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 553 km from the proposed site.

The predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times, are all less than de minimis levels at a distance of 0.3 km from the proposed sources in the direction of the Big Bend National Park Class I area. The Big Bend National Park Class I

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area is an additional 552.7 km from the location where the predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ 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.

D. Minor Source NSR and Air Toxics Analysis

Table 4. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	Standard (µg/m ³)
SO ₂	1-hr	289	715
H ₂ S	1-hr	30	108

Table 5. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	17	7.8
SO ₂	3-hr	246	25
PM ₁₀	24-hr	5.4	5
PM _{2.5}	24-hr	3.1	1.2
PM _{2.5}	Annual	0.6	0.2
NO ₂	1-hr	18	7.5
NO ₂	Annual	4.5	1

The 1-hr NO₂, 1-hr SO₂, and 24-hr and annual PM_{2.5} GLCmax are based on the highest five-year average of the maximum predicted concentrations determined for each receptor.

For all other pollutants and averaging times, the GLCmax are the maximum predicted concentrations associated with five years of meteorological data.

The primary NAAQS for 24-hr and annual SO₂ have been revoked for Nueces County and are not reported above.

The justification for selecting the EPA's interim 1-hr NO₂ and 1-hr SO₂ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO₂ and 1-hr SO₂ 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 NO₂ and 1-hr SO₂ NAAQS.

Intermittent guidance was relied on for the 1-hr SO₂ and 1-hr NO₂ minor NSR De Minimis analyses.

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

TCEQ Interoffice Memorandum

The PM_{2.5} 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 a PM_{2.5} NAAQS based on the analyses documented in EPA guidance and policy memoranda³.

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. 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 worst-case Texas source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.04 µg/m³ and 0.001 µg/m³, 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 6. Total Concentrations for Minor NSR 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	127	15	142	196
SO ₂	3-hr	264	25	289	1300
PM ₁₀	24-hr	8	79	87	150
PM _{2.5}	24-hr	11.3	23	34.3	35
PM _{2.5}	Annual	1	8	9	12
NO ₂	1-hr	63	57	120	188
NO ₂	Annual	6	8	14	100

The 1-hr SO₂ GLCmax is the highest five-year average of the 99th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The 3-hr SO₂ GLCmax is the high second-high predicted concentration associated with five years of meteorological data. The 24-hr PM₁₀ GLCmax is the high sixth-high predicted concentration associated with five years of meteorological data. The 24-hr PM_{2.5} GLCmax is the highest five-year average of the 98th percentile of the annual distribution of the predicted 24-hr concentrations determined for each receptor. The 1-hr NO₂ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of the predicted daily maximum 1-hr concentrations determined for each receptor. The annual PM_{2.5} GLCmax is the highest five-year average of the annual predicted concentrations determined for each receptor. The annual NO₂ GLCmax is the maximum predicted concentration associated with five years of meteorological data.

The primary NAAQS for 24-hr and annual SO₂ have been revoked for Nueces County and are not reported above.

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

TCEQ Interoffice Memorandum

Background concentrations for SO₂ were obtained from the EPA AIRS monitor 483550025 at 902 Airport Blvd, Corpus Christi, Nueces County. The three-year (2017-2019) average of the 99th percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The second highest 3-hr average concentration from the most recent year (2019) was used for the 3-hr value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on its proximity to the project site and the applicant's comparison of emissions within 10 km of the monitor and project site and surrounding land use.

A background concentration for PM₁₀ was obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County. The high second-high concentration from the most recent three years of monitoring data (2017-2019) was used for the 24-hr value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on its proximity to the project site and the applicant's comparison of emissions within 10 km of the monitor and project site and surrounding land use.

Background concentrations for PM_{2.5} were obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County. The three-year (2017-2019) average of the 98th percentile of the annual distribution of 24-hr concentrations was used for the 24-hr value. The 3-year (2017-2019) average of the annual average concentrations was used for the annual value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. The first and third quarters of 2018 monitoring data were incomplete as well as the fourth quarter of 2020 monitoring data. The third quarter of 2018 and the fourth quarter of 2020 are less than 50% complete and the ADMT substituted each quarter with the corresponding data from EPA AIRS monitor 483550032 located at 3810 Huisache St., Corpus Christi, Nueces County and verified the overall modeling result will not be affected. Using data from the nearby monitor is reasonable since the distance between the two monitors is approximately three kilometers. For the first quarter, the ADMT performed the substitution test as outlined in Appendix N to 40 CFR Part 50 and verified the validity of using 2018 monitoring data. Use of this monitor is reasonable based on the applicant's comparison of emissions within 10km of the monitor and project site, surrounding land use, and a review of the surrounding industries. In addition, the applicant explicitly modeled nearby off-property sources of PM_{2.5}.

Background concentrations for NO₂ were obtained from the EPA AIRS monitor 482011050 at 4522 Park Rd, Seabrook, Harris County. The three-year (2017-2019) average of the 98th percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The annual average concentration from the most recent year (2019) was used for the annual value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on the applicant's comparison of emissions within 10km of the monitor and project site, surrounding land use, county population and emissions comparison and a review of the surrounding industries. In addition, the applicant explicitly modeled nearby off-property sources of NO₂.

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 worst-case Texas source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.04 µg/m³ and 0.001 µg/m³,

TCEQ Interoffice Memorandum

respectively. When these estimates are added to the GLCmax listed in Table 6 above, the results are less than the NAAQS.

Table 7. Minor NSR Production Project-Related Modeling Results for Health Effects since Most Recent Site-wide Modeling

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	25% ESL ($\mu\text{g}/\text{m}^3$)
Ammonia 7664-41-7	1-hr	3	45
Refinery light 8006-61-9	1-hr	108	875
Refinery Heavy 64741-88-4	1-hr	100	250

Table 8. Minor NSR Production Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	10% ESL ($\mu\text{g}/\text{m}^3$)
Ammonia 7664-41-7	1-hr	3	18
Refinery light 8006-61-9	1-hr	108	350
Refinery Heavy 64741-88-4	1-hr	100.003	100

Table 9. Minor NSR MSS Project Modeling Results for Health Effects since Most Recent Site-wide Modeling

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	50% ESL ($\mu\text{g}/\text{m}^3$)
Refinery light 8006-61-9	1-hr	704	1750
Refinery Heavy 64741-88-4	1-hr	108	500

Table 10. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	25% ESL ($\mu\text{g}/\text{m}^3$)
Refinery light 8006-61-9	1-hr	704	875
Refinery Heavy 64741-88-4	1-hr	108	250

3. Model Used and Modeling Techniques

AERMOD (Version 19191) was used in a refined screening mode.

Unitized emission rates of 1 lb/hr and 1 tpy were used to predict a generic short-term and long-term impact, respectively, for each source. The generic impact was used to determine the worst-case location for the SRU MSS, tank control system and MSS heater decoking. The worst-case short-term location for the tanks control system (MSSTVCU1) and worst-case long-term location (MSSTVCU4) were used in the 1-hr and annual analyses, respectively. The worst-case short-term location for MSS heater decoking (MSSDCOK1) and worst-case long-term location

TCEQ Interoffice Memorandum

(MSSDCOK2) were used in the 1-hr and annual analyses, respectively. The worst-case location for the SRU MSS (MSSSRU) was used in the 1-hr and annual analyses.

Per the applicant, of tanks T_61 and T_62, only one tank can be filled at any given time. T_62 was included in the modeling as the worst-case source, as it is the closest to the property line.

For the health effects analyses, the applicant stated that MSS and routine emissions do not occur simultaneously. In addition, the modeling indicates that for the refinery light analysis only one of the following MSS activities will be occurring at any given time: source IDs MSSTCVU1, MSSTCVU2, MSSTCVU3, MSSTCVU4, MSSTCVU5, MSSTCVU6, MSSTCVU7, MSSDGAS, and MSSVAC. The applicant included one source group for all routine emissions and one source group for each MSS activity. For the refinery heavy analysis, the routine source group contains all routine emissions, and each MSS source group contains emissions from one of the sources listed above together with emissions from MSSFLR and MSSDCOK1. The results associated with the worst-case operating scenarios are reported in the tables above.

The applicant conducted the 1-hr and annual NO₂ NAAQS analyses using the ARM2 model option following EPA guidance.

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: 2016 for Health Effects and H₂S analyses;
2014-2018 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.

Some receptors on the west side of the property were modeled on-site. This is conservative.

D. Building Wake Effects (Downwash)

Input data to Building Profile Input Program Prime (Version 04260) are consistent with the aerial photography, and/or plot plan, and modeling report.

4. Modeling Emissions Inventory

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

TCEQ Interoffice Memorandum

For the H₂S analysis, volume source ID TRUCKRKF was modeled in a location approximately 15 meters away from the location used in other analyses. Justification was not provided for this. However, the ADMT ran test modeling using the appropriate location and determined that this has no effect on the model predicted results.

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

For the 1-hr NO₂ de minimis and NAAQS analyses, emissions from the complex 8 #6 boiler (EPN EP-B-6) and tank control system (MSSTVCU2) were modeled with annual average emission rates, consistent with EPA guidance for evaluating intermittent emissions. Emissions from the boiler were represented to occur for no more than 36 hours per year; emissions from the tank control system were represented to occur no more than 24 hours per year.

For the 1-hr SO₂ and 1-hr NO₂ de minimis and NAAQS analyses, emissions from the heater decoker (EPN MSS Caps) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions from the heater decoker were represented to occur for no more than 60 hours per year.

With the exceptions 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.

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: 11/23/2005 COURTOORDER (Settlement-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)
Description: Failure to provide notification of reportable emissions, released as a result of emissions events at the Vacuum Jet Compressor on September 21, 2002 and February 7, 2003, within 24 hours of discovery.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(G)
Rqmt Prov: TCEQ Permit 6797 PA
Description: Failure to obtain regulatory authority for, or satisfy all of the demonstration criteria to exempt from compliance limitations, emissions involving the Vacuum Jet Compressor during eleven emissions events.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(G)
Rqmt Prov: TCEQ Permit 6797 PA
Description: Failure to obtain regulatory authority for, or satisfy all of the demonstration criteria to exempt from compliance limitations, emissions involving the Ingersoll Rand (IR) Compressor during an emissions event on June 27, 2002.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(G)
30 TAC Chapter 116, SubChapter B 116.115(c)
Rqmt Prov: TCEQ Permit 21655 PA
Description: Failure to obtain regulatory authority for, or satisfy all of the demonstration criteria to exempt from compliance limitations, emissions involving the Sulfur Recovery Unit Incinerator during an emissions event which started on June 20, 2002 and ended on June 24, 2002.
Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)
Description: Failure to provide rule required information in the notification of a reportable emissions, released as a result of emissions events at the Vacuum Jet Compressor on September 23, 2003, to the commission's regional office within 24 hours of discovery.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)
Rqmt Prov: General Conditions PA
Description: Failure to obtain regulatory authority for, or satisfy all demonstration criteria to exempt from compliance limitations, the emissions (including approximately 3 tons of sulfur dioxide) that were released from the Vacuum Jet Compressor facility during an emissions event on September 23, 2003.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(H)
Rqmt Prov: 6797 PA
Description: Failure to satisfy all demonstration criteria in 30 TAC §101.222(b) and (c) and obtain regulatory authority for the emissions (including approximately 89 tons of sulfur dioxide) that were released from the Vacuum Jet Compressor facility during emissions events and scheduled activities.
Classification: Moderate
Citation: 30 TAC Chapter 112, SubChapter B 112.31
Description: Failure to prevent emissions of hydrogen sulfide from a source or sources operated on a property or multiple sources operated on contiguous properties from exceeding a net ground level concentration of 0.80 parts per million averaged over a 30-minute period.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
Rqmt Prov: SC 1 PA
Description: Failure to satisfy all demonstration criteria in 30 TAC §101.222(b) and obtain regulatory authority for the emissions (including approximately 6.3 tons of sulfur dioxide) that were released from the Vacuum Jet Compressor facility during an emissions event on or about May 5, 2004.
Classification: Moderate
Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(4)(A)(ii)
Description: Failure to prevent visible emissions from the flare (EPN: EP-FLARE1) from exceeding the required limit, as reported on January 21, 2004 in incident 33605.
Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)

Description: Failure to notify the TCEQ Corpus Christi Region Office within twenty four hours after the discovery of a reportable emissions event.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failure to satisfy all demonstrations criteria in 30 TAC §101.222(b) and gain an affirmative defense for the unauthorized emissions that were released during TCEQ incident 37739.

Classification: Moderate

Rqmt Prov: Provision No. 3 PERMIT

Description: Failed to prevent the discharge of floating solids and visible foam in other than trace amounts at Outfall 001.

2 Effective Date: 12/30/2005 ADMINORDER 2001-1023-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.6(a)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. obtain regulatory auth. or meet demonstration requirements of 30TAC101.11 for emissions resulting from upset event that occurred 7/2/00 - 7/7/00.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. maintain complete records regarding upset event that occurred on 9/8/2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. obtain regulatory auth. or meet demonstration requirements of 30TAC101.11 for emissions resulting from upset events that occurred on 7/2/00 thru 7/7/00.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. obtain regulatory auth. or meet demonstration requirements of 30TAC101.11 for emissions resulting from upset that occurred on 9/26/00.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. obtain regulatory auth. or meet demonstration requirements of 30TAC101.11 for emissions resulting from upset event that occurred on 9/26/00.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. obtain regulatory auth. or meet demonstration requirements of 30TAC101.11 for emissions resulting from 20 upset events at crude & vacuum unit.

Classification: Minor

Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(4)(A)(ii)

5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. maintain flare observation log for 4 flares for may & june 2000 & for east plt. main flare for december 2000.

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter B 115.114(b)(2)

30 TAC Chapter 115, SubChapter B 115.114(b)(3)

30 TAC Chapter 115, SubChapter B 115.114(b)(4)

5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. visually inspect or physically measure secondary seal gaps of vessels numbered 84, 98, 100, 151, 153, 355 & 358 at least once every 12 months during calendar yr. 2000.

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.322(5)

5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. mark applicable pipeline valves & pressure relief valves in gaseous VOC serv. in manner readily obvious to monitoring personnel.

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.324(1)(C)
30 TAC Chapter 115, SubChapter D 115.326(2)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. measure emissions from all affected process drains on yearly basis.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 113, SubChapter C 113.130
30 TAC Chapter 115, SubChapter D 115.325(1)
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.485(b)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.355(h)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.180(b)

Rqmt Prov: SC 11 & 12 PERMIT
SC 13F PERMIT
SC 16F & 16G PERMIT
SC 1F & 1G PERMIT
SC 3F & 3G PERMIT
SC 5 & 6 PERMIT
SC 5F, 5G & 6 PERMIT
SC 6 PERMIT
SC4 PERMIT

Description: Fail. properly conduct test method 21.

Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.326(1)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. submit monitoring program plan which includes list of refinery units & quarter in which they will be monitored copy of log book format & make & model of monitoring equip. to be used.

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.327(4)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. submit required compliance plan & start up notification before #2 reformer at Quintana plt. was re-started in 1/2001.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC13 PERMIT
SC29E PERMIT

Description: Fail. submit accurate summ.rpt. for SRU#1 for 3rd qurtr. cal. yr. 1999(3Q99)&for SRU#1 &SRU #2 for 2Q00 &fail. to submit CMS EER for 1Q97,2Q97,4Q98 &2Q99 for fuel gas hydrogen sulfide content 3Q00 SRU#1 S02 emissions,3Q97 &1Q00 co-gen.unit NOX emiss.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. submit rpt. at least semi-annual cert. indicating whether any changes were made in opers. SRU#1 & SRU#2 emission control system when SO2 data wasn't available from CEMS.

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
40 CFR Part 60, Subpart NNN 60.665(a)
40 CFR Part 60, Subpart NNN 60.665(d)

Description: Fail. submit notification indicating method of compliance w/ 40CFR60.662 & fail. provide records of flow rates & semi-annual rpts. as required.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC11A PERMIT
SC13A PERMIT
SC16A PERMIT
SC3A PERMIT
SC4A PERMIT
SC5A & 6A PERMIT

Description: Fail. provide records of throughput and service and emission control tanks repairs/replacements.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC11F PERMIT
SC16F PERMIT
SC4F PERMIT
SC6F PERMIT
SCF5 PERMIT

Description: Fail. utilize directed maintenance program to monitor accessible valves.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SP 8D,8E &8F PERMIT

Description: Fail. maintain record of semi-annual & yr.-to-date emissions calculations for annual & short-term emissions for vessels.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: GC1 PERMIT

Description: Fail to produce, upon request, proper records of CO emissions.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC8 PERMIT

Description: Failed to include emissions from the CO boiler and the collapse of the roof of storage vessel no. 352 in teh EIU for calendar year 1999.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. maintain emissions of CO, VOC & PM at or below allowable emission limits for reactor heater 3-H-3 for calendar yr. 2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC3 PERMIT

Description: Fail. comply w/ required fuel rate limit for reactor heater 3-H-3 from 10/1999 - 6/2000 & 8/2000

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC8A PERMIT

Description: Fail. properly maintain records of fuel throughput for reactor heater 3-H-3.

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC7 PERMIT

Description: Fail. report results of annual test runs to confirm accuracy of weekly sampling procedures of SC4 of TNRCC air permit #3784A for 1999 & 2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Fail. maintain emissions of VOC, NOx & CO at or below allowable emission limits for #2 reformer flare REF2FL1 for calendar yrs. 1999 & 2000 and misrepresentation of these emissions in 1/22/92 permit app..

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC5 PERMIT

Description: Fail. maintain records of daily avg. fuel gas usage for heater QL-10.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)

5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: GC8 PERMIT

Description: Fail. maintain emissions of CO at or below allowable emission limits for heater QH-125 for calendar yrs. 1999 & 2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 PERMIT

Description: Fail. maintain emissions of VOC at or below allowable emission limits for heater Q10-H-1 for calendar yr. 2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC6 PERMIT

Description: Fail. comply w/ required feed rate limit for heater Q10-H-1 for 12/1999.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC4 PERMIT

Description: Fail. comply w/ required hourly firing rate limit for heater 8-H-6 from 1/1 to 5/27, 6/3 to 6/18, 7/3 to 7/6 & 7/21 to 9/9, 1999; and fail. comply w/ required hourly firing rate limit for heaters 8-H-3 & 8-H-5 for 17 hrs. between 1/22 & 4/21, 1999.

Classification: Moderate

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

Rqmt Prov: SC11E PERMIT

Description: Fail. manually switch CEMS monitor between stacks cogen-1 & cogen-2 every 3 months during calendar yrs. 1999 & 2000.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC1 OP

Description: Failure to produce on request records of VOC emission levels for for Coker Heater 7-H-2 for calendar year 1999 and for emission levels of VOCs, PM and CO for calendar year 2000

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.116(b)(1)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: misrepresented the West Plant Flare as an emergency flare instead of a process flare

Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: SC18 OP

Description: failed to complete all samples required for cooling water VOC leak detection sampling

3 Effective Date: 08/23/2007 ADMINORDER 2007-0131-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: TCEQ 2937 / SC 1 PA

Description: Failure to satisfy all demonstration criteria in 30 TAC §101.222(b) and gain an affirmative defense against penalties for unauthorized emissions that were released from the No. 4 Vacuum Unit during an emissions event (TCEQ STEERS No. 75676) which occurred on or about May 10, 2006.

4 Effective Date: 11/19/2007 ADMINORDER 2006-0468-MLM-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 335, SubChapter A 335.4

Description: Failed to prevent the discharge of slop oil and wastewater to the environment, as documented during an investigation conducted on June 20, 2006. Specifically, the investigator documented that a spill of hazardous wastewater occurred from Tank 109 into the earthen dike surrounding the tank on June 1, 2006, and the contaminated soils in the earthen dike had not been removed and properly disposed.

Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(9)

Rqmt Prov: TCEQ Water Quality Permit No. 00465 PERMIT

Description: Failed to report any noncompliance which may endanger human health, safety, or the environment within 24 hours of becoming aware of the noncompliance, as documented during an investigation conducted on June 20, 2006. Specifically, Valero did not submit notification of the overflow of slop oil and hazardous wastewater from Tank 109.

- 5 Effective Date: 04/14/2008 ADMINORDER 2007-1189-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov No.: 2937 PERMIT
PSD-TX-1023M1 PERMIT
Description: This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Emission Caps and Individual Emission Limitations".
- 6 Effective Date: 11/17/2008 ADMINORDER 2007-1545-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.211(b)(1)(H)
30 TAC Chapter 101, SubChapter F 101.211(b)(1)(I)
5C THC Chapter 382, SubChapter D 382.085(b)
Description: Failed to submit an administratively complete final report within two weeks after the end of the activity. Specifically, the Respondent failed to individually list all compounds or mixtures of air contaminants involved in the emissions activity, their estimated total quantities, the authorized emissions limits for those contaminants, and the preconstruction authorization in the final report for Incident Number 87955.
Classification: Major
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: TCEQ Air Permit 2937/PSD-TX-1023MI PERMIT
Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 63.38 lbs of benzene, 2,173.93 lbs of VOCs, 67.95 lbs of toluene, 19.5 lbs of xylene and 6.3 lbs of ethylbenzene during a maintenance activity involving Tank 102 that began March 6, 2007 and lasted 24 hours.
- 7 Effective Date: 08/23/2009 ADMINORDER 2007-1813-MLM-E (Findings Order-Agreed Order Without Denial)
Classification: Major
Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)(1)(B)
Description: Failure to comply with hazardous waste tank requirements.
Classification: Major
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 335, SubChapter A 335.4
30 TAC Chapter 335, SubChapter B 335.43(a)
Description: Failure to prevent the unauthorized discharge of untreated industrial wastewater and contact storm water from Tank 109 to the tank containment area and the discharge of oil from Tank 100 and allowing it to mix with the accumulated storm water inside the tank containment area.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: SC 18 PERMIT
Description: Failure to maintain particulate matter emissions on Complex 8 FCCU (EPN 12-CO-STK) at or below the permitted limit of one pound per 1,000 pounds coke burn-off. An emission rate of 1.08 pounds per 1,000 pounds coke burn-off was documented during a performance test conducted on August 15, 2007.
- 8 Effective Date: 09/21/2009 ADMINORDER 2009-0288-AIR-E (Findings Order-Agreed Order Without Denial)
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition 1 PERMIT
Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 59,497 lbs of CO, 1,509.61 lbs of SO₂, 849.14 lbs of PM, 136 lbs of NO_x, 131.71 lbs of H₂SO₄ and 20.23 lbs of VOCs from the Fluid Catalytic Cracking Unit during an avoidable emissions event that began May 18, 2008 and lasted 10 hours and 48 minutes. A differential pressure indicator became plugged with catalyst and mistakenly indicate an erroneous pressure reading, resulting in a reversal of hot oil and catalyst
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(c)(7)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition No. 1 PERMIT
STC No. 21 OP

Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 723.15 lbs of SO₂, 7.38 lbs H₂S, 6.09 lbs of CO, 0.84 lbs of NO_x and 8.39 lbs of VOCs from the Vacuum Unit during a foreseeable emissions event (Incident No. 112938) that began August 21, 2008 and lasted 48 minutes.

Classification: Minor

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

Rqmt Prov: 2238 - SC No. (2)(F) OP

Description: Failed to submit an administratively complete final report for Incident No. 113325. Specifically, the Respondent failed to list the compounds released from Tail Gas Unit Incinerator No. 1 and the total quantities of air contaminants released during the event

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(c)(7)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 2238 -SC Nos. 21 & 23 OP

Flexible Permit No. 2937 - SC No. 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 1,036.1 lbs of SO₂, 6.33 lbs hydrogen sulfide ("H₂S"), 1.38 lbs of CO, 1.17 lbs of sulfur, 0.42 lbs of carbonyl sulfide, 0.27 lbs of NO_x and 0.27 lbs of carbon disulfide from the Sulfur Recovery Unit during an avoidable emissions event (Incident No. 113325) that began August 30, 2008 and lasted 43 minutes. The unauthorized release was the result of a fuel gas valve malfunction resulting in the shutdown of the feed

9 Effective Date: 12/18/2009 ADMINORDER 2009-0510-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)
30 TAC Chapter 101, SubChapter F 101.201(c)
5C THSC Chapter 382 382.085(b)

Description: Failed to submit the final report for Incident No. 116693 in timely manner. Specifically, the report was due November 30, 2008 and submitted on December 1, 2008.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 113, SubChapter C 113.120
30 TAC Chapter 116, SubChapter G 116.715(a)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.112b(a)(1)(i)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.112b(a)(1)(iv)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.351(a)(1)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.119(b)(1)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.119(b)(6)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.133(a)(2)(ii)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: [2937/PSD-TX-1023M1] Special Condition 1 PERMIT

Permit O-2250, Spec. Terms & Cond. No. 1 OP

Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 338.32 lbs of VOCs, 21.87 lbs of benzene, 13.34 lbs of toluene, 12.24 lbs of H₂S, 5.22 lbs of xylene and 1.23 lbs ethylbenzene during an avoidable emissions event (Incident No. 116871) that began November 19, 2008 and lasted 45 hours. The unauthorized release was the result of a failure to bolt or fasten covers on each access hatch to form an air-tight seal on Tank 9. Since there was no air tight seal, benzene water

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)

5C THSC Chapter 382 382.085(b)

Rqmt Prov: [2937/PSD-TX-1023M1] Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, the Respondent released 3,669.45 lbs of SO₂, 39.78 lbs of H₂S, 4.59 lbs of CO, 0.90 lbs of NO_x, 0.16 lbs of VOCs and 0.04 lbs of ammonia during an emissions event (Incident No. 116693) that began November 16, 2008 and lasted 48 minutes. The unauthorized release was the result of an electronic component malfunction that caused the acid gas feed control valve to malfunction. Because the final report for this emissions event was submitted late

10 Effective Date: 11/18/2011 ADMINORDER 2010-0909-MLM-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Permit 2937, Special Condition 10.A. PERMIT

Description: Failed to comply with the 0.035 lb of NO_x per million British thermal units ("lb NO_x/MMBtu") on an hourly averaging period for Boiler Nos. 1, 2 and 5, as reported in the semi-annual deviation reports for the annual compliance certification periods of November 24, 2007 through November 23, 2008 and November 24, 2008 through November 23, 2009 at the Corpus Christi Refinery East Plant.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Flexible Permit 2937, SC 1 PERMIT

Description: Failed to prevent unauthorized emissions at the Corpus Christi Refinery East Plant.

11 Effective Date: 10/18/2013 ADMINORDER 2013-0248-IWD-E (1660 Order-Agreed Order With Denial)

Classification: Major

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)(1)
30 TAC Chapter 305, SubChapter F 305.125(4)

Rqmt Prov: Permit Conditions 2.g. PERMIT

Description: Failed to prevent the unauthorized discharge of contaminated storm water into or adjacent to any water in the state, as documented during an investigation conducted on November 6, 2012. Specifically, on April 16, 2012, to prevent the overflow from the surge tank, an estimated 561,000 gallons of contaminated storm water was pumped to an earthen containment area surrounding Tank 201.

12 Effective Date: 11/30/2021 ADMINORDER 2020-1388-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: Special Term & Condition 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

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: [PSDTX1023M2] Special Condition 1 PERMIT

GTC and SCT No. 24 OP

SC No. 1 PERMIT

Special Term & Condition 25 OP

Description: Failure to prevent unauthorized emissions. Specifically, the Respondent released 801.03 pounds ("lbs") of carbon disulfide, 5.18 lbs of carbon monoxide, 1,613.26 lbs of hydrogen sulfide, and 1,516.80 lbs of sulfur dioxide as fugitive emissions, during an emissions event (Incident No. 327456) that began on December 29, 2019 and lasted 97 hours. The emissions event occurred when the refractory liner within the transition piece on the thermal reactor lost some thermal protection over time and the

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

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

Item 1	September 13, 2004	(352433)
Item 2	October 07, 2004	(292867)
Item 3	October 21, 2004	(334534)
Item 4	November 23, 2004	(352435)
Item 5	November 30, 2004	(342509)
Item 6	December 06, 2004	(342868)
Item 7	December 22, 2004	(381980)
Item 8	January 14, 2005	(381981)
Item 9	February 10, 2005	(342544)
Item 10	February 22, 2005	(381978)
Item 12	March 18, 2005	(381979)
Item 13	April 11, 2005	(350299)
Item 14	April 19, 2005	(430046)
Item 15	May 23, 2005	(430047)
Item 16	June 02, 2005	(394325)
Item 17	June 21, 2005	(430048)
Item 18	July 05, 2005	(397974)
Item 19	July 09, 2005	(397621)
Item 20	July 15, 2005	(397268)
Item 21	July 20, 2005	(430049)
Item 22	August 19, 2005	(405862)
Item 23	August 24, 2005	(402929)
Item 24	August 30, 2005	(418769)
Item 25	September 19, 2005	(440956)
Item 26	October 14, 2005	(433213)
Item 27	October 24, 2005	(440957)
Item 28	October 25, 2005	(432976)
Item 29	November 17, 2005	(403617)
Item 30	November 21, 2005	(468638)
Item 31	December 21, 2005	(468639)
Item 32	January 23, 2006	(468640)
Item 33	January 28, 2006	(453260)
Item 34	February 08, 2006	(453776)
Item 36	March 20, 2006	(468637)
Item 37	March 28, 2006	(458315)
Item 38	April 19, 2006	(462919)
Item 39	April 24, 2006	(498341)
Item 40	May 08, 2006	(464657)
Item 42	May 23, 2006	(498342)
Item 43	May 25, 2006	(479708)
Item 44	June 06, 2006	(480816)
Item 45	June 19, 2006	(465775)
Item 46	June 21, 2006	(498343)
Item 47	July 07, 2006	(485108)
Item 48	July 10, 2006	(462991)
Item 49	July 19, 2006	(481002)
Item 50	July 20, 2006	(498344)
Item 51	August 18, 2006	(520356)
Item 52	September 13, 2006	(510965)
Item 53	September 19, 2006	(520357)
Item 54	October 16, 2006	(511059)
Item 55	October 20, 2006	(544689)
Item 56	November 16, 2006	(544690)
Item 57	November 30, 2006	(531095)
Item 58	December 05, 2006	(532536)
Item 59	December 06, 2006	(532499)
Item 60	December 19, 2006	(544691)
Item 61	January 08, 2007	(533142)

Item 62	January 22, 2007	(544692)
Item 63	January 26, 2007	(534329)
Item 64	February 05, 2007	(517485)
Item 65	February 08, 2007	(538991)
Item 66	February 20, 2007	(575585)
Item 67	February 21, 2007	(541385)
Item 68	March 16, 2007	(553836)
Item 69	March 20, 2007	(575586)
Item 70	April 23, 2007	(575587)
Item 71	May 21, 2007	(575588)
Item 72	June 04, 2007	(540935)
Item 73	July 18, 2007	(575590)
Item 74	July 27, 2007	(564471)
Item 75	August 01, 2007	(565791)
Item 76	August 20, 2007	(563339)
Item 77	August 21, 2007	(562042)
Item 78	August 29, 2007	(573753)
Item 79	September 14, 2007	(594164)
Item 80	September 21, 2007	(607582)
Item 81	October 09, 2007	(595753)
Item 82	October 19, 2007	(597755)
Item 83	October 22, 2007	(597742)
Item 84	October 31, 2007	(598205)
Item 85	November 09, 2007	(599099)
Item 86	November 14, 2007	(598476)
Item 87	December 12, 2007	(609425)
Item 88	December 17, 2007	(611173)
Item 89	December 19, 2007	(619629)
Item 90	December 21, 2007	(612065)
Item 91	January 17, 2008	(672155)
Item 93	February 15, 2008	(618558)
Item 94	February 21, 2008	(672153)
Item 95	February 22, 2008	(636427)
Item 96	March 03, 2008	(637496)
Item 97	March 20, 2008	(672154)
Item 98	March 31, 2008	(640957)
Item 99	April 08, 2008	(636416)
Item 100	April 14, 2008	(641040)
Item 101	April 18, 2008	(690060)
Item 102	May 05, 2008	(654417)
Item 103	May 21, 2008	(690061)
Item 104	May 23, 2008	(680306)
Item 105	May 28, 2008	(671660)
Item 106	May 30, 2008	(641327)
Item 107	May 31, 2008	(532287)
Item 108	June 10, 2008	(641355)
Item 109	June 12, 2008	(636082)
Item 110	June 16, 2008	(690062)
Item 111	July 17, 2008	(710843)
Item 112	August 20, 2008	(688327)
Item 113	August 25, 2008	(710844)
Item 114	September 18, 2008	(710845)
Item 115	October 09, 2008	(704922)
Item 116	October 22, 2008	(727556)
Item 117	October 31, 2008	(705894)
Item 118	December 03, 2008	(708988)
Item 119	December 15, 2008	(720987)
Item 120	December 16, 2008	(727559)
Item 121	December 22, 2008	(709272)
Item 122	January 21, 2009	(750372)

Item 123	February 19, 2009	(768431)
Item 124	February 25, 2009	(735573)
Item 125	March 27, 2009	(750371)
Item 126	April 08, 2009	(740281)
Item 127	April 22, 2009	(768432)
Item 128	April 30, 2009	(742256)
Item 129	May 21, 2009	(768433)
Item 130	June 09, 2009	(747146)
Item 131	June 10, 2009	(746935)
Item 132	June 22, 2009	(748756)
Item 133	July 09, 2009	(749787)
Item 134	July 20, 2009	(924852)
Item 135	August 02, 2009	(761871)
Item 136	August 20, 2009	(924853)
Item 137	September 05, 2009	(739607)
Item 138	September 22, 2009	(924854)
Item 139	October 06, 2009	(777079)
Item 140	October 14, 2009	(779041)
Item 141	October 19, 2009	(924855)
Item 142	November 17, 2009	(782605)
Item 143	November 23, 2009	(924856)
Item 144	December 03, 2009	(783645)
Item 145	December 21, 2009	(924857)
Item 146	January 19, 2010	(785428)
Item 147	January 20, 2010	(788420)
Item 148	January 27, 2010	(789406)
Item 149	January 28, 2010	(789587)
Item 150	February 18, 2010	(792451)
Item 151	February 19, 2010	(792055)
Item 152	February 26, 2010	(793930)
Item 153	March 22, 2010	(830974)
Item 154	March 25, 2010	(796350)
Item 155	April 21, 2010	(830975)
Item 156	May 20, 2010	(800211)
Item 157	May 21, 2010	(830976)
Item 158	May 26, 2010	(924858)
Item 159	June 21, 2010	(846298)
Item 160	June 22, 2010	(803894)
Item 161	July 28, 2010	(842255)
Item 162	August 03, 2010	(841450)
Item 163	August 04, 2010	(844065)
Item 164	August 09, 2010	(844426)
Item 165	August 20, 2010	(866862)
Item 166	August 25, 2010	(849769)
Item 167	September 17, 2010	(860255)
Item 168	September 22, 2010	(873930)
Item 169	September 27, 2010	(864992)
Item 170	October 15, 2010	(866198)
Item 171	October 18, 2010	(866661)
Item 172	November 22, 2010	(896275)
Item 173	December 20, 2010	(896276)
Item 174	January 01, 2011	(902333)
Item 175	January 11, 2011	(872428)
Item 176	February 15, 2011	(893691)
Item 177	February 22, 2011	(909118)
Item 178	March 21, 2011	(916371)
Item 179	April 25, 2011	(924850)
Item 180	April 26, 2011	(914116)
Item 181	May 03, 2011	(915061)
Item 182	May 23, 2011	(938056)

Item 183	May 31, 2011	(922844)
Item 184	June 06, 2011	(922997)
Item 185	June 20, 2011	(932928)
Item 186	June 22, 2011	(945424)
Item 187	June 30, 2011	(934167)
Item 188	July 21, 2011	(952653)
Item 190	August 22, 2011	(948927)
Item 191	August 29, 2011	(951041)
Item 192	September 13, 2011	(950784)
Item 193	September 14, 2011	(950565)
Item 194	September 22, 2011	(965370)
Item 195	October 21, 2011	(971409)
Item 196	November 04, 2011	(964458)
Item 197	November 21, 2011	(977566)
Item 198	November 23, 2011	(968460)
Item 199	December 09, 2011	(969950)
Item 200	December 22, 2011	(974874)
Item 201	December 27, 2011	(984336)
Item 202	January 03, 2012	(974525)
Item 203	January 13, 2012	(974982)
Item 204	January 24, 2012	(990634)
Item 205	February 13, 2012	(970831)
Item 206	February 21, 2012	(1010087)
Item 207	March 22, 2012	(1003522)
Item 208	May 22, 2012	(1016478)
Item 209	June 07, 2012	(1001039)
Item 210	June 13, 2012	(1008992)
Item 211	June 22, 2012	(1024200)
Item 212	July 23, 2012	(1031593)
Item 213	July 24, 2012	(1020870)
Item 214	August 03, 2012	(1022507)
Item 215	August 22, 2012	(1009915)
Item 216	August 23, 2012	(1079024)
Item 217	September 18, 2012	(1031013)
Item 218	September 24, 2012	(1046703)
Item 219	October 19, 2012	(1041082)
Item 220	October 22, 2012	(1060973)
Item 221	October 31, 2012	(1035340)
Item 222	November 19, 2012	(1045913)
Item 223	November 26, 2012	(1060974)
Item 224	December 06, 2012	(1043323)
Item 225	January 25, 2013	(1052926)
Item 226	February 26, 2013	(1079023)
Item 227	March 07, 2013	(1073630)
Item 228	March 13, 2013	(1057629)
Item 229	March 14, 2013	(1074547)
Item 230	April 12, 2013	(1078470)
Item 231	April 22, 2013	(1095730)
Item 232	May 22, 2013	(1106655)
Item 233	June 18, 2013	(1092955)
Item 234	June 20, 2013	(1093459)
Item 235	June 24, 2013	(1110330)
Item 236	July 23, 2013	(1117215)
Item 237	August 12, 2013	(1006714)
Item 238	August 16, 2013	(1113775)
Item 239	August 19, 2013	(1049782)
Item 240	August 27, 2013	(1124970)
Item 241	August 29, 2013	(1115461)
Item 242	September 25, 2013	(1135300)
Item 243	October 25, 2013	(1135301)

Item 244	October 29, 2013	(1116600)
Item 245	October 31, 2013	(1122734)
Item 246	November 22, 2013	(1133078)
Item 247	November 26, 2013	(1140699)
Item 248	December 16, 2013	(1134322)
Item 249	December 23, 2013	(1147158)
Item 250	January 20, 2014	(1153227)
Item 251	February 11, 2014	(1140326)
Item 252	February 20, 2014	(1160562)
Item 253	March 19, 2014	(1167207)
Item 254	April 17, 2014	(1174340)
Item 255	May 20, 2014	(1180528)
Item 256	June 20, 2014	(1187426)
Item 257	July 16, 2014	(1198601)
Item 258	August 19, 2014	(1198602)
Item 259	September 19, 2014	(1205831)
Item 260	October 20, 2014	(1212243)
Item 261	November 20, 2014	(1209615)
Item 262	December 18, 2014	(1192313)
Item 263	January 16, 2015	(1230861)
Item 264	February 19, 2015	(1242312)
Item 265	March 18, 2015	(1230066)
Item 266	March 20, 2015	(1248641)
Item 267	April 20, 2015	(1255541)
Item 268	May 20, 2015	(1262251)
Item 269	June 05, 2015	(1253868)
Item 270	July 17, 2015	(1254723)
Item 271	July 20, 2015	(1276966)
Item 272	July 29, 2015	(1259461)
Item 273	August 20, 2015	(1283143)
Item 274	August 31, 2015	(1260861)
Item 275	September 18, 2015	(1290282)
Item 276	October 06, 2015	(1280803)
Item 277	October 19, 2015	(1296486)
Item 278	November 04, 2015	(1282714)
Item 279	November 19, 2015	(1301939)
Item 280	December 08, 2015	(1289349)
Item 281	December 17, 2015	(1308867)
Item 282	January 18, 2016	(1315651)
Item 283	February 19, 2016	(1308529)
Item 284	March 17, 2016	(1331772)
Item 285	April 20, 2016	(1338935)
Item 286	May 20, 2016	(1345735)
Item 287	June 20, 2016	(1352177)
Item 288	July 20, 2016	(1359151)
Item 289	July 25, 2016	(1329156)
Item 290	August 19, 2016	(1365575)
Item 291	August 26, 2016	(1356705)
Item 292	September 20, 2016	(1372276)
Item 293	September 22, 2016	(1362975)
Item 294	October 20, 2016	(1378453)
Item 295	October 26, 2016	(1356441)
Item 296	November 17, 2016	(1362558)
Item 297	November 18, 2016	(1384412)
Item 298	December 19, 2016	(1390550)
Item 299	January 20, 2017	(1397166)
Item 300	February 17, 2017	(1404050)
Item 301	March 18, 2017	(1411150)
Item 302	April 13, 2017	(1400599)
Item 303	April 14, 2017	(1401583)

Item 304	April 20, 2017	(1417653)
Item 305	May 19, 2017	(1425242)
Item 306	June 20, 2017	(1431245)
Item 307	July 20, 2017	(1439854)
Item 308	August 18, 2017	(1443543)
Item 309	August 30, 2017	(1434737)
Item 310	August 31, 2017	(1428964)
Item 311	October 20, 2017	(1455989)
Item 312	December 20, 2017	(1467849)
Item 313	January 19, 2018	(1474554)
Item 314	February 20, 2018	(1486780)
Item 315	March 06, 2018	(1446938)
Item 316	March 13, 2018	(1490457)
Item 317	March 23, 2018	(1448989)
Item 318	April 20, 2018	(1493694)
Item 319	May 18, 2018	(1500612)
Item 320	June 20, 2018	(1507729)
Item 321	July 19, 2018	(1500119)
Item 322	August 20, 2018	(1520109)
Item 323	August 22, 2018	(1434631)
Item 324	September 19, 2018	(1527273)
Item 325	October 11, 2018	(1512333)
Item 326	October 20, 2018	(1533631)
Item 327	November 20, 2018	(1541466)
Item 328	November 30, 2018	(1530928)
Item 329	December 20, 2018	(1545250)
Item 330	January 18, 2019	(1559725)
Item 331	February 05, 2019	(1540688)
Item 332	February 20, 2019	(1559723)
Item 333	February 26, 2019	(1539105)
Item 334	March 11, 2019	(1550986)
Item 335	March 20, 2019	(1559724)
Item 336	April 18, 2019	(1571847)
Item 337	May 06, 2019	(1436885)
Item 338	May 20, 2019	(1583304)
Item 339	June 20, 2019	(1583305)
Item 340	July 19, 2019	(1593160)
Item 341	August 20, 2019	(1599506)
Item 342	August 27, 2019	(1582357)
Item 343	September 19, 2019	(1592569)
Item 344	September 20, 2019	(1606411)
Item 345	October 20, 2019	(1613257)
Item 346	November 25, 2019	(1589762)
Item 347	January 20, 2020	(1634064)
Item 348	March 20, 2020	(1647203)
Item 349	April 20, 2020	(1653539)
Item 350	April 21, 2020	(1632394)
Item 351	April 22, 2020	(1643860)
Item 352	May 04, 2020	(1611422)
Item 353	May 05, 2020	(1640225)
Item 354	May 06, 2020	(1632357)
Item 355	May 18, 2020	(1638924)
Item 356	May 20, 2020	(1660126)
Item 357	May 22, 2020	(1650443)
Item 358	June 24, 2020	(1632371)
Item 359	July 02, 2020	(1658968)
Item 360	July 16, 2020	(1663831)
Item 361	July 22, 2020	(1663401)
Item 362	August 03, 2020	(1665627)
Item 363	August 06, 2020	(1652656)

Item 364	August 12, 2020	(1665141)
Item 365	August 18, 2020	(1665362)
Item 366	August 20, 2020	(1680363)
Item 367	August 28, 2020	(1436588)
Item 368	September 11, 2020	(1673217)
Item 369	September 21, 2020	(1686931)
Item 370	October 20, 2020	(1693278)
Item 371	October 30, 2020	(1679547)
Item 372	November 20, 2020	(1712524)
Item 373	December 04, 2020	(1692496)
Item 374	December 18, 2020	(1712525)
Item 375	January 19, 2021	(1712526)
Item 376	February 10, 2021	(1651823)
Item 377	February 19, 2021	(1725579)
Item 378	April 09, 2021	(1708597)
Item 379	April 16, 2021	(1709244)
Item 380	April 19, 2021	(1725581)
Item 381	April 23, 2021	(1703363)
Item 382	May 06, 2021	(1704727)
Item 383	May 12, 2021	(1708700)
Item 384	May 18, 2021	(1707391)
Item 385	May 20, 2021	(1740092)
Item 386	June 18, 2021	(1747594)
Item 387	July 09, 2021	(1739021)
Item 388	July 16, 2021	(1735149)
Item 389	July 20, 2021	(1751727)
Item 390	August 20, 2021	(1757191)
Item 391	August 30, 2021	(1756778)
Item 392	September 01, 2021	(1760475)
Item 393	September 15, 2021	(1762375)
Item 394	September 20, 2021	(1766271)
Item 395	October 20, 2021	(1776734)
Item 396	November 05, 2021	(1749619)
Item 397	November 19, 2021	(1783643)
Item 398	December 20, 2021	(1790669)
Item 399	January 20, 2022	(1798463)
Item 400	February 17, 2022	(1794958)
Item 401	March 17, 2022	(1813404)
Item 402	March 25, 2022	(1797322)
Item 403	April 18, 2022	(1819975)
Item 404	May 13, 2022	(1813178)
Item 405	May 18, 2022	(1828814)
Item 406	July 01, 2022	(1825336)
Item 408	August 01, 2022	(1817052)
Item 409	August 18, 2022	(1839232)

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: 05/31/2022 (1835107)
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: 08/01/2022 (1824577)
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 335, SubChapter C 335.53(f)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.17(a)(1)(v)
Description: Failed to inspect areas where waste containers are stored at least weekly to look for leaking containers or deterioration of containers caused by corrosion or other factors.

Self Report? NO Classification: Minor
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT M 262.261(e)
Description: Failed to include in the contingency plan a list of all emergency equipment at the facility with the location and physical description of each item on the list and a brief outline of its capabilities.

3

Date: 08/26/2022 (1833027)
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
GTCs + STC 3A(iv)(1) OP
Description: Failure to conduct required quarterly visible emissions observations of stationary vents. Specifically, the observations of stationary vents from operating emission units were not conducted during the certification period of April 19, 2020, through April 18, 2021.

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(a)(2)(iii)
5C THSC Chapter 382 382.085(b)
GTCs + STC 1A OP
Description: Failure to use certified gasses which were within their expiration dates for quality assurance procedures on a continuous Hydrogen Sulfide (H2S) concentration monitoring system.

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)
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)
GCs & SC 49C PA
GTCs & STC 25 OP
Description: Failure to maintain daily records for vacuum truck activities.

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)
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)
GCs & SC 1 PA
GTCs + STC 25 OP
Description: Failure to comply with permitted emission limit for CO from the Complex 8 Boiler #1 (EP-B-1).

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)
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)
GCs + SC 1 PA
GTCs + STC 25 OP
Description: Failure to comply with permitted emission limit for CO from the Complex 8 Boiler #2 (EP-B-2).

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)
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)
GCs + SC 26 PA
GTCs & STC 25 OP
Description: Failure to complete quarterly monitoring for Leak Detection and Repair (LDAR) components within the allotted timeframe.

Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(2)
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(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 1, SubChapter C, PT 61, SubPT V 61.242-6(a)(1)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)

5C THSC Chapter 382 382.085(b)

GCs + SC 24E PA

GTCs + STC 25 OP

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.

F. Environmental audits:

Notice of Intent Date: 05/20/2009 (759300)

Disclosure Date: 09/13/2010

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-1(a)

Description: Failed to have documentation available that stated that all new equipment had been incorporated into the LDAR program and initially monitored in a timely manner.

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-5(b)

Description: Failed to operate the sampling connection system such that the purged process fluid was collected in accordance with Subpart W.

Viol. Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.322(4)

40 CFR Part 60, Subpart VV 60.482-6

Description: Failed to cap open ended lines in process units.

Viol. Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.322(2)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7(d)(1)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7(d)(2)

Description: Failed to make an attempt at repair or a retest within 5 days, or the final repair within 15 days after the detection of a leak. Also, there were instances where components were not re-monitored after the initial or subsequent repair attempts.

Viol. Classification: Minor

Citation: 40 CFR Part 60, Subpart VV 60.482-8

Description: Failed to prevent stains from forming below fugitive piping components that were not accounted for in the AVO program.

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-9(a)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-9(e)

Description: Failed to repair two valves in the HDS unit that were designated for delay of repair during the process unit shutdown which occurred in October or December 2007.

Viol. Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.325(1)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.485(b)

Description: Instances were discovered where time between monitoring was less than twice the instrument response time when a deflection was measured or was faster than physically possible due to the instrument response time or the time required to move to the next.

Viol. Classification: Minor

Citation: 30 TAC Chapter 115, SubChapter D 115.325(1)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.485(b)

Description: Failed to monitor at all of the potential leak interfaces on a control valve.

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.485(b)

Description: Expired calibration gass were used at the 4 applicable leak definitions (500, 2,000, 3,000 and 10,000 ppmv) from 9/15/06.

Viol. Classification: Minor

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.182(d)

Description: Failed to include the pump monitoring results and the number of non repaired pumps in the semi-annual report for the first half of 2006.

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(a)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.487(c)

Description: Failed to identify the number of non repaired valves or pumps on 4 previous NSPS VV periodic reports during the two years prior to the audit.

Notice of Intent Date: 07/26/2010 (873305)

Disclosure Date: 05/05/2011

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1565(b)(6)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1574(d)

Description: Failed to prevent contaminated soil from being shipped off-site while attempting to qualify for the 30-day MACT GGGGG exemption; and failed to document the remediation completion date for the 30-day MACT GGGGG exemption.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)

Description: Failed to record tank seal repairs to verify compliance for first attempt and 45 day repair requirements.

Viol. Classification: Major

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.342(c)(1)

40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.342(e)(1)

Description: Failed to prevent deficiencies in the hazardous waste manifests. Specifically, applicable RQ's for waste codes were not identified in Box 9b waste codes in Box 13 on all 2009 manifests for TCEQ #9026319H list K037 as the waste code, however, Box 9b lists F037 as the code. Also additional codes in Box 9b were not carried over to box 14, including the primary waste code for the shipment (K050); all manifests shipped to Duratherm in 2009 had the incorrect EPA ID number for the designated treatment

Viol. Classification: Moderate

Citation: 30 TAC Chapter 281, SubChapter A 281.25(a)(4)

Description: Failed to have storm water authorization.

Viol. Classification: Minor

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)

Description: Failed to include details about minor repairs for control equipment failures in the semi-annual periodic reports for the HON Subpart G requirements.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715

Description: Failed to include Marine Loading deviations in the semi-annual report for the first half of 2009.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1575(f)(1)

Description: Failed to have car seals to ensure that proper valve position is maintained on the East Plant Dock vapor recovery piping.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1574(f)(2)(i)

Description: The SWPPP for the East Plant did not meet all the Multi Sector General Permit requirements.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT GGGGG 63.7884(b)(2)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT GGGGG 63.7884(b)(3)

Description: Failed to calculate and record hourly and daily average temperatures data as required by MACT GGGGG; failed to document data deviations and outages caused by the thermocouple, failed to have a site specific monitoring plan for the TO-2 thermocouple; failed to document that the TO-2 thermocouple had undergone a performance evaluation; and failed to include the TO-2 thermocouple in the East Plant's Start-Up, Shutdown, and Malfunction Plan (SSMP).

Viol. Classification: Minor

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.349(a)(1)

Description: Failed to have flanges and valves tagged on a sump managing wastewater from oily sewers and equipment with carbon canisters (169-P-217/P-218). This would not allow documentation of the Method 21 monitoring required per the BWON standard for individual drain systems. This also appeared to be the case for the Benzene Hub Pump (169-P-041).

Viol. Classification: Minor

Citation: 40 CFR Part 60, Subpart QQQ 60.698(b)(1)

Description: Failed to submit the initial certification notification for NSPS Subpart QQQ for the new Process Units SMR (9/28/07) and ULSD (11/13/07).

Viol. Classification: Minor

Citation: 40 CFR Chapter 370, SubChapter J, PT 370, SubPT C 370.33(a)

40 CFR Chapter 370, SubChapter J, PT 370, SubPT C 370.33(b)

Description: Failed to submit MSDS sheets for new hazardous chemicals introduced at the plant or that have had significant new information added. They had not been submitted to the LEPC, SERC, and local fire departments within three months of discovery.

Notice of Intent Date: 02/18/2011 (905295)

Disclosure Date: 04/27/2012

Viol. Classification: Major

Citation: 30 TAC Chapter 106, SubChapter X 106.533

Description: Failure to have PBRs for 35 remediation wells, RW57-RW90 and RWQ02

Notice of Intent Date: 07/26/2011 (981728)

No DOV Associated

Notice of Intent Date: 08/07/2012 (1023725)

Disclosure Date: 11/14/2012
 Viol. Classification: Minor
 Citation: 30 TAC Chapter 335, SubChapter A 335.24
 30 TAC Chapter 335, SubChapter A 335.6
 Description: Failed to submit notifications of recycling activities for 10 waste streams.
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11
 40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(a)(3)
 Description: Failed to label plastic drums used to collect liquids from an aerosol can puncturing device, in the Electric Shop and Machine Shop, as "Hazardous Waste".
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 261, SubChapter I, PT 261, SubPT A 261.4(c)
 Description: Failed to clean hazardous waste from 4 manufacturing process units (MPU) ceasing operations for greater than 90 days and demonstrate documentation the waste left in the 4 MPU's was not hazardous.
 Viol. Classification: Minor
 Citation: 30 TAC Chapter 305, SubChapter F 305.124
 Description: Failed to have The Storm Water Pollution Prevention Plan approved by the Responsible Official.
 Viol. Classification: Minor
 Citation: 30 TAC Chapter 122, SubChapter C 122.222(k)(2)
 Description: Failed to submit Off-Permit Change Notification to incorporate the change into Title V Permit.
 Viol. Classification: Major
 Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ka 60.115a(a)
 Description: Failed to calculate monthly total vapor pressures (TVP) for all tanks in the East Plant.
 Viol. Classification: Major
 Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.345(a)(1)(i)
 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.345(b)
 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.356
 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: Failed to inspect all vacuum tracks annually(Method 21) or quarterly (visual inspection) as required per FF, contain background levels as required for inspection records of Method 21 inspections, indicate the status of visual inspections (i.e. Pass/Fail or no deficiencies noted, etc.), and provide instructions for reporting any deficiencies noted. Such missing documentation may be interpreted as not having performed the visual inspection.
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(a)(2)
 Description: Failed to accurately report a positive visual indication of presence of an effective water seal control (example: Unit 130 SMR) where no visible confirmation of water seal is possible in visual inspection records of various drain funnels.
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.110b(b)
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ka 60.113a(a)(1)(ii)(C)
 40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(b)(2)
 Description: Failed to properly estimate total gap width in secondary seal gap measurements (used a tape measure).
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(2)(i)
 40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(3)(ii)
 Description: Failed to conduct inspection for 6 floating roof tanks in Hazardous Organic NESHAP service within the specified 12-month timeframe.
 Viol. Classification: Minor
 Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7(c)(2)
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7(c)(3)
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7(d)(2)
 Description: Failed to submit both the detailed reports for CMS downtime and excess emissions whenever having 1% or more excess emissions or 5% or more CMS downtime.
 Viol. Classification: Major
 Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)
 Description: Failed to adhere sources to maximum allowable tons per year (TPY) emissions in Permit No. 2937. Specific sources and type of pollutants that exceed their limits are the following: No.4 Crude Charge Heater 108-H-4 (NOx, SO2, VOC), No.4 Crude Charge Heater 108-H-6 (VOC, SO2), No.4 Vacuum Heater 108-H-5 (NOx), GOT Frac Reb Heater 144-H-2 (NOx, VOC, PM), Coker Charge Heater 107-H-2 (NOx, SO2), No.4 Hydrobon Heater 139-H-1 (NOx, SO2), and No.4 Hydrobon Reb. Heater 139-H-2 (SO2).
 Viol. Classification: Major
 Citation: 30 TAC Chapter 335, SubChapter A 335.4

Description: Failed to provide waste analyses or process knowledge to accurately classify piles of excavated soil in the following areas: WMU #16, W of WWTU Control Room, S of 350 Tank and E of 92 Tank.

Notice of Intent Date: 06/12/2015 (1266551)

Disclosure Date: 08/24/2015

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Special Condition 32.A.

Description: Failure to retrofit Tank 152 with a secondary seal (It is believed that Tank 152 was inadvertently included in the lists of permitted tanks to be retrofitted).

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Special Condition 38

Description: Failure to comply with the benzene concentrate (heartcut) import limit of 18,200 BPD (30-day rolling average) during 2014.

Disclosure Date: 11/16/2015

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Special Condition 32.A.

Description: Failure to retrofit Tank 152 with a secondary seal (It is believed that Tank 152 was inadvertently included in the lists of permitted tanks to be retrofitted).

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Special Condition 38

Description: Failure to comply with the benzene concentrate (heartcut) import limit of 18,200 BPD (30-day rolling average) during 2014.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Permit 2937 MAERT TPY Limit

Description: Failure to comply with the particulate matter and volatile organic compound tons per year permit emission limit for Heater 8-H-4 for the period of January - December 2015. The limits were exceeded by 0.2 tons per year of particulate matter and 0.15 tons per year of volatile organic compounds.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter C 122.210(a)

40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.115b(b)(2)

Rqmt Prov: OP Special Condition 1.A.

Description: Failure to ensure that Title V Permit applicability correlates with storage tank regulatory applicability based on periodic reports being submitted under NSP'S Kb, MACT CC, and MACT G. The NSPS Kb reports did not include the necessary MACT CC compliance/applicability information for TK-110 in the East Plant title V permit. Examples include Tanks 85, 356, and 205 at the East plant.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 110, SubChapter D, PT 110 112.7(e)

Description: Failure to ensure that all testing criteria are aligned with industry standards. Specifically, records indicated that at East Dock # 11, five of the fourteen lines were tested below the 336 psig specified in the Integrated Contingency Plan.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT GGGGG 63.7881(c)(2)

Description: Failure to ensure that remediation wastes are being sampled and tracked with respect to GGGGG. Specifically, a review of spills and semi-annual MACT GGGGG reports did not show that the refinery was conducting a review of remediation material shipments to determine if they are subject to the control requirements of GGGGG and if the containers were required to be monitored.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(5)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(6)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.122(a)(4)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.122(a)(5)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.122(d)(1)(ii)

40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.122(h)(1)(i)

Description: Failure to include one HON tank failure in the semiannual MACT report and ensure the required notification was provided prior to the tank being returned to service, refilled after inspections, or maintenance.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)

Rqmt Prov: PERMIT General Permit

Description: Failure to ensure the Stormwater Pollution Prevention Plan is kept updated to reflect conditions at the site, by ensure Outfall 020 is represented, contains coke as a potential pollutant, includes erosion control measures. In addition, noncompliance of inspections and monitoring report was not submitted to the TCEQ

documenting that coke fines were being discharged offsite through Outfall 020 in 2014.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT ZZZZ 63.6625(e)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT ZZZZ 63.6625(h)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT ZZZZ 63.6655(f)

Description: Failure to maintain compliance documentation for five RICE engines, including oil and filter change records, air filter, hose, and belt inspection for engine 191L001-EN and manufacturer's emission related written instruction or developed maintenance plan for engines 191L001-EN and 131-P-064-EN.

Viol. Classification: Minor

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.112b(a)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.343(a)(1)(i)(B)

Description: Failure to ensure that Tank 202 in the Waste Water Treatment Plant (East) has a latch on the rooftop hatch.

Notice of Intent Date: 01/07/2016 (1308521)

Disclosure Date: 05/18/2016

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT SC 49A

Description: Failure to ensure that vacuum trucks with vapor controls are used per the MSS permit. Specifically, based on data collected under this audit, the refinery evaluated the anomalous emissions and identified that an uncontrolled vacuum truck was utilized as part of a sewer clean our maintenance activity in Complex 8 Sulfolane/BTX unit.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-3(a)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.347(a)(1)(i)(A)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.347(a)(1)(i)(B)

Description: Failure to ensure that the CIP separator operates as required. Specifically, based on data collected under this audit, the refinery evaluated the anomalous emissions and identified that the Complex 8 CPI separator overflowed for a limited time.

Notice of Intent Date: 01/05/2017 (1388470)

No DOV Associated

Notice of Intent Date: 05/16/2018 (1486356)

Disclosure Date: 11/14/2018

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 (inspection decals on some vacuum trucks were missing relevant dates or were missing dates).

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.346(a)(1)(i)(B)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.347(a)(1)(i)(B)

Description: Failure to ensure that five hatches on segregated solvent oily water sewer hubs in Unit 127 are latched (and noted that hatches on the CPI oil water separator were not secured closed).

Viol. Classification: Moderate

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

Description: Failure to maintain readily available records indicating that the required visual inspection of the closed vent piping was conducted.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.355(c)(3)(ii)(D)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.355(c)(3)(ii)(E)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.355(c)(3)(ii)(F)

Description: Failure to ensure that minimum volume of waste is purged prior to collecting a sample. In addition, the thermometer used during sampling was not known to be calibrated or certified.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 355, SubChapter J, PT 355 355.40(b)

Description: Failure to maintain written follow-up reports to the LEPC for select air-related events.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT Y 63.560(a)(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT Y 63.565(l)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT Y 63.567(j)(4)

Description: Failure to maintain records of HAP emissions calculations demonstrating that the site's Marine Loading Operations emitted less than 10 tons per year of an individual HAP and less than 25 tons per year total HAPs.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.108a(c)(6)(xi)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.108a(d)(5)

Description: Failure to identify the discharge from the HCU flare on April 2-4, 2016 in the NSPS Subpart Ja semi-annual report.

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 maintain documentation demonstrating that a steam eductor on the Semi-Regen Reformer in Unit 116 qualifies for an exemption from control.

Notice of Intent Date: 12/20/2018 (1538377)

Disclosure Date: 04/05/2019

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)
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)(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 were not 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 covers 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 oil-water separators are consistently maintained in a closed or 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 controlled with a cover and closed vent system are consistently maintained in a closed or 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 are consistently maintained to ensure compliance with alternative requirements.

Notice of Intent Date: 01/03/2019 (1539850)

Disclosure Date: 02/22/2019

Viol. Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.6(e)

Rqmt Prov: PERMIT SC 1
OP ST&C No. 24

Description: Failure to prevent a hydrocarbon leak coming from the clay treater (FIN 127-T-006) in Complex 8.

Viol. Classification: Moderate

Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.6(e)

Rqmt Prov: PERMIT SC No. 1
OP ST&C 24

Description: Failure to prevent a hydrocarbon leak on an overhead product cooler line in the Platformate Splitter Unit (FIN 154-E-108).

Disclosure Date: 05/16/2019

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter B 115.114(b)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.113b(b)

Rqmt Prov: PERMIT SC No. 22

Description: Failure to prevent intermittent non-fugitive emissions from pressure relief valves based on an IR camera inspection (TK-102, TK-138).

Viol. Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter B 115.114(b)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.113b(b)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(4)

Rqmt Prov: PERMIT SC No. 22
Description: Failure to prevent non-fugitive emissions from pressure relief valves based on AVO and a IR camera inspection (Tank 356).
Viol. Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter B 115.122
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.174(d)
Rqmt Prov: PERMIT SCs
Description: Failure to prevent a leak in the benzene tower water boot drain under the protective walking cover which released material intermittently.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter B 115.122
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.174(d)
Rqmt Prov: PERMIT SCs
Description: Failure to prevent a leaking overhead off-gas line that goes to the control valve 116-PV-04 sample line connection.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 327 327.5
Description: Failure to prevent a spill of hydrocarbon-containing wastewater from a buried pipeline.
Disclosure Date: 11/15/2019
Viol. Classification: Moderate
Citation: 40 CFR Part 60, Subpart VV 60.482-5
Rqmt Prov: OP Applicable Requirements Summary
Description: Failure to comply with the close-loop sampling requirement at two units (120 Sulfolane and 146 Sulfolane).
Viol. Classification: Moderate
Citation: 4F TWC Chapter 63, SubChapter A 63.166(a)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.166(b)
4F TWC Chapter 63, SubChapter A 63.166(c)
Rqmt Prov: OP Applicable Requirements Summary
Description: Failure to comply with the close-loop sampling requirements at three units (116 #2 Reformate Splitter, 127 BTX, and 154 #4 Platformate Splitter).
Viol. Classification: Moderate
Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-2(a)(5)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT QQQ 60.692-6
Rqmt Prov: OP SC 22
Description: Failure to ensure that the API separator effluent sump hatches and PV/RV on V-002 do not intermittently emit emissions in excess of the leak definition.
Notice of Intent Date: 07/20/2020 (1670818)
Disclosure Date: 11/17/2020
Viol. Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
Rqmt Prov: OP SC 24(E)
Description: Failure to prevent open ended lies with a cap, blind flange, plug, or second valve Units 107, 108, 141, 143, and 144.
Disclosure Date: 05/11/2021
Viol. Classification: Moderate
Citation: 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.113b(a)(4)
Description: Failure to conduct 10 year internal inspection for Tanks 143TK002 & 194TK074.

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

For
Informational
Purposes
Only

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.


 Stacy Hunter
 Alternative Custodian of Records
 Texas Commission on Environmental Quality

Preliminary Determination Summary

Valero Refining-Texas, L.P.

Permit Numbers 2937 and PSDTX1023M3

I. Applicant

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

II. Project Location

Bill Greehey Refinery East Plant
 1300 Cantwell Lane
 Nueces County
 Corpus Christi, Texas 78407

III. Project Description

The main process at this site is refining of crude oil into various fuel products and sending those products out to market. Sources currently authorized include storage tanks, boilers and heaters, cooling towers, marine and truck loading, thermal oxidizers at loading points, flares, sulfur recovery units, coke handling, process vents, recovery wells, and wastewater treatment and carbon adsorption canisters.

The current project is a renewal and amendment of the air quality permit for these sources. Below is a summary of the proposed changes to the permit:

- 1) Removal of all emission caps for routine refinery operations – Since the sum of the annual allowables for all Emission Point Numbers (EPNs) for routine refinery operations was less than the permit caps, the caps have been removed.
- 2) Reduce nitrogen oxide (NOx) factor on selected heaters: EPNs Q10-H-1, QL-10 as required by (previously numbered) Special Condition No. 11 and Consent Decree.
- 3) Increase hourly and annual emissions on Heater - C6B HCU Rx Chrg. EPN Q11-H-301 to design capacity.
- 4) Authorize Ammonia emissions from all boilers and heaters. These emissions have always been present but were detected in testing at the refinery, so are being quantified with this action.
- 5) Authorize carbon adsorption system (CAS) to control select wastewater treatment plant (WWTP) sources to comply with National Emission Standards for Hazardous Air Pollutants (NESHAP) for benzene waste (EPN WW-CAS)
- 6) Authorize emissions from previously authorized benzene wastewater stripper that were omitted during deflex (EPN WP-FLARE1)
- 7) Authorize the use of the #2 Reformer Flare as an alternate means of control for Volatile Organic Compounds (VOC) – Currently VOC emissions from the #2 Reformer and the #4 Platformer are routed to process heaters. The flare will be used as an alternate means of control. (EPNs QL-10, Q3-H-4A/B, REF-FL2)
- 8) Authorize Heater 130-H-01 as a secondary control device (EPN SMR2) for the existing Steam Methane Reformer (SMR)
- 9) Authorize emissions from Coker drums associated with the existing delayed coker unit (EPNs CSV1 and CSV2)
- 10) Update emissions from the following flares – EPNs WP-FLARE1, EP-FLARE1, HCU-FL1, and REF-FL2) – Applicant has requested to update flare emissions based on recently measured flow and composition data.
- 11) Update particulate matter (PM), including PM 10 microns or less and PM 2.5 microns or less (PM₁₀/PM_{2.5}) emissions from Sulfur Recovery Unit (SRU) Incinerators (EPNs SRU1-INCIN, SRU2-INCIN)
- 12) Increase amount of gas oil loaded into barges at Dock 6 (EPN PD-6)

- 13) Increase emissions from loading of asphalt (EPN PMA-LOAD)
- 14) Change basis of Cooling Tower emissions to maximum total dissolved solids (TDS) and VOC content – This will affect five cooling towers (EPNs 83-CT1, Q-CT4, Q-CT5, 88-CT7, Q-CT8)
- 15) Update fugitive emission rates because of full incorporation of thirteen Permits by Rule (PBRs) (EPN REFUG)
- 16) Authorize Maintenance, Startup, and Shutdown (MSS) for the Complex 8 Corrugated Plate Interceptor (within MSS Subcap)
- 17) Authorize MSS heater pigging and decoking activities (within MSS Subcap)
- 18) Authorize MSS activities – meter maintenance and purging at a neighboring industrial facility (within MSS Subcap)
- 19) Authorize increased annual abrasive blasting (within MSS Subcap)
- 20) Remove EPNs that have been permanently shut down: 39-H-3A, 39-H-3B, 39-H-3C, 39-H-7,
- 21) Remove EPNs that have been renamed ASPH-RCLDG, ASPH-TLDG, LATEX-TLDG, RC-RACK1, SULF-RCLDG, SULF-TLDG, 4REGENVENT
- 22) Move EPNs from individual emission rates on Maximum Allowable Emission Rate Table (MAERT) to Wastewater Treatment Plant (EPN WWTP), which controls emissions from wastewater sources. Some were renamed due to addition of covers, etc., others were incorporated by consolidation from previous PBR authorization.
- 21) Remove tank heater EPNs that are authorized by NSR Permit 135622: H-TK-54, H-TK-70

Heaters and boilers had slight corrections to emission rates with respect to incorrect representations when amending the permit from a flexible permit to an NSR non flexible permit (previous deflex permit action, Project 159115). At the time of that action, individual emission rates were mistakenly not represented as maximum potential to emit based on maximum firing rate, short term emission rate factors, and short term sulfur limits in the fuel. Also with this renewal, ammonia emissions of 0.00032 lb/MMBtu that have always been emitted from these sources but not previously quantified are now being quantified on the MAERT, per TNRCC Victoria Hsu Memo, March 10, 1997. These adjustments are not modifications to these units.

The Special Conditions and MAERT were reviewed and edited to ensure they accurately described the current process at the site along with required monitoring. Month/year references within the Special Conditions are left based on applicant request.

IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	717.48
NO _x	659.27
SO ₂	479.97
CO	844.57
PM/PM ₁₀ /PM _{2.5}	163.78 / 132.78 / 117.55
H ₂ S	11.45
NH ₃	10.73

See below for discussion of federal applicability.

With regard to PM10 and PM2.5, condensable particulate was included in the review along with filterable particulate in order to have proper values addressed in the NAAQS analysis.

MSS is authorized within this permit within the MSS Subcap category on the MAERT and per the MSS Special Conditions. Changes are as discussed above. Short term limits are maximum expected and annual limits are average annual from all MSS sources.

V. Federal Applicability

Nonattainment review is not applicable because this county is in attainment or unclassified for all NAAQS. The applicant investigated federal applicability for potential PSD review. The site is currently a major PSD named source. This project is aggregated with Permit 135622, Project 247318 since sources on that permit were on NSR Permit 2937 at the time renewal was due. The table below includes EPNs from both permits / projects.

Pollutant	Project Increase (tpy) ¹	PSD Netting Trigger (tpy)	Netting Required Y/N	Net Emission Change (tpy) ²	Major Mod Trigger (tpy)	PSD Triggered Y/N
VOC ³	194.2	40	Y	271.4	40	Y
NOx ^{3,4}	31.6	40	N	NA	40	N
SO ₂ ⁴	7.8	40	N	NA	40	N
CO	172.4	100	Y	178.9	100	Y
PM	9.8	25	N	NA	25	N
PM ₁₀	9.8	15	N	NA	15	N
PM _{2.5} ⁵	9.6	10	N	NA	10	N
H ₂ S	3.5	7	N	NA	7	N

- ¹ Project Increases: Comparison of Baseline Actual to Potential to Emit (PTE) Increases only
- ² Net Emissions: Baseline Actual to PTE for the project currently under review, Baseline Actual to PTE for all other increases and decreases within netting window.
- ³ Ozone precursor. Either pollutant precursor can trigger BACT and impacts analysis, as applicable.
- ⁴ PM_{2.5} precursor. Not used to trigger PM_{2.5} BACT or impacts analysis at this time.
- ⁵ Use PM₁₀ emissions only if PM_{2.5} emissions cannot be quantified or estimated. (PM_{2.5} Implementation Plan).

Pollutants that did not trigger PSD review still underwent minor NSR review and health effects review.

VI. Control Technology Review

As part of the BACT review process, the Texas Commission on Environmental Quality (TCEQ) evaluates information from the EPA's RACT/BACT/LAER Clearinghouse (RBLCL), on-going permitting in Texas and other states, and the TCEQ's continuing review of emissions control developments for pollutants triggering a PSD review. PSD review is triggered for CO and VOC, and state level review is triggered for all other regulated pollutants.

In addition to a review of control technology for steady state operations, the Best Available Control Technology (BACT) analysis includes startup and shutdown emissions and the numerical emission limits in the draft permit reflect this analysis. BACT for each pollutant is reflected in the numerical limits in the MAERT.

For a renewal of an existing air permit, the commission may not impose conditions more stringent than the existing permit unless more stringent conditions are necessary to avoid a condition of air pollution or to ensure compliance with other state and federal air quality control requirements. BACT is addressed below for modified units only.

Refinery Fugitives (PSD for VOC) 28VHP or 28AVO Leak Detection and Repair (LDAR) program as applicable. This is the commonly applied control within the RBLC. BACT is met.

Tanks Subcap (PSD for VOC) Internal floating roof tanks with mechanical shoe primary seal, painted white. External floating roof tank, painted white with primary mechanical shoe seal and a secondary rim-mounted seal. Vertical fixed roof tanks storing low vp products (vp < 0.5 psia) with submerged fill, painted white. These are the commonly applied controls within the RBLC. BACT is met.

Marine Loading and Thermal Oxidizer (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) Materials with vp > 0.5 psia are collected with an efficiency of 95% and are routed to thermal oxidizer. Ships loaded with crude or condensate pass an annual vapor tightness test. These are the commonly applied controls within the RBLC. BACT is met.

Asphalt Loading (PSD for VOC) The RBLC only had one site with any controls (which was a regenerative thermal oxidizer) for this type of source. That source even with controls was > 15 lb/hr VOC. Materials w/ vp < 0.5 psia typically require submerged loading. Applicant stated that submerged fill is not technically feasible for polymer-modified asphalt because it is thixotropic (shear thinning). Splash filling of asphalt is avoided to the extent practicable. Even under shear, it has limited ability to form suspended droplets in a vessel's vapor space. Using the splash loading factor will overstate emissions but this will also be included within the AQA / health effects to ensure acceptable impacts. The asphalt has ultra-low vapor pressure (maximum of 0.018 psia) and high viscosity, with an average of 2500 centipoise (cP) and a minimum of 890 cP. Due to these physical properties, these ultra-low vapor pressure materials will be splash loaded. This meets BACT for this source with 1.02 lb/hr VOC.

Truck loading and thermal oxidizer (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) Materials with vp > 0.5 psia are collected with an efficiency of 95% and are routed to thermal oxidizer or flare (EPNs TO-2 or WP- FLARE1). Materials w/ vp < 0.5 psia use submerged loading. Gasoline tank trucks pass a leak-tight test annually. Throughput limits were the only controls found in RBLC, which are present for these sources. BACT is met.

Thermal oxidizer (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) Tank EPNs T-102, T-108, T-138, T-201, and recovery wells are routed to this oxidizer, that must meet MACT CC (40 CFR 63.670, 671) requirements. This is consistent with RBLC results. BACT is met.

Flares subcap (SO₂, NO_x; PSD for VOC and CO) 98% VOC DRE represented. Flares meet MACT CC requirements in 40 CFR 63.670/671 which suffice to meet BACT as defined in 40 CFR 60.18. This is consistent with RBLC results. BACT is met.

SRUs Subcap (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) PM being quantified and added to MAERT with this action, other pollutants unchanged. Proposed collateral increase from this control device is due to combustion of waste gas in incinerators that was not previously accounted for. Sulfur > 10 LTPD, SRU and Tail Gas Incinerators. 99.8% sulfur recovery. SO₂

CEMS for incinerators. RBLC search has no VOC or CO limits mentioned, only mention of 99.8% sulfur recovery. BACT of good combustion practices and use of gaseous fuel is acceptable for this source and permitting action.

Wastewater Treatment Unit Subcap (PSD for VOC) Uncontrolled site-wide wastewater emissions > 5 tpy VOC: stripped gases from pretreatment routed to a control device, collection system hard piped/covered conveyance to biological treatment unit vented to a control device, wastewater treatment system must be at least 90 percent efficient. Benzene wastewater stripper emissions routed to Complex 7 Flare (EPN WP-FLARE1) Gas Recovery unit, which removes H₂S via amine treatment and recovers gas to the fuel gas system. This is consistent with RBLC results. BACT is met.

Wastewater Carbon Adsorption Canisters: Disposable (non-regenerative) (PSD for VOC) Minimum of two carbon canisters in series; periodic monitoring before the last canister which is acceptable for these low use rate systems. Breakthrough concentration 20-100 ppm based on vendor representations for specific compounds. Monitoring frequency every 2 weeks. Breakthrough concentration is 100 ppmv for VOC. This is consistent with RBLC results. BACT is met.

MSS: Process Units and Tanks Shutdown / Depressurize / Drain / Startup (PSD for VOC) Process vessel purge gases routed to flares. Process vessels containing liquids with vp > 0.5 psia purged until one of the following (or similar) is met: VOC pp < 0.5 psia, 34,000 ppmv or less, measured as methane, 50% or less of lower explosive limit, and/or 3x the volume of the vessel has been nitrogen or steam purged. Remaining process fluid reduced through process fluid recovery and flaring, followed by testing with a gas sensor. This is consistent with RBLC results. BACT is met.

MSS: SRU Maintenance Shutdown (SO₂; PSD for VOC) RBLC search did not result in controls for SRU maintenance. Sweep natural gas through SRU to carry residual sulfur compounds to SRU incinerator, which has DRE of sulfur compounds of 99.9%. BACT is met.

MSS: Atmospheric Tank Cleaning and Refilling (PSD for VOC) Drain and degas landed volume for floating roof tanks taken out of service. No more than six floating roof tanks taken out of service and drained and degassed per year. For change of service, land roof, drain tank, and begin refill within 24 hours. Only 3 gasoline tanks in service at any one time. Two roof landings per season (March and September) per tank. Maintain fixed roof tanks only when warranted by inspection. This is consistent with RBLC results. BACT is met.

MSS: Heater decoking (PM/PM₁₀/PM_{2.5}) Limiting the frequency and duration of activities. Water spray to minimize decoking emissions. This is consistent with RBLC results. BACT is met.

MSS: Abrasive blasting (PM/PM₁₀/PM_{2.5}) Collection and removal of spent or waste abrasive blast media in such a manner to minimize emissions and placing the waste in covered containers prior to removal from the site. Use of low dusting abrasives with a free silica content < 1%. No visible emissions crossing property line. This meets BACT for this source.

MSS: Complex 8 Corrugated Plate Interceptor (CPI) (PSD for VOC) These are MSS operations for a process unit. Degassing to the atmosphere will be limited to MACT CC levels (72 lb VOC, which will require adjustment of the 50 lb VOC limit in the MSS Special Conditions). Vacuum truck operations will otherwise be used as control, subject to appropriate MSS special conditions for these operations already within the permit. This is consistent with RBLC results. BACT is met.

MSS: Meter maintenance and purging at a neighboring industrial facility (Enterprise) (PSD for VOC) Emissions from truck venting, propane loading line clearing and meter maintenance

purging performed at the neighboring Enterprise facility will be vented to a flare. Venting to a flare with 98% control efficiency is considered BACT for these MSS activities. This is consistent with RBLC results. BACT is met.

C8 No. 6 Boiler, EP-B-6, (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) 334 MMBtu/hr, Boiler authorized by Standard Permit being consolidated. Low NO_x burners and SCR are present resulting in NO_x emissions of 0.015 lb/MMBtu and 50 ppm CO at 3% O₂. CO 100 ppm max, 50 ppm average annual. Natural or refinery fuel gas ≤ 60 ppmvd H₂S average annual (162 ppmvd H₂S maximum). The use of gaseous fuels limits PM emissions to values consistent with the AP-42 value for natural gas of 7.6 lb/MMscf. The NH₃ level of 0.00032 lb/MMBtu is low enough that further controls (for this pollutant) are impractical. NO_x and CO CEMS are present. This is consistent with RBLC results and meets TCEQ Tier I BACT for refinery gas fired boilers. BACT is met.

Heater – C7 Kero HDS, 37-H-3 (SO₂, NO_x, PM/PM₁₀/PM_{2.5}; PSD for VOC and CO) 34 MMBtu/hr, Consolidation of unregistered PBR 106.183, replacement heater for previous EPN 37-H-2. Increases are not being requested with respect to the PBR previously claimed. NO_x 0.1 lb NO_x/MMBtu, CO 100 ppm max, 50 ppm average annual. Low NO_x burners, good combustion practices, natural or refinery fuel gas ≤ 60 ppmvd H₂S average annual. Ammonia emissions of 0.00032 lb/MMBtu (as detected in stack testing) are being added. This NH₃ level is low enough that further controls are impractical. For unit of this size being consolidated, this level of control is reasonable. This is consistent with RBLC results for heaters of this size. BACT is met.

The project also included emission rate corrections for physically unmodified heaters and boilers. As specified in the TCEQ's BACT guidance document, APDG 6110v2 dated January 2011, "*Applications for projects subject to air pollution control evaluations are those with new and modified facilities or sources of emissions of air contaminants.*" These facilities are not new and are not being physically modified with this project. However, these sources are proposed to have allowable emission rates increases to correct representations in the permit. Therefore, the previous BACT evaluations were reviewed to ensure that the original BACT determinations would not have been different if the correct emission rates had been known at the time that they were originally evaluated for BACT. None of the allowable emission rate changes would have changed the BACT determinations.

VII. Air Quality Analysis

The applicant demonstrated that the proposed project's emissions will not adversely affect public health and welfare, which includes the National Ambient Air Quality Standards (NAAQS), PSD de minimis and significance, additional impacts, minor new source review of regulated pollutants without a NAAQS, and air toxics review.

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

A. De Minimis Analysis

For pollutants that triggered federal review (CO and VOC), all pollutants, averaging times, project GLCs, de minimis and monitoring significance levels were included. Ozone PSD de minimis was also investigated.

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results for 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms Per Cubic Meter ($\mu\text{g}/\text{m}^3$)

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
CO	1-hr	240	2000
CO	8-hr	221	500

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

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	0.18	1

The applicant performed an O₃ analysis as part of the PSD AQA. The applicant evaluated project emissions of O₃ 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 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 worst-case Texas source, the applicant estimated an 8-hr O₃ concentration of 0.18 ppb. When the estimate 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 8-hr CO is below its monitoring significance level.

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	Significance ($\mu\text{g}/\text{m}^3$)
CO	8-hr	221	575

The GLCmax represents the maximum predicted concentration over five years of meteorological data.

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 O₃ monitoring data to satisfy requirements in 40 CFR 52.21(i)(5)(i)(f).

A background concentration for O₃ was obtained from the EPA AIRS monitor 483550025 located at 902 Airport Blvd, Corpus Christi, Nueces County. A three-year average (2017-

2019) of the annual fourth highest daily maximum 8-hr concentrations (61 ppb) was used in the analysis. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. The use of this monitor for a background concentration of ozone is reasonable based on its proximity (<5 kilometers [km]) to the project site.

C. 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 553 km from the proposed site.

The predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times, are all less than de minimis levels at a distance of 0.3 km from the proposed sources in the direction of the Big Bend National Park Class I area. The Big Bend National Park Class I area is an additional 552.7 km from the location where the predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ 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.

D. Minor Source NSR and Air Toxics Review

All federally regulated pollutants are subject to impacts analysis, even if a minor source. Sulfur compounds are also subject to Texas State Property Line standards.

Table 4. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	Standard (µg/m ³)
SO ₂	1-hr	289	715
H ₂ S	1-hr	30	108

Table 5. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	17	7.8
SO ₂	3-hr	246	25
PM ₁₀	24-hr	5.4	5

Pollutant	Averaging Time	GLCmax ($\mu\text{g}/\text{m}^3$)	De Minimis ($\mu\text{g}/\text{m}^3$)
PM _{2.5}	24-hr	3.1	1.2
PM _{2.5}	Annual	0.6	0.2
NO ₂	1-hr	18	7.5
NO ₂	Annual	4.5	1

The 1-hr NO₂, 1-hr SO₂, and 24-hr and annual PM_{2.5} GLCmax are based on the highest five-year average of the maximum predicted concentrations determined for each receptor.

For all other pollutants and averaging times, the GLCmax are the maximum predicted concentrations associated with five years of meteorological data.

The primary NAAQS for 24-hr and annual SO₂ have been revoked for Nueces County and are not reported above.

The justification for selecting the EPA's interim 1-hr NO₂ and 1-hr SO₂ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO₂ and 1-hr SO₂ 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 NO₂ and 1-hr SO₂ NAAQS.

Intermittent guidance was relied on for the 1-hr SO₂ and 1-hr NO₂ minor NSR De Minimis analyses.

The PM_{2.5} 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 a PM_{2.5} NAAQS based on the analyses documented in EPA guidance and policy memoranda³.

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. 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 worst-case Texas source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.04 $\mu\text{g}/\text{m}^3$ and 0.001 $\mu\text{g}/\text{m}^3$, 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.

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

Table 6. Total Concentrations for Minor NSR 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	127	15	142	196
SO ₂	3-hr	264	25	289	1300
PM ₁₀	24-hr	8	79	87	150
PM _{2.5}	24-hr	11.3	23	34.3	35
PM _{2.5}	Annual	1	8	9	12
NO ₂	1-hr	63	57	120	188
NO ₂	Annual	6	8	14	100

The 1-hr SO₂ GLCmax is the highest five-year average of the 99th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor. The 3-hr SO₂ GLCmax is the high second-high predicted concentration associated with five years of meteorological data. The 24-hr PM₁₀ GLCmax is the high sixth-high predicted concentration associated with five years of meteorological data. The 24-hr PM_{2.5} GLCmax is the highest five-year average of the 98th percentile of the annual distribution of the predicted 24-hr concentrations determined for each receptor. The 1-hr NO₂ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of the predicted daily maximum 1-hr concentrations determined for each receptor. The annual PM_{2.5} GLCmax is the highest five-year average of the annual predicted concentrations determined for each receptor. The annual NO₂ GLCmax is the maximum predicted concentration associated with five years of meteorological data.

The primary NAAQS for 24-hr and annual SO₂ have been revoked for Nueces County and are not reported above.

Background concentrations for SO₂ were obtained from the EPA AIRS monitor 483550025 at 902 Airport Blvd, Corpus Christi, Nueces County. The three-year (2017-2019) average of the 99th percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The second highest 3-hr average concentration from the most recent year (2019) was used for the 3-hr value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on its proximity to the project site and the applicant's comparison of emissions within 10 km of the monitor and project site and surrounding land use.

A background concentration for PM₁₀ was obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County. The high second-high concentration from the most recent three years of monitoring data (2017-2019) was used for the 24-hr value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on its proximity to the

project site and the applicant's comparison of emissions within 10 km of the monitor and project site and surrounding land use.

Background concentrations for PM_{2.5} were obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County. The three-year (2017-2019) average of the 98th percentile of the annual distribution of 24-hr concentrations was used for the 24-hr value. The 3-year (2017-2019) average of the annual average concentrations was used for the annual value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. The first and third quarters of 2018 monitoring data were incomplete as well as the fourth quarter of 2020 monitoring data. The third quarter of 2018 and the fourth quarter of 2020 are less than 50% complete and the ADMT substituted each quarter with the corresponding data from EPA AIRS monitor 483550032 located at 3810 Huisache St., Corpus Christi, Nueces County and verified the overall modeling result will not be affected. Using data from the nearby monitor is reasonable since the distance between the two monitors is approximately three kilometers. For the first quarter, the ADMT performed the substitution test as outlined in Appendix N to 40 CFR Part 50 and verified the validity of using 2018 monitoring data. Use of this monitor is reasonable based on the applicant's comparison of emissions within 10km of the monitor and project site, surrounding land use, and a review of the surrounding industries. In addition, the applicant explicitly modeled nearby off-property sources of PM_{2.5}.

Background concentrations for NO₂ were obtained from the EPA AIRS monitor 482011050 at 4522 Park Rd, Seabrook, Harris County. The three-year (2017-2019) average of the 98th percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The annual average concentration from the most recent year (2019) was used for the annual value. The applicant did not consider monitoring data from most recent year (2020). The ADMT reviewed monitoring data from 2018-2020 and determined that the overall modeling result will not be affected. Use of this monitor is reasonable based on the applicant's comparison of emissions within 10km of the monitor and project site, surrounding land use, county population and emissions comparison and a review of the surrounding industries. In addition, the applicant explicitly modeled nearby off-property sources of NO₂.

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 worst-case Texas source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.04 µg/m³ and 0.001 µg/m³, respectively. When these estimates are added to the GLCmax listed in Table 6 above, the results are less than the NAAQS.

The applicant provided a health effects review as specified in the TCEQ's March 2018 Modeling and Effects Review Applicability (MERA) guidance for project emission increases of non-criteria pollutants. A summary of the review for the pollutants with allowable emissions increases is included below in Table 7 below.

Table 7. Health Effects Review - Minor NSR Project-Related Modeling Results

Pollutant & CAS#	Averaging Time	GLCmax (µg/m³)	ESL (µg/m³)	Modeling and Effects Review Applicability (MERA) Step in Which Pollutant Screened Out
Ammonia 7664-41-7	1-hr	3	180	Step 4 – Production project-related results since most recent site-wide modeling GLCmax ≤ 25% of ESL, and Production Project GLCmax ≤ 10% of ESL
	Annual	N/A	92	Step 0 – long-term ESL ≥ 10% of short-term ESL
Refinery light 8006-61-9	1-hr	108	3500	Step 4 – Production project-related results since most recent site-wide modeling GLCmax ≤ 25% of ESL, and Project Production GLCmax ≤ 10% of ESL
		704 (MSS)		Step 4 - GLCmax ≤ 50% ESL site-wide MSS modelling, GLCmax ≤ 25% ESL project MSS only
	Annual	NA	350	Step 0 – long-term ESL ≥ 10% of short-term ESL
Refinery heavy 64741-88-4	1-hr	100	1000	Step 4 – Production project-related results since most recent site-wide modeling GLCmax ≤ 25% of ESL, and Project Production GLCmax ≤ 10% of ESL
		108 (MSS)		Step 4 - GLCmax ≤ 50% ESL site-wide MSS modelling, GLCmax ≤ 25% ESL project MSS only
	Annual	NA	100	Step 0 – long-term ESL ≥ 10% of short-term ESL

Thus, the applicant has demonstrated that the proposed project’s emissions will not adversely affect public health and welfare, which includes the NAAQS, additional impacts, minor new source review of regulated pollutants without a NAAQS, and air toxics review. Therefore, the proposed increases in health effects pollutants will not cause or contribute to any federal or state exceedances. Therefore, emissions from the facility are not expected to have an adverse impact on public health or the environment.

VIII. Conclusion

The applicant has demonstrated the project meets all applicable rules, regulations, and requirements of the Texas and Federal Clean Air Acts. The proposed facilities and controls represent BACT for the proposed facility. Modeling analyses indicate that the proposed project will not violate the NAAQS or any PSD increment, nor have any adverse impacts on the public health, soils, vegetation, or Class I areas.

The Executive Director makes a preliminary recommendation to issue Permit Nos. 2937 and PSDTX1023M3.

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 19, 2022

State of Texas
County of Travis

JAN 20 2023

TO: Persons on the attached mailing list.

RE: Valero Refining-Texas, L.P.
Air Quality Permit Nos. 2937 and PSDTX1023M3

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.

Stacy Harper
Alternative Custodian of Records
Texas Commission on Environmental Quality

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 Comments. A copy of the complete application, draft permit and related documents, including public comments, is available for review at the TCEQ Central office. A copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the Owens R. Hopkins Public Library, 3202 McKenzie Road, Corpus Christi, Nueces County, 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. A brief description of the procedures for these two 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; and
 - (B) 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. The request must be based on issues that were raised during the comment period. The request cannot be based solely on issues raised in comments that have been withdrawn. The enclosed Response to Comments will allow you to determine the issues that were raised during the comment period and whether all comments raising an issue have been withdrawn. The public comments filed for this application are available for review and copying at the Chief Clerk's office at the address below.

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 comments that you dispute; and 2) the factual basis of the dispute. In addition, you should list, to the extent possible, any disputed issues of law or policy.

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 alternative dispute resolution director 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/mt

Enclosure

MAILING LIST
for
Valero Refining-Texas, L.P.
Air Quality Permit Nos. 2937 and PSDTX1023M3

FOR THE APPLICANT:

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via electronic mail:

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Office of Chief Clerk MC-105
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TCEQ Commissioners' Integrated Database - All Activity Actions

State of Texas
County of Travis

JAN 20 2023

[Back](#) **Back to Report Result 1 - 4**

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.

Stacey Harper
Alternative Custodian of Records
Texas Commission on Environmental Quality

Activity Action List:	Document Type	Action
12/09/2022	DIRECT REFERRAL - APPLIC	RECEIVED
12/07/2022	AGENDA SETTING LTR	MAILED
12/05/2022	TCEQ DOCKET NUMBER	ISSUED
12/05/2022	TCEQ DOCKET NUMBER	REQUESTED
08/18/2022	RFR/HR PERIOD	END
07/19/2022	FINAL DECISION LETTER	MAILED
07/12/2022	RESPONSE TO COMMENTS	RECEIVED
04/20/2022	AVAILABILITY VERIFICATIO	RECEIVED
04/20/2022	BILINGUAL VERIFICATION	RECEIVED
04/14/2022	COMMENT PERIOD	END
03/25/2022	BILINGUAL TEARSHEET	RECEIVED
03/25/2022	NEWSPAPER TEARSHEET	RECEIVED
03/25/2022	AFFIDAVIT - NAPD	RECEIVED
03/15/2022	BILINGUAL AFFIDAVIT	RECEIVED
03/15/2022	BILINGUAL NOTICE	PUBLISHED
03/15/2022	NOTICE - PRELIM DECISION	PUBLISHED
03/07/2022	NOTICE - PRELIM DECISION	MAILED
03/04/2022	NOTICE - PRELIM DECISION	RECEIVED
08/25/2015	AVAILABILITY VERIFICATIO	RECEIVED
08/25/2015	BILINGUAL VERIFICATION	RECEIVED
12/01/2014	NEWSPAPER TEARSHEET	RECEIVED
12/01/2014	AFFIDAVIT - NORI	RECEIVED
11/20/2014	NOTICE OF RECEIPT/INTENT	PUBLISHED
11/07/2014	NOTICE OF RECEIPT/INTENT	MAILED
11/06/2014	ADMIN REVIEW	COMPLETE
11/06/2014	NOTICE OF RECEIPT/INTENT	RECEIVED
10/31/2014	APPLICATION	RECEIVED

Related Links:

- [Central Registry](#)
- [Commissioners' Agenda](#)
- [Executive Director's Agenda](#)
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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.

Sharon [Signature]
Afternoon Custodian of Records
Texas Commission on Environmental Quality

TCEQ AIR QUALITY PERMIT NUMBER 2937 and PSDTX1023M3

**APPLICATION BY
VALERO REFINING-TEXAS, L.P.
BILL GREEHEY REFINERY EAST
PLANT
CORPUS CHRISTI, NUECES COUNTY**

§
§
§
§

**BEFORE THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**

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 person: Kelly L. Haragan on behalf of Citizens for Environmental Justice (hereinafter CFEJ). CFEJ members include: Tammy Foster, Connie and Polo Gonzales, Carol Burnside, Joe Musquiz, and Janette and Pat Dunehoo. Additional signatories of Ms. Haragan's comment letter were Amy Johnson and Erin Gaines of Texas RioGrande Legal Aid and Ilan Levin with Environmental Integrity Project. 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) § 382.055 and §382.0518. This will authorize continued operation of an existing facility and the modification of an existing facility that may emit air contaminants.

This permit will authorize the Applicant to continue operation of an existing permitted facility and modify the Bill Greehey Refinery East Plant. Facilities authorized by this permit include storage tanks, boilers and heaters, cooling towers, marine and truck loading, thermal oxidizers at loading points, flares, sulfur recovery units, coke handling, process vents, recovery wells, and wastewater treatment and carbon adsorption canisters. Proposed amendments to the permit include authorizing a flare as an alternate means of VOC control, incorporation of fugitive emissions previously authorized by permit by rule (PBR), authorization for benzene evaporation treatment and carbon adsorption canisters, and revising represented maintenance, startup, and shutdown (MSS) activities. The refinery is located at 1300 Cantwell Lane, Corpus Christi, Nueces County. Contaminants authorized under this permit include ammonia, carbon monoxide, exempt solvents, hazardous air pollutants, hydrogen sulfide, 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.

Procedural Background

To continue operating an existing permitted facility, and before work is begun on the modification of an existing facility that may emit air contaminants, the person planning the continued operation and modification must obtain a permit renewal and a permit amendment from the commission. This permit application is for a permit renewal and amendment of Air Quality Permit Number 2937 and PSD Permit Number PSDTX1023M3.

The permit application was received on October 31, 2014 and declared administratively complete on November 6, 2014. The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice) for this permit application was published in English on November 20, 2014, in the *Corpus Christi Caller Times*. At the time of the first public notice in 2014, the Applicant affirmed that an alternative language publication could not be found. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) was published on March 15, 2022, in English in the *Corpus Christi Caller Times* and in Spanish on March 15, 2022, in *Tejano y Grupero News*. The public comment period ended on April 14, 2022. Because this application was received before September 1, 2015, it is not subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

COMMENTS AND RESPONSES

COMMENT 1: PERMIT CHANGES

CFEJ raised concerns regarding proposed changes under the permit renewal. Specifically, CFEJ asks for more information on the operational changes, emission changes, and any new equipment. CFEJ also raised concerns about inconsistencies in the permit application.

(CFEJ)

RESPONSE 1: The original renewal application for this refinery was received on October 31, 2014. A new, amended renewal application (hereinafter "Application") was received on January 20, 2016, which addressed deficiencies and inconsistencies in the original renewal application. The Application proposed some emission increases, in addition to new operating procedures and equipment changes, which will be laid out in more detail in this Response. The amended Application proposes removing overall emission caps for the entire refinery and assigning individual emissions limits for each emission point number (EPN) associated with each emission point. The Application also updates the NO_x emission concentration limits for EPNs Q10-H-1 and QL-10 heaters to accurately reflect the emission amount for NO_x. Additionally, for heater EPN Q11-H-301, the emission estimates were recalculated in the Application to reflect the maximum fuel capacity of the heater. The Application also proposes authorizing ammonia (NH₃) emissions from boilers and heaters, flaring as a VOC control option, emissions for the coker drum, and utilizing heaters as a secondary control device for VOC. The Application included an updated wastewater benzene (VOC) capture system

which will route the captured benzene for flaring and wastewater to a carbon adsorption system. The Application proposes an increase of 24 tons per year for VOC, an increase in PM, decrease in PM₁₀, and decrease in PM_{2.5}. The Application also removed emission points that are no longer operational. Heaters that were authorized under the original permit for the refinery are now authorized under permit 135622 in addition to some tanks, some refinery fugitives, and associated Maintenance, Startup, and Shutdown (MSS) activities.

COMMENT 2: HEALTH EFFECTS AND AIR QUALITY

CFEJ is concerned about the effect of the emissions from the proposed project on the air quality and health of people. CFEJ members believe emissions of air pollutants, including VOC and particulate matter, from the refinery are adversely affecting their health. CFEJ states that the application fails to adequately demonstrate protectiveness of public health and welfare. CFEJ raises concerns regarding cumulative effects due to the expansion in the Corpus Christi area.

(CFEJ)

RESPONSE 2: 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 (NO₂), ozone (O₃), sulfur dioxide (SO₂), particulate matter (PM) less than or equal to 10 microns in aerodynamic diameter (PM₁₀), and PM less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5}).

¹ 40 CFR 50.2

The Applicant conducted a NAAQS analysis for CO, O₃, SO₂, PM₁₀, PM_{2.5}, and NO₂. The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations of maximum ground level concentrations (GLC_{max}) 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 De Minimis Review

Pollutant	Averaging Time	GLC _{max} (µg/m ³)	De Minimis (µg/m ³)
NO ₂	1-hr	18	7.5
NO ₂	Annual	4.5	1
CO	1-hr	240	2000
CO	8-hr	221	500
PM ₁₀	24-hr	5.4	5
PM _{2.5}	24-hr	3.1	1.2
PM _{2.5}	Annual	0.6	0.2
SO ₂	1-hr	17	7.8
SO ₂	3-hr	246	25

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O ₃	8-hr	0.18	1

The pollutants below the de minimis level should not cause or contribute to a violation 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 NAAQS analysis are presented below in Table 2. The total concentration was determined by adding the GLC_{max} 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. Background concentrations for SO₂ were obtained from the EPA AIRS monitor 483550025 at 902 Airport Blvd, Corpus Christi, Nueces County. Background concentrations for NO₂ were obtained from the EPA AIRS monitor 482011050 at 4522 Park Rd, Seabrook, Harris County. Background concentrations for PM₁₀ and PM_{2.5} were obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County, supplemented by data from EPA AIRS monitor 483550032 at 3810 Huisache Street, Corpus Christi, Nueces County.

Table 2. Total Concentrations for NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLC _{max} (µg/m ³)	Background (µg/m ³)	Total Conc. = [Background + GLC _{max}] (µg/m ³)	Standard (µg/m ³)
NO ₂	1-hr	63	57	120	188
NO ₂	Annual	6	8	14	100
PM ₁₀	24-hr	8	79	87	150
PM _{2.5}	24-hr	11.3	23	34.3	35
PM _{2.5}	Annual	1	8	9	12
SO ₂	1-hr	127	15	142	196
SO ₂	3-hr	264	25	289	1300

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.

Effects Screening Levels (ESLs)

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.² 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 satisfy the MERA criteria and therefore are not expected to cause adverse health effects.

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 (SO₂), hydrogen sulfide (H₂S), and sulfuric acid (H₂SO₄), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard.

Table 3. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	Standard (µg/m ³)
SO ₂	1-hr	289	715
H ₂ S	1-hr	30	108

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 the proposed emission rates associated with this project.

² See TCEQ Air Permits Division Guidance document 5874.

COMMENT 3: POTENTIAL OZONE NONATTAINMENT

CFEJ is concerned that the emissions from this project could cause Nueces County or San Patricio County to be designated as nonattainment for ozone. CFEJ is concerned about the cumulative effects of industrial growth in the Corpus area and in San Patricio County and requested that TCEQ ensure the accuracy of baseline ozone concentrations used in the air quality modeling.

(CFEJ)

RESPONSE 3: Nueces County and San Patricio County are currently designated as being in attainment or unclassifiable for all pollutants. An impacts analysis was conducted for this project and demonstrates that the facility will not cause or contribute to an exceedance of the NAAQS; therefore, the project is not expected to cause Nueces County or San Patricio County to be designated as nonattainment.

The NAAQS analysis results for ozone, as shown in **Response 2** above, are below its de minimis level and did not require consideration of the baseline ozone concentrations in this attainment or unclassifiable area.

COMMENT 4: BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

CFEJ questioned the control technology proposed in the application. CFEJ stated that the application did not address BACT requirements for every unit that should be subject to BACT review, and that the BACT recommendations do not contain sufficient information. CFEJ stated that inadequate BACT analyses were provided and that the controls selected did not reflect BACT, specifically calling out the proposed BACT for the delayed coker, fugitive leaks, flares, tanks storing higher Reid Vapor Pressure (RVP) product, and heaters and boilers. CFEJ requested additional BACT controls.

(CFEJ)

RESPONSE 4: Best Available Control Technology (BACT) is an air pollution control method for a new or modified facility, that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. BACT may be numerical limitations, the use of an add-on control technology, design considerations, the implementation of work practices, or operational limitations. The Applicant has represented in the permit application that BACT will be used for the proposed new and modified sources.

The contaminants authorized by this proposed permit are ammonia, carbon monoxide, exempt solvents, hazardous air pollutants, hydrogen sulfide, 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. BACT was addressed for modified units only. For a renewal of an existing air permit (unmodified units), the commission may not impose conditions more stringent than the existing permit unless more stringent conditions are necessary to avoid a condition of air pollution or to ensure compliance with other state and federal air quality control requirements.

The primary control measures applied to this refinery include: internal floating roofs with seals for storage tanks, external floating roofs with seals for storage tanks, or fixed roofs for low vapor pressure products for storage tanks; thermal oxidizers for loading sources; flares for refinery process sources and MSS activities; sulfur recovery incinerators for refinery process; 90% VOC control of wastewater through pre-treatment, collection, biological treatment, and carbon adsorption canisters; controlled depressurization of process units for MSS with purging then flaring and operational limits on MSS activities; low NO_x burners, selective catalytic reduction, and good combustion practices for heaters and boilers. The permit reviewer evaluated the proposed BACT and confirmed it to be acceptable.

Additional information was provided by the Applicant within the course of the technical review addressing BACT requirements for every modified unit, including those without physical changes. The Applicant provided a detailed technical and quantitative analysis for physical facilities at the refinery that require additional existing facilities emission rate corrections under the Application, however, these facilities are not being physically modified.

Delayed Coker

Regarding the delayed coker drum BACT, the draft special condition No. 22B does require that the coke drums not be depressurized into the atmosphere until the average drum pressure is reduced to 2 pounds per square inch gage (psig) or less. Therefore, the Applicant must have the pressure in the coker drum below 2 psig before the drum is opened.

Fugitive Leaks

Fugitive leaks are subject to systematic and objective leak detection and repair programs, 28MID, 28VHP, 28CNTQ, or 28AVO, as detailed in Special Condition Nos. 25-29.³ Leakless equipment is not required and is not considered BACT. Numerical emission limits for fugitive leaks are based off the emission limits as laid out in the Maximum Allowable Emission Rate Table (MAERT), which contains the emission limits authorized by the permit, for VOC. BACT requires control measures such as operational procedures, occasion testing, and a leak detection and repair program. These control measures are required in the permit's Special Conditions.

Flares

Regarding flares, the Applicant, in reference to federal rules,⁴ must meet the minimum heating value and maximum tip velocity in order to have 98% control efficiency of VOC destruction removal.

³ See

https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/fugitives/nsr_fac_eqfug.html

⁴ See 40 CFR 63 Subpart CC; See 40 CFR 60 Subpart Ja

Tanks

Tanks storing higher Reid Vapor Pressure (RVP) product, which are now authorized by Permit No. 135622, are limited to storing materials with a maximum RVP of 10.5 pounds per square inch absolute (psia), are painted white, and have external floating roofs with a primary mechanical shoe seal and secondary rim-mounted seal, which meets BACT for tanks storing these types of products. Geodesic domes are not considered BACT.

Heaters/Boilers

For the boiler being incorporated from a standard permit, low NO_x burners and selective catalytic reduction (SCR) meeting a NO_x limit of 0.015 pounds per million British thermal units (lb/MMBtu), CO meeting 50 parts per million by volume dry (ppmvd) at 3% O₂ average annual, low sulfur fuel (≤ 60 ppmvd H₂S average annual), and monitoring of NO_x and CO emissions with Continuous Emissions Monitoring Systems (CEMS) are present and meet BACT for this 334 million British thermal units per hour (MMBtu/hr) boiler. A heater of 34 MMBtu/hr has low NO_x burners meeting 0.1 lb/MMBtu, low sulfur refinery fuel (≤ 60 ppmvd H₂S average annual), and good combustion practices with CO meeting 50 ppmvd at 3% O₂ average annual, which meets BACT with additional justification from the Applicant.

The project also included emission rate corrections for physically unmodified heaters and boilers. As specified in the TCEQ's BACT guidance document, APDG 6110v2 dated January 2011, "Applications for projects subject to air pollution control evaluations are those with new and modified facilities or sources of emissions of air contaminants." These facilities are not new and are not being physically modified with this project. However, these sources are proposed to have allowable emission rates increases to correct representations in the permit. Therefore, the previous BACT evaluations were reviewed to ensure that the original BACT determinations would not have been different if the correct emission rates had been known at the time that they were originally evaluated for BACT. None of the allowable emission rate changes would have changed the BACT determinations. Heaters QL-10 added ammonia emissions. QH-135 is not a heater, however, heater QH-125 added NO_x emissions. Finally, SMR-2 (130-H-01) was added as a secondary control device for VOC, however, this did not result in an emission increase for VOC. Additionally, some heaters previously authorized by this permit are now permitted under permit number 135622.

COMMENT 5: PSD REVIEW

CFEJ stated that the application file contained conflicting statements on if a PSD review was triggered by the application. CFEJ noted that the application represented that actual emission increases of CO and VOC exceed the federal PSD major modification threshold and that modification to the PSD permit is required. CFEJ states that there is not enough information to evaluate if the netting analysis is practicably enforceable. CFEJ raised concerns about the BACT analysis for PSD pollutants.

(CFEJ)

RESPONSE 5: A Prevention of Significant Deterioration (PSD) major site is defined as a site emitting over 250 tpy of any one pollutant if it is an unnamed source or 100 tpy of any one pollutant if it is one of twenty-eight sources named in 40 CFR § 52.21(b)(1)(a). Once a site is considered a major source, the project emission increases for each pollutant are compared to the applicable significant emission rate to determine if that pollutant requires PSD review.

This site is a named source and has proposed emission rates greater than 100 tpy of at least one pollutant, making it a major source. In addition, the proposed increases of the following pollutants are above the defined significant emission rates and are subject to PSD permitting: CO and VOC. The proposed increases of all other pollutants with this project are below the significant emission rates and are not subject to PSD permitting. As part of the BACT review process for pollutants subject to PSD, the TCEQ evaluates information from the EPA's Reasonably Available Control Technology (RACT), BACT, Lowest Achievable Emission Rate (LAER), Clearinghouse (RBLC), on-going permitting in Texas and other states, and the TCEQ's continuing review of emissions control developments for pollutants triggering a PSD review. PSD review was triggered for CO and VOC for this Application, and state level review was triggered for all other regulated pollutants.

Project increases with regard to federal applicability and PSD review are determined by comparing baseline actual emissions to the proposed potential to emit. Those differences are determined for each PSD regulated pollutant. If that difference is greater than the significant emission rate for the pollutant, then netting is required. PSD review for this permit renewal was only triggered for VOC and CO. PM_{2.5} project increases were determined by taking the proposed potential to emit minus baseline actual emissions, and that result from all facilities was less than the significant emission rate (PSD Major Modification Threshold) of 10 tpy. When comparing previously authorized emissions to proposed emissions of PM_{2.5}, that results in a decrease.

As explained in **Response 1**, a completely new renewal and amendment application for this permit was received on January 20, 2016, replacing the original application received in 2014. The new application clearly addressed and provided detailed information regarding PSD applicability for CO and VOC.

Netting, which is the sum of projected emissions increases and decreases, was required to be considered per 40 CFR § 51.166(a)(7)(iv)(a) and 30 TAC § 116.160(b)(1) regarding PSD applicability because proposed CO and VOC increases were above their respective netting thresholds. Once netting was performed, PSD review was still triggered for these pollutants. The PSD review found the increases to be in compliance with applicable federal standards. Emissions increases in the netting analysis were not used to avoid PSD applicability and are practically enforceable through the draft permit Special Conditions and Maximum Allowable Emission Rate Table (MAERT). Proposed project increases of other pollutants were not above netting thresholds, so netting was not performed for these pollutants. Authorization of emissions increases and limits are federally enforceable with the MAERT and conditions of the permit, though restrictions such as throughput limits, fuel flow monitoring, leak detection and

repair programs, tank operation and maintenance restrictions, vapor collection at loading locations routed to thermal oxidizers or flares, flares meeting Maximum Achievable Control Technology, found in 40 CFR Part 63 Subpart CC, standards, wastewater VOCs routed to control device, and MSS operational restrictions in Special Condition Nos. 44-66.

COMMENT 6: PERMITTING PROCESS & PSD VALIDITY

CFEJ stated that this application is an example of the problems created by TCEQ's permitting program and its failure to require that all changes in the emissions authorized pursuant to a PSD permit be made, at the time they are authorized, to that PSD permit. CFEJ stated TCEQ allows sources to make changes to federal PSDs permit through various mechanisms, some of which are not SIP approved and many of which fail to provide the 30-day notice and comment period required by 40 CFR § 51.161. CFEJ stated that the Applicant should be required to provide information similar to the EPA's deflex audit program so projects can be tracked over time. CFEJ is concerned that changes at the facility since the company's last State Implementation Plan (SIP) approved PSD permit have violated federal or state permitting requirements. CFEJ is concerned about how emissions authorized by Permits By Rule (PBRs) are being rolled into this permit, and whether they are being properly included in estimates of emission increases for the PSD permit, subject to BACT review, and have been incorporated into the air quality analysis. CFEJ stated that this permit action is the consolidation of nineteen permits by rule and standard permits.

(CFEJ)

RESPONSE 6: The Texas Clean Air Act⁵ has allowed for the issuance of permits by rule (PBRs) for certain types of facilities that will not significantly contribute air contaminants to the atmosphere. The TCAA also provides for consolidation of permits, including standard permits or PBRs into a single permit⁶. Additionally, the Texas Administrative Code (TAC), requires any changes authorized by a PBR to be incorporated in the permit at amendment or renewal.⁷ PBRs may be used to authorize only certain types of facilities or changes within facilities which do not make a significant contribution of air contaminants to the atmosphere.⁸ Further, additional requirements must be met in order to claim a PBR: facilities may not emit more than 250 tpy CO or NO_x, 25 tpy VOC, SO₂, or PM₁₀, or 25 tpy of any other air contaminant. Further, PBRs cannot be used to authorize a major source; must meet applicable requirements of NSPS, NESHAP, and TCEQ rules; and maintain registration and recordkeeping to show compliance with emission limits and conditions of the PBR.

PBRs must be adopted or revised through rulemaking into applicable Subchapters under 30 TAC Chapter 106. Such new and revised PBRs must undergo public notice and a 30-day comment period, and TCEQ must address all comments received from

5 See TCAA §§ 382.051(a)(4); 382.05196; 30 TAC § 106.1

6 See TCAA § 382.0511

7 See 30 TAC § 116.116(d)(2)

8 See 30 TAC Chapter 106, Subchapter A

the public before finalizing its action to issue or revise a PBR. In addition, as part of the current permit renewal and amendment, affected facilities currently authorized by PBRs are now subject to public notice and comment. The SIP must include procedures⁹ that enable the TCEQ to determine whether the construction or modification will result in a violation of applicable portions of the control strategy or interfere with attainment or maintenance of a national ambient air quality standard.

After EPA disapproved TCEQ's flexible permitting program, applicants went through the "deflex" program to obtain an New Source Review (NSR) permit in order to maintain their operations. The EPA created a Deflex Audit Program to monitor these permit changes. The Applicant previously submitted a deflex application which was processed as a permit alteration. The Applicant's representations in the deflex alteration application were considered as potential modifications in the current permit application and had to undergo a BACT and health effects review.

The last federal modification (PSD review, PSDTX1023M2) at the refinery was approved and issued August 19, 2010. Changes affecting facilities authorized by NSR Permit 2937 / PSDTX1023M2 since that review included thirteen alterations and seven amendments, which were reviewed and approved subject to 30 TAC § 116.116 and applicable federal regulations. Sixteen PBRs were issued in that time frame for this facility, which were reviewed and approved subject to 30 TAC Chapter 106, Subchapter A and rules in 30 TAC Chapter 106.

When incorporating PBRs by consolidation into an NSR permit, facilities being consolidated must undergo an impacts review and BACT review. Facilities previously authorized by PBRs that are being consolidated with this action are additional fugitives, additional liquefied petroleum gas truck loading, crude tank water draws and oil/water separator, wastewater treatment plant, and a replacement heater. The NSR permit was amended to account for these changes by ensuring fugitive BACT language is present, updating loading throughput, adding wastewater treatment plant conditions that constitute acceptable BACT and monitoring, and adding emission limits; and proposed limits were included within the air quality analysis. Additionally, some facilities authorized under the original permit were removed and are now authorized by other permits.

COMMENT 7: EMISSION RATES AND CALCULATIONS

CFEJ questioned the accuracy and methodology for determining the emission rates for the proposed project. CFEJ further asks if there will be an increase in emissions. CFEJ also raised concerns that some of the emissions calculations may be underestimated and expressed particular concern about the PM_{2.5} project increase being very close to the significance level.

(CFEJ)

⁹ See 40 CFR § 51.160(a)

RESPONSE 7: The proposed net emission increases for this Application are for ammonia, particulate matter, volatile organic compounds, carbon monoxide, hydrogen sulfide, and sulfur dioxide. However, particular emission points may have short or long term increases or decreases of additional pollutants, such as PM₁₀, PM_{2.5}, nitrogen oxides, or hazardous air pollutants.

Emissions from these facilities were determined by using actual stack testing data, manufacturer and vendor data, stack test data from a similar facility, and mathematical formulas calculated according to the EPA's Compilation of Air Pollutant Emission Factors, AP-42 Manual¹⁰. 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.

PM emissions result from combustion units, sulfur recovery units, coker steam vents, cooling towers, and MSS activities. PM emissions from these units were estimated using factors from Sections 1.1, 1.4, 13.2, and 13.4 of EPA AP-42, stack testing, factors from May 2011 "Emission Estimation Protocol for Petroleum Refineries" by RTI International to EPA Office of Air Quality Planning and Standards study, total dissolved solids and circulation rates, droplet distribution and methodology from 2001 "Calculating Realistic PM₁₀ Emissions from Cooling Towers" memo by Reisman and Frisbie, paint usage and paint solids content, and factors from TCEQ Draft RG-169 "Abrasive Blast Cleaning." Emission estimates in pound per hour and ton per year quantities are found in the draft MAERT. EPA AP-42 is regularly utilized as an emission estimation tool.

The TCEQ permit reviewer analyzed the proposed emission factors and the control efficiencies represented in the application for accuracy and applicability and found the factors and corresponding calculations to be acceptable.

COMMENT 8: MAINTENANCE, STARTUP, AND SHUTDOWN EMISSIONS (MSS)

CFEJ stated that MSS emissions were segregated from routine emissions for the same unit and that the unit emissions as a whole should be considered when determining federal applicability and BACT. CFEJ stated that the application should include a demonstration for all MSS emissions and routine emissions showing normal BACT cannot be met from the unit during MSS, the authorized MSS emissions reflect BACT for those emissions, and MSS emissions are properly limited in duration.

(CFEJ)

RESPONSE 8: The draft permit has separate limits for authorized MSS activities within the MAERT and applicable Special Conditions. MSS activities authorized by this permit include: controlled and uncontrolled process vessel purging and degassing, vacuum truck loading, maintenance painting and miscellaneous chemical usage, tank

¹⁰ See <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors>

maintenance (cleaning, inspection, and changes of service), SRU maintenance, abrasive blast cleaning, and corrugated plate interceptor maintenance. A BACT and impacts review were required for the MSS emissions. Emissions associated with these activities were estimated using emissions factors and guidance mentioned in **Response 7**, along with the size of the process vessels, flare destruction removal efficiency, composition of gases purged or combusted, loading losses, tanks, roof types, material stored, assumed paint usage, chemical usage, tank landings, combustor characteristics, SRU flue gas characteristics, and expected maintenance durations. Those emissions were included in the air quality analysis and found acceptable. Note that all these periods during which MSS emissions could occur are of short duration and are limited by the restrictions in the Special Conditions and MAERT.

Regarding federal applicability for the current project, PSD review was triggered for VOC and CO due to proposed emissions increases, considering both routine and MSS emissions, of those pollutants.

A BACT review was required by both federal and state rules for all affected facilities. BACT was proposed and reviewed for MSS activities as follows:

Source Name	Best Available Control Technology Description
MSS: Process Units and Tanks Shutdown / Depressurize / Drain / Startup	Process vessel purge gases routed to flares. Process vessels containing liquids with vapor pressure > 0.5 pounds per square inch absolute (psia) purged until one of the following (or similar) is met: VOC partial pressure < 0.5 psia, 34,000 parts per million by volume (ppmv) or less, measured as methane, 50% or less of lower explosive limit, and/or 3 times the volume of the vessel has been nitrogen or steam purged. Remaining process fluid reduced through process fluid recovery and flaring, followed by testing with a gas sensor. BACT is met.
MSS: SRU Maintenance Shutdown	Sweep natural gas through SRU to carry residual sulfur compounds to SRU incinerator, which has destruction removal efficiency (DRE) of sulfur compounds of 99.9%. BACT is met.

Source Name	Best Available Control Technology Description
MSS: Atmospheric Tank Cleaning and Refilling	Drain and degas landed volume for floating roof tanks taken out of service. No more than six floating roof tanks taken out of service and drained and degassed per year. For change of service, land roof, drain tank, and begin refill within 24 hours. Only 3 gasoline tanks in service at any one time. Two roof landings per season (March and September) per tank. Maintain fixed roof tanks only when warranted by inspection. BACT is met.
MSS: Vacuum Trucks	Slop oil or wastewater. Static loading or CAS with 95% control efficiency. BACT is met.
MSS: Heater decoking	Limiting the frequency and duration of activities. Water spray to minimize decoking emissions. BACT is satisfied.
MSS: Abrasive blasting	Collection and removal of spent or waste abrasive blast media in such a manner to minimize emissions and placing the waste in covered containers prior to removal from the site. Use of low dusting abrasives with a free silica content < 1%. No visible emissions crossing property line. This meets BACT for this source.
MSS: Complex 8 Corrugated Plate Interceptor (CPI)	These are MSS operations for a process unit. Degassing to the atmosphere will be limited to MACT CC levels (72 lb VOC). Vacuum truck operations will otherwise be used as control, subject to appropriate MSS special conditions for these operations already within the permit. This meets BACT.
MSS: Meter maintenance and purging at a neighboring industrial facility (Enterprise)	Emissions from truck venting, propane loading line clearing and meter maintenance purging performed at the neighboring Enterprise facility will be vented to a flare. Venting to a flare with 98% control efficiency is considered BACT for these MSS activities.

The Executive Director reviewed the proposed BACT and determined it was met.

COMMENT 10: ENVIRONMENTAL JUSTICE

Commenters raised concerns regarding environmental justice.

(CFEJ)

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 previously conducted for the existing emissions authorized by this permit during the initial permit review and the permit was found to be protective of human health and the environment. In addition, as described in **Response 2** a health effects review was conducted for the proposed emissions increases associated with this application.

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 ensure that concerns are considered thoroughly and handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300.

More information may be found on the TCEQ website: [Title VI Compliance at TCEQ - Texas Commission on Environmental Quality - www.tceq.texas.gov](http://www.tceq.texas.gov).

COMMENT 11: PERMIT COMPLIANCE

CFEJ asked how emissions will be adequately monitored.

(CFEJ)

RESPONSE 11: Special conditions have been included as part of the draft permit to ensure the Applicant can demonstrate compliance with the emission limitations set forth in the permit. Emissions will be monitored through various methods, including stack sampling, continuous emissions monitoring systems for Sulfur Recovery Unit (SRU) SRU1 and SRU2 incinerators and for larger heaters and boilers, annual inspections of internal floating roofs and seals, hourly pilot flame monitoring on flares, quarterly visible emissions monitoring, quarterly leak detection and repair monitoring, periodic sampling of wastewater carbon adsorber systems, monthly recordkeeping for floating roof tank roof landings, degassing, and change of serves, monthly recordkeeping of VOCs from tanks, loading, and cooling towers, monthly recordkeeping showing compliance with short term and annual emission limits for all facilities authorized with subcaps (fugitives, tanks, flares, wastewater, MSS), quarterly inspections of wastewater treatment water seals, weekly sampling of suspended solids in wastewater treatment plant, flow rates, refinery fuel composition, heating value, H₂S monitoring, temperature monitoring, throughputs, AVO. The permit holder is also required to maintain records to demonstrate compliance, including monitoring. Records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction. 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.

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. 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.

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).

No changes to the draft permit have been made in response to public comment.

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
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REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

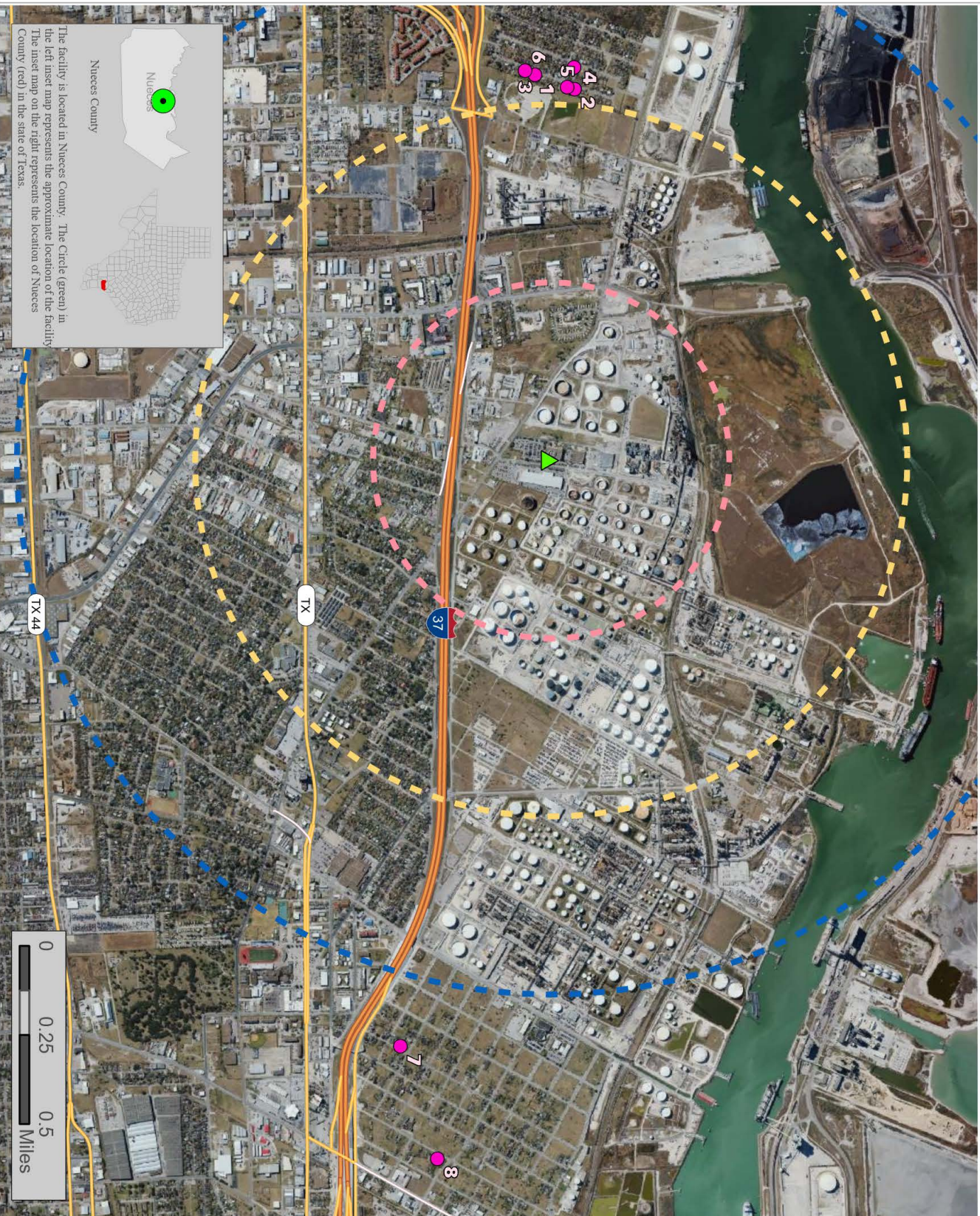
Valero - 2937

Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda



*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: 12/14/2022
CRF: 0076719
Cartographer: Abanda



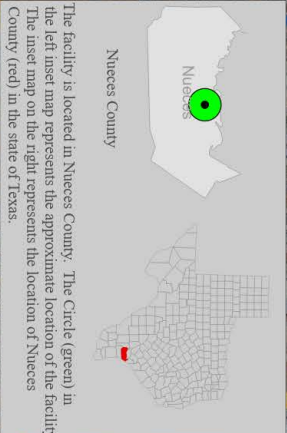
- Facility Point
- Requestors
- 0.5 - Mile Radius of Facility Point
- 1 - Mile Radius of Facility Point
- 1.5 - Mile Radius of Facility Point
- County Boundary

Distance from Requestor address to Facility Point in miles:

- 1 - Tammy Foster : 1.08
- 2 - Connie & Polo Gonzales : 1.04
- 3 - Carol Burnside : 1.10
- 4 - Joe Musquiz : 1.11
- 5 - Janette & Pat Dunehee : 1.05
- 6 - Terry Cox : 1.10
- 7 - Barbara Major : 1.70
- 8 - Lamont Taylor : 1.99

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.



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.



Valero - 2937

Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda



*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: 12/14/2022
CRF: 0076719
Cartographer: Abanda



- Facility Point
- Requestors
- 0.5 - Mile Radius of Facility Point
- 1 - Mile Radius of Facility Point
- County Boundary

Distance from Requestor address to
Facility Point in miles:

- 1 - Tammy Foster : 1.08
- 2 - Connie & Polo Gonzales : 1.04
- 3 - Carol Burnside : 1.10
- 4 - Joe Musquiz : 1.11
- 5 - Janette & Pat Dunehee : 1.05
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Valero - 2937

Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda



*Protecting Texas by
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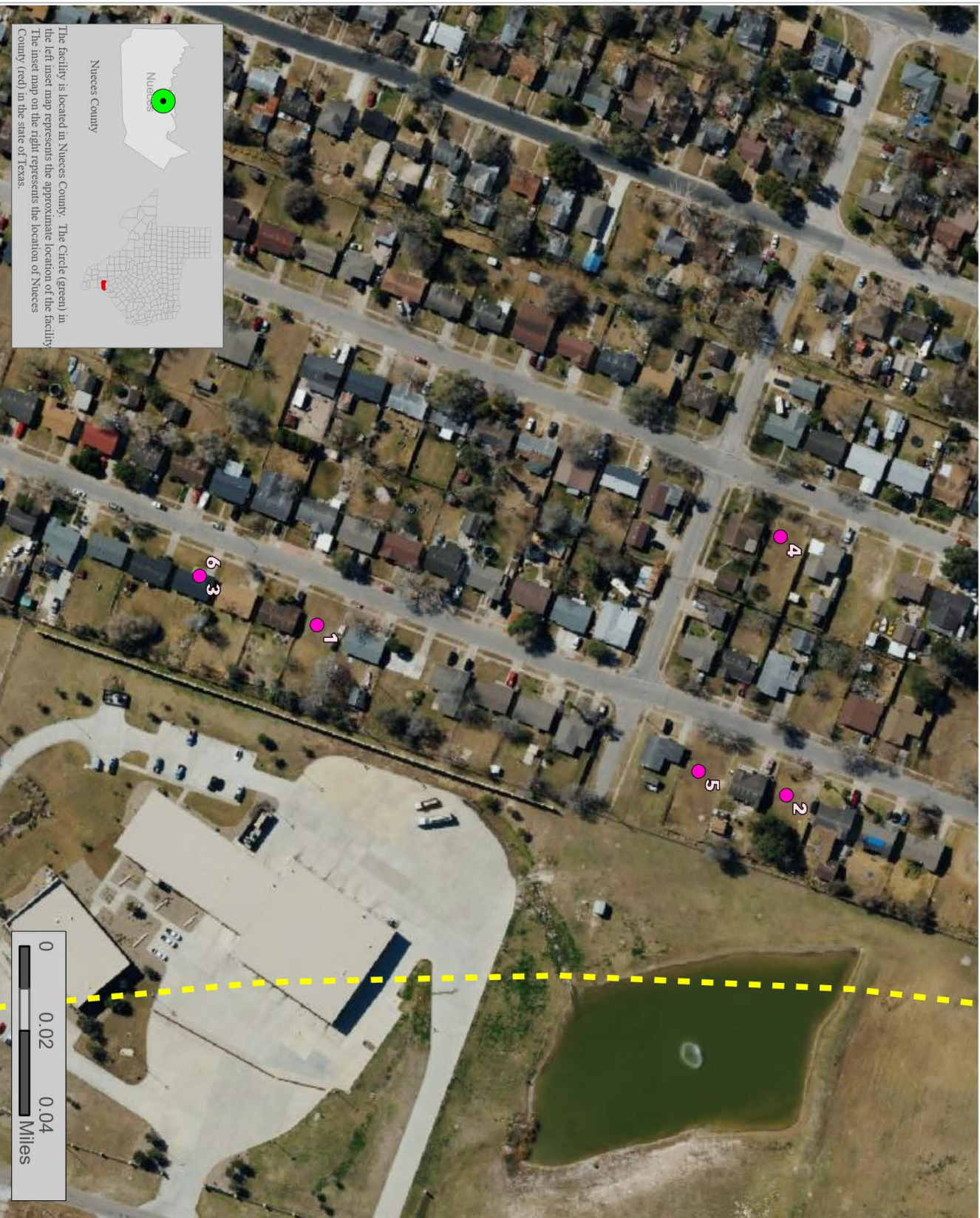
Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087
Date: 8/29/2022
CRF: 0076719
Cartographer: ABaranda



- Facility Point
- Requestors
- Air Sites
- 1- Mile Radius of Facility Point
- County Boundary

Distance from Requestor address to Facility Point in miles:

- 1 - Tammy Foster : 1.08
- 2 - Connie & Polo Gonzales : 1.04
- 3 - Carol Burnside : 1.10
- 4 - Joe Musquiz : 1.11
- 5 - Janette & Pat Dunehoo : 1.05
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