Texas Commission on Environmental Quality INTEROFFICE MEMORANDUM

TO: Office of Chief Clerk Date: March 17, 2022

FROM: Ashley Rich

Staff Attorney

Environmental Law Division

SUBJECT: Transmittal of Documents for Administrative Record

Applicant: Blanchard Refining Company, LLC

Proposed Permit No.: 98954 **Program:** Air

In a contested case hearing, the administrative record includes copies of the public notices relating to the permit application. Also included are affidavits from the applicant verifying publication of the notices. The applicant files these affidavits 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, as required by 30 Tex. Admin. Code § 80.118.

This transmittal memo also serves to request that the OCC transmit the attached items and the public notice documents, including the notice of hearing, to the State Office of Administrative Hearings.

Documents included with this transmittal are as follows:

- The final draft permit, including any special conditions or provisions.
- The maximum allowable emission rates for the permit application.
- The modeling audit for the permit application.
- The summary of the technical review of the permit application.
- The compliance summary of the applicant.
- Agency documents determined by the Executive Director to be necessary to reflect the administrative and technical review of the application as required by 30 Tex. Admin. Code § 80.118(a)(6):
 - o The Executive Director's Response to Comments.
 - o The map and appendix prepared by the Executive Director.

Special Conditions

Permit No. 98954

 This permit authorizes emissions 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 the MAERT and other requirements specified in the special conditions.

Planned startup and shutdown emissions due to the activities identified in Special Condition 2 are authorized from facilities and emission points identified in Attachment D in other construction permits at the site provided the facility and emissions are compliant with the respective MAERT and Special Conditions, or Special Condition 11 of this permit.

2. This permit authorizes the emissions from the facilities identified in Attachment D for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit.

Additionally, this permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, portable control devices identified in Special Condition #11 and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain in the same location on the plant site for more than 12 consecutive months in the same service, and (b) does not operate as a permanent replacement for an existing authorized facility.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A 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 A 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 B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B 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 A or B 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 and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. the date and time of the MSS activity and its duration;
- 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.

- 3. Process units and facilities, with the exception of those identified in Special Conditions 5, 6, 8, and Attachment A shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements. Process equipment clearing to atmosphere shall not exceed the total maximum emission rate represented in the confidential Emissions Summary Start Up, Shut Down, and Routine Equipment Clearing, submitted July 8, 2020.
 - 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 partial pressure 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. 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 partial pressure 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 or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery 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 must be covered or transferred to a covered vessel within one hour of being drained.
 - D. If the VOC partial pressure 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 facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.
 - (1) For MSS activities identified in Attachment B, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere 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 (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system 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 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. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL, the benzene concentration is less than 100 ppmv, and the hydrogen sulfide concentration is less than 40 ppmv. Documented site procedures used to de-inventory 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.

- E. Gases and vapors VOC partial pressure 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 contaminant to be vented to atmosphere during shutdown or startup, as applicable.

All instances of venting directly to atmosphere per Paragraph E of Special Condition No. 3 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 or equivalent for those planned MSS activities identified in Attachment B.

- 4. 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 60, Appendix A) with the following exceptions:
 - (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded.
 - (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
 - 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 as defined in (3) is less than 80 percent of the range of the tube and 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 functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for pentane. 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.
- 5. This permit authorizes emissions from EPN MSS_PROCESS and MSSCONTROL for the storage tanks identified in the Attachment D during planned floating roof landings. Tank roofs may only be landed for changes of tank service or tank inspection/maintenance as identified in the permit application. 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, for which the tank is not cleaned and degassed, 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 or a controlled recovery system during this process.
 - B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F and for tanks 22 and 143, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained unless the vapor under the floating roof is routed to control or a controlled recovery system during this period. The tank shall not be opened except as necessary to set up for degassing and cleaning. Controlled degassing of the vapor space under landed roofs shall be completed as follows:
 - 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 of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume 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 4.
- (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) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- C. The tank shall not be opened or ventilated without control until one of the criteria in part D of this condition is satisfied, except manways may be opened as necessary to allow access to the tank to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank. Access points shall be closed when not in use.
- D. The tank may be opened without restriction and ventilated without control, after degassing as required in part B of this condition and all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. The maximum uncontrolled emission rate to atmosphere for each tank is limited to the rate represented in the confidential emission calculations Table FRT-5 and FRT-8 submitted July 8, 2020. The VOC partial pressure criteria shall be demonstrated in any one of the following ways.
 - (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure 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 partial pressure 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 435 Subpart A Appendix 1.
 - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

- (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 4.
- (3) No standing liquid verified through visual inspection.

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

- E. Tanks shall be refilled as rapidly as practicable until the roof is off its legs with the following exceptions:
 - (1) Only one tank with a landed floating roof can be filled at any time at a rate not to exceed the maximum emission rate for each tank as represented in the confidential emission calculations Table FRT-5 and FRT-8 submitted July 8, 2020
 - (2) The vapor space below the tank roof is directed to a control device when the tank is refilled until the roof is floating on the liquid. The control device used, and the method and locations used to connect the control device shall be recorded. All vents from the tank being filled must exit through the control device.
- F. 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, time, and other information specified for 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 partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi.
 - (e) if there is liquid in the tank, VOC partial pressure 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.
- 6. Fixed roof storage tanks are subject to the requirements of Special Condition 5.C. and 5.D. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of Special Condition 5.B.(1) through 5.B.(4). The maximum emission rate to atmosphere for each tank is limited to the rate represented in the confidential emission calculations

Table FX-4, submitted July 8, 2020. Records shall be maintained per Special Condition 5.F.(3)c through 5.F.(3)e, and 5.F.(4).

- 7. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:
 - A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document that the VOC partial pressure 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 partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system.
 - B. If vacuum pumps or blowers are operated when liquid is in or being transferred to the truck, the following requirements apply:
 - (1) If the VOC partial pressure of the liquid in or being transferred to the truck is greater than 0.50 psi at 95°F, the vacuum/blower exhaust shall be routed to a control device or a controlled recovery system.
 - (2) Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.
 - (3) A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
 - (a) 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.
 - (b) 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. 11, measured using an instrument meeting the requirements of Special Condition 4.A or B.
 - C. Record 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 partial pressure 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 Special Condition 7.A through 7.D do not apply.
- 8. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

- A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.
- 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 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
- 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. This record must be updated by the last day of the month following. 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 partial pressure 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 partial pressure 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.
- Additional occurrences of MSS activities authorized by this permit may be authorized under permit
 by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring,
 and recordkeeping requirements applicable to the activity.
- 10. All permanent facilities must comply with all operating requirements, limits, and representations in the permits identified in Attachment D 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. Combustion units, with the exception of flares, at this site are exempt from NO_x and CO operating requirements identified in special conditions in other NSR permits during planned startup and shutdown if the following criteria are satisfied.
 - (1) The maximum allowable emission rates in the permit authorizing the facility 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. The time it takes to complete the shutdown does not exceed 4 hours.
 - (3) Control devices are started and operating properly when venting a waste gas stream.
 - B. The limits identified below apply to the operations of the specified facilities during startup and shutdown.
 - (1) FCCU torch oil burning, including during hot standby shall not exceed 2000 ppmv CO in the regenerator exhaust. During periods of startup of FCCU, the CO emissions are not required to comply with 30 TAC § 117.310(c)(1)(A), 400 ppmv at 3 percent O₂ on a rolling 24-hour average basis.
 - (2) FCCU Reactor Overhead or Snort Vent shall operate with no visible emissions. as determined by using U.S. Environmental Protection Agency (EPA) Test Method 22.

- C. A record shall be maintained indicating that the start and end times of each of the activities identified above occur and documentation that the requirements for each have been satisfied. The FCCU Reactor Overhead or Snort Vent shall be observed in accordance with EPA Method 22 for a minimum of 15 minutes each day it is operated.
- 11. 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 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:
 - CAS systems equipped with an upstream liquid scrubber may be sampled once every 12 hours of CAS run time to determine breakthrough
 - (a) 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
 - (b) The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of an 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 the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.
 - (3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 4.A or B.
 - (4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv 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 4 hours or up to 30% of the minimum potential saturation time up to a maximum of 24 hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.
 - (5) Records of CAS monitoring shall include the following:
 - (a) Sample time and date.
 - (b) Monitoring results (ppmv).
 - (c) Canister replacement log.

- (6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.
- (7) Liquid scrubbers may be used upstream of carbon canisters to enhance VOC capture provided such systems are closed systems and the spent absorbing solution is discharged into a closed container, vessel, or system.

B. Thermal Oxidizer.

- (1) The thermal oxidizer firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.
- (2) The thermal oxidizer 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
- (3) The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5°C.
- (4) As an alternative to Paragraph B(1) of this condition, the thermal oxidizer may be tested to confirm a minimum of 99 weight percent destruction efficiency. The results of the test will be used to determine the minimum operating temperature and residence time. A 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. As an alternative to Paragraphs B(1) and B(2) of this condition, the thermal oxidizer may be equipped with continuous VOC monitors (inlet and outlet). The VOC monitors shall be calibrated and maintained in accordance with Special Conditions 4.A or B. In order to demonstrate compliance with this requirement, inlet VOC and outlet VOC concentrations shall be measured, and inlet and outlet VOC mass rates shall be calculated on an hourly basis to confirm minimum 99 weight percent destruction efficiency or an exhaust concentration no greater than 10 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 subparagraph 3 below. VOC shall be measured in accordance with the applicable United States Environmental Protection Agency (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 4.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 paragraph (2) above.

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 4.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 4.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 paragraph (2) above.
- D. Plant and Portable Flare Systems
 - (1) The requirements in 40 CFR 63.670 *Requirements for flare control devices* shall be complied with during operations authorized by this permit.
 - (2) The requirements in 40 CFR 63.671 *Requirements for flare monitoring systems* shall be complied with during operations authorized by this permit. The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12 month period

Records of the monitor calibrations and test, and monitoring values for all periods of operations authorized by this permit shall be retained.

- E. A liquid scrubbing system may be used upstream of carbon adsorption. A single carbon can or a liquid scrubbing system may be used as the sole control device if the requirements below are satisfied.
 - (1) The 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 scrubber.
 - (2) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition No. 4A.

- (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 ensure 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 No. 4.
 - (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.
- 12. 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 that the position of the valves and the condition of the car seals that prevent flow out the bypass.

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

C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

Dated: DRAFT April, 2021



Attachment A

Inherently Low Emitting Activities

Activity	Emissions				
	voc	NOx	СО	PM	H ₂ S/SO ₂
Instrumentation/analyzer/injection quill maintenance and calibration	Х				
Instrumentation/analyzer filter changeouts	Х				
Small Equipment Opening (1)	Х				
Process sampling	Х				
Sight glass/level instrument maintenance					
Carbon canister maintenance/replacement	х				
Aerosol cans - paint/solvent/degreaser/misc.	х			х	
Containers (2)	х				
Miscellaneous materials handling (3)	Х				
Soap and other aqueous based cleaners	Х				

- (1) Small equipment opening includes activities such as fugitive component repair (line breaks), small pump maintenance, and other minor equipment opening events.

 Contained volumes less than 30 cubic feet.
- (2) Transitional use of containers (pans, buckets, drums, etc.) used for the holding of liquids while equipment is being drained and decommissioned. Containers must be shielded to avoid wind across liquid surface.
- (3) Includes insulation, lime, sand, salt and refractory handling, it does not include catalyst handling.

Dated: <u>DRAFT April 2021</u>

Attachment B

Routine Maintenance Activities

Planned MSS activities performed with work orders where the isolated system volume is less than 500 cubic feet, including draining liquids to pans. These include activities such as:

Pump repair/replacement

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

Compressor repair/replacement

Heat exchanger repair/replacement

Vessel repair/replacement



Attachment C MSS Activity Summary

Facilities	Description	Emissions Activity	EPN
All process units and ancillary equipment	Process unit shutdown and deinventory, depressurize, purge vapor space, startup and nitrogen purge	vent to flare	MSS_FLARE
All process units	Process unit purge, degas and drain	vent to atmosphere	MSS_PROCESS
FCCU	Regenerator startup and hot standby	high CO vent thru scrubber	ES12
FCCU	Reactor startup, snort vent	vent thru cyclones	SNORT
Floating roof tanks	Roof landing and refloat	vent to control	MSS_CONTROL
Floating roof tanks	Roof landing and refloat	vent to atmosphere	MSS_PROCESS
Fixed roof tanks	Purge vapor space	vent to control	MSS_CONTROL
Fixed roof tanks	Open and ventilate vapor space	vent to atmosphere	MSS_PROCESS
Frac tanks	Hold process and tank de-inventory low volatility liquids	vent to atmosphere	MSS_PROCESS
Frac tanks	Hold process and tank de-inventory high volatility liquids	vent to control	MSS_CONTROL
Vacuum trucks	Uncontrolled vacuuming of process and cleaning liquids	vent to atmosphere	MSS_PROCESS
Vacuum trucks	Controlled vacuuming of process and cleaning liquids	vent to control	MSS_CONTROL
Ancillary equipment	Degas and drain	vent to atmosphere	MSS_PROCESS
Attachment A equipment	miscellaneous low emitting activities	see Attachment A	ILEA

Dated: DRAFT April 2021

Attachment D

Facility List

This permit authorizes MSS emissions from the permanent site facilities identified below. The headings for each group of facilities (Process Units, Tanks, etc) are used in the MSS Activity Summary to identify all facilities in the respective group.

Process Units

Description	<u>Permit</u>
#4 Topper Crude Unit	22433
#5 Topper Crude Unit	22433
Alkylation Unit	22433
Amine Unit	22433
Sulfur Recovery Unit	22433
Sour Water Strippers	22433
Merox Unit	22433
FCCU and Gas Con	22433
Propylene Unit	22433
Plant Flares (1)	22433
Tank Farm	22433
(4) DI (EI	E040 I

(1) Plant Flares are EPNs ES16 and ES 17

Tanks

FIN	Type	Representative Service	Permit
T6	IFR	Toluene	22433
T15	IFR	Xylene and Heavier Aromatics	22433
T18	IFR	Xylene and Heavier Aromatics	22433
T39	IFR	Kerosene and Heavier	22433
T140	IFR	Heavy Gasoline Components	22433
T143	IFR	Xylene and Heavier Aromatics	22433
T128	IFR	Heavy Gasoline Components	22433
T129	IFR	Heavy Gasoline Components	22433
T147	IFR	BTX Reformate	22433
T151	IFR	Heavy Gasoline Components	22433
T156	IFR	Heavy Gasoline Components	22433
T158	IFR	Heavy Gasoline Components	22433
T163	IFR	Heavy Gasoline Components	22433
T164	IFR	Heavy Gasoline Components	22433
T184	IFR	Toluene	22433
T183	IFR	Toluene	22433
T14	IFR	Sour Water (with hydrocarbon layer)	22433
T22	IFR	Toluene, Solvent, Xylene and Heavier Aromatics	22433
T44	EFR	Toluene	22433
T16	EFR	Wastewater/sludge	22433
T111	EFR	Finished Gasoline/Light Components	22433
T112	EFR	Finished Gasoline/Light Components	22433
T125	EFR	Heavy Gasoline Components	22433
T127	EFR	Finished Gasoline/Light Components	22433
T134	EFR	Heavy Gasoline Components	22433

Tanks (cont.)

	s (cont.)		
<u>FIN</u>	Type	Representative Service	<u>Permit</u>
T121	EFR	Heavy Gasoline Components	22433
T153	EFR	Crude Oil/Slop	22433
T165	EFR	Finished Gasoline/Light Components	22433
T166	EFR	Finished Gasoline/Light Components	22433
T192	EFR	Finished Gasoline/Light Components	22433
T514	EFR	Crude Oil/Slop	22433
T516	EFR	Crude Oil/Slop	22433
T517	EFR	Crude Oil/Slop	22433
T518	EFR	Crude Oil/Slop	22433
T520	EFR	Crude Oil/Slop	22433
T9	EFR	Wastewater/sludge	22433
T513	EFR	Crude Oil/Slop	22433
T531	EFR	Crude Oil/Slop	22433
T33	FX	Kerosene and Heavier	22433
T32	FX	Kerosene and Heavier	22433
T42	FX	Kerosene and Heavier	22433
T161	FX	Kerosene and Heavier	22433
T162	FX	Kerosene and Heavier	22433
T10	FX	Kerosene and Heavier	22433
T36	FX	Kerosene and Heavier	22433
T38	FX	Kerosene and Heavier	22433
T114	FX	Tetraethylene Glycol	22433
T122	FX	Slop Oil	22433
T124	FX	Slop Oil	22433
T130	FX	Kerosene and Heavier	22433
T131	FX	Kerosene and Heavier	22433
T144	FX	Kerosene and Heavier	22433
T159	FX	Kerosene and Heavier	22433
T160	FX	Kerosene and Heavier	22433
T188	FX	Slop Oil	22433
T206	FX	Slop Oil	22433
T207	FX	Slop Oil	22433
T505	FX	Kerosene and Heavier	22433
T511	FX	Kerosene and Heavier	22433
T512	FX	Kerosene and Heavier	22433
T515	FX	Kerosene and Heavier	22433
T35	FX	Kerosene and Heavier	22433
T132	FX	Slop Oil	22433
T596	FX	Slop Oil	22433
T598	FX	Slop Oil	22433
T602	FX	Slop Oil	22433
85-T-1114	FX	MDEA	22433
T532	FX	Gas Oil	22433

Dated: DRAFT April 2021

Emission Sources - Maximum Allowable Emission Rates

Permit Number 98954

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 Daint No. (4)	Occurs Name (O)	Air Ocatomia ant Name (2)	Emission I	Rates
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	lbs/hour	TPY (4)
MSS_FLARE	Plant Flares, EPNs ES16 and ES17	voc	3019.39	28.09
	Lo To and Lo Tr	NOx	246.61	2.49
		СО	1270.43	12.80
		SO ₂	189.50	3.31
		H ₂ S	2.01	0.04
MSS_CONTROL	Temporary Control Devices for Tank	voc	325.66	8.10
	Degassing	NOx	13.71	1.90
		СО	33.02	6.16
		SO ₂	919.53	7.45
		H ₂ S	3.26	0.03
		РМ	0.96	0.43
		PM ₁₀	0.96	0.43
		PM _{2.5}	0.96	0.43
MSS_PROCESS	Maintenance, Startup and Shutdown	voc	837.84	31.91
	Activities Venting Directly to Atmosphere	H ₂ S	1.87	0.09
ES12	FCCU Regen Startup and Hot Standby	со	752.60	15.94
SNORT	FCCU Reactor Startup	РМ	9.00	0.67
		PM ₁₀	5.40	0.40
		PM _{2.5}	1.35	0.10
ILEA	Inherently Low Emitting Activities	voc	30.08	9.98
	Liming / touvides	РМ	5.51	0.10
		PM ₁₀	5.43	0.10
		PM _{2.5}	5.41	0.10

Project Number: 170583

Emission Sources - Maximum Allowable Emission Rates

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3)

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

PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as

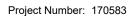
represented

PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter

 $\begin{array}{c} \text{CO} & \text{- carbon monoxide} \\ \text{H}_2 \text{S} & \text{hydrogen sulfide} \end{array}$

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.





To: Jeff Greif

Chemical Section

Thru: Chad Dumas, Team Leader

Air Dispersion Modeling Team (ADMT)

From: Justin Cherry, P.E.

ADMT

Date: July 28, 2020

Subject: Second Air Quality Analysis Audit – Blanchard Refining Company LLC

(RN102535077)

1. Project Identification Information

Permit Application Number: 98954 NSR Project Number: 170583 ADMT Project Number: 6886 NSRP Document Number: 630514

County: Galveston

ArcReader Published Map: \\teq4avmgisdata\GISWRK\APD\MODEL

PROJECTS\6886\6886.pmf

Air Quality Analysis: Submitted by Waid Environmental, June 2020, on behalf of Blanchard Refining Company LLC. Additional information was provided July 2020.

2. Report Summary

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

This is the second modeling audit for this NSR project number, and the audit was conducted to review modeling submitted to address revised emissions. This second modeling audit memo represents a complete summary and supersedes the first modeling audit memo dated August 16, 2019 (NSRP Document Number 619856).

A. Minor Source NSR and Air Toxics Analysis

Table 1. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
SO ₂	1-hr	7.7	14.3
H ₂ S	1-hr	71	2.16 (If property is residential, recreational, business, or commercial)

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
H ₂ S	1-hr	113	3.24 (If property is not residential, recreational, business, or commercial)

Table 2. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (µg/m³)
SO ₂	1-hr	7.7	7.8
SO ₂	3-hr	7	25
PM ₁₀	24-hr	4.6	5
PM _{2.5}	24-hr	1.16	1.2
PM _{2.5}	Annual	0.004	0.2
NO ₂	1-hr	3.3	7.5
NO ₂	Annual	0.03	1
СО	1-hr	285	2000
СО	8-hr	219	500

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

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

The justification for selecting the EPA's interim 1-hr NO_2 and 1-hr SO_2 De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO_2 and 1-hr SO_2 De Minimis levels. As explained in EPA guidance memoranda^{1,2}, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO_2 and 1-hr SO_2 NAAQS.

The PM_{2.5} 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 memorandums³.

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

To evaluate secondary PM $_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models. 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 hypothetical source, the applicant estimated 24-hr and annual secondary PM $_{2.5}$ concentrations of 0.013 μ g/m³ and 0.0004 μ g/m³, respectively. When these estimates are added to the GLCmax listed in the table above, the results are less than the De Minimis levels.

Table 3. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Worst-case	Averaging	GLCmax	ESL
	Scenario	Time	(µg/m³)	(µg/m³)
gasoline 8006-61-9	Uncontrolled Floating- Roof Tank MSS – Refilling/Standing Idle (T127) + ILEA at worst-case location (ILEA7)	1-hr	13,440	3500
kerosene 8008-20-6	Uncontrolled Fixed- Roof Tank MSS – Vented Degassing (T161) + ILEA at worst-case location (ILEA7)	1-hr	8375	1000
light reformate (contains 8-12% benzene) NA	Uncontrolled Floating- Roof Tank MSS – Refilling/Standing Idle (T147) + ILEA at worst-case location (ILEA7)	1-hr	1586	1250
petroleum distillates 8002-05-9	Uncontrolled Floating- Roof Tank MSS – Refilling/Standing Idle (T164) + ILEA at worst-case location (ILEA7)	1-hr	13,821	3500
toluene 108-88-3	Uncontrolled Floating- Roof Tank MSS – Refilling/Standing Idle (T6) + ILEA at worst-case location (ILEA7)	1-hr	5862	4500

Pollutant & CAS#	Worst-case	Averaging	GLCmax	ESL
	Scenario	Time	(µg/m³)	(μg/m³)
xylene 1330-20-7	Uncontrolled Floating- Roof Tank MSS – Vented Degassing (T22) + ILEA at worst-case location (ILEA7)	1-hr	1374.44	2200

Table 4. Minor NSR MSS Hours of Exceedance for Health Effects

Pollutant	Averaging Time	1 X ESL GLCmax	2 X ESL GLCmax	4 X ESL GLCmax
gasoline	1-hr	24	24	0
kerosene	1-hr	5	5	5
light reformate (contains 8- 12% benzene)	1-hr	13	0	0
petroleum distillates	1-hr	5	5	0
toluene	1-hr	8	0	0

The applicant based the hours of exceedance on the number of hours to refill the applicable tank from the worst-case impacts.

3. Model Used and Modeling Techniques

AERMOD (Version 18081) was used in a refined screening mode for all demonstrations except the pollutants reported in Table 3. AERMOD (Version 19191) was used for the pollutants reported in Table 3. This discrepancy will not change the overall conclusions.

The project evaluated emissions from planned maintenance, startup, and shutdown (MSS) activity at GBR Bay Plant, which include the following activities:

- Process unit start-up and shut-down (SU/SD) venting to flare.
- Process unit SU/SD uncontrolled opening process equipment to atmosphere.
- Uncontrolled degassing and refilling/standing idle of Floating-Roof tanks.
- Uncontrolled degassing of Fixed-Roof tanks.
- Controlled degassing and refilling of tanks (Floating and Fixed-Roof) using control devices.
- Frac tank and vacuum truck degassing to atmosphere or to control devices.
- Start-up/hot stand-by emissions from the fluid catalyst cracking unit (FCCU).
- Inherently low emitting activities (ILEA).

For the list of the EPNs included in each planned MSS activity, please refer to section 13 of the original AQA.

For short-term analyses, the applicant evaluated each EPN of the planned MSS activities listed above as a separate scenario and reported the results associated with the worst-case scenario. According to the applicant, the EPNs of the planned MSS activities will not occur simultaneously within a given hour. For long-term analyses, the applicant evaluated each planned MSS activity listed above as a separate scenario and reported the results associated with the worst-case scenario. According to the applicant, the planned MSS activities will not occur simultaneously within a given year.

For this analysis, the applicant evaluated two scenarios where MSS activities can operate simultaneously. The first scenario represents uncontrolled tank MSS with ILEA activities, and the second scenario represents uncontrolled tank MSS with frac tank activities.

A unitized emission rate of 1 lb/hr was used to predict a generic short-term and long-term impact for each source except for the long-term ILEA locations. The generic impact was multiplied by the proposed pollutant specific emission rates to calculate a maximum predicted concentration for each source. For the long-term ILEA activities, the generic impact from all ten locations were combined to create a single generic impact. Each location was modeled at 0.1 lb/hr to get a combined emission rate of 1 lb/hr. For health effect analyses, all pollutants fell out at step 3 of the MERA guidance document, except pollutants in Table 3 above. The pollutants in Table 3 were evaluated at Step 5b of the MERA guidance document using pollutant specific modeling. Please note that the applicant conservatively used the total gasoline emissions from ILEA activities in conjunction with the worst-case MSS tank activity to evaluate light reformate, toluene, and xylene since these speciated compounds are found within gasoline.

According to the applicant, one of the two flares, EPNs ES-16 and ES-17, will be used during the process unit planned start-up, shut-down activity. The applicant reported the results associated with Flare ES-16. Based on the generic modeling, the unit impact of the two flares are comparable.

For Inherently Low Emitting Activities (ILEA), ten potential locations of the emissions were evaluated (Model IDs ILEA1 – ILEA10), and the result associated with the worst-case location was used in all subsequent short-term demonstrations. As noted above, the applicant used source groups to determine the combined impact from all ten locations for all subsequent annual demonstrations.

For uncontrolled frac tank and vacuum truck loading fugitives, fifteen potential locations of the emissions were evaluated (Model IDs FTVLMSS1 - FTVLMSS15), and the result associated with the worst-case location was reported by the applicant.

For controlled frac tank and vacuum truck loading fugitives, there are two control device options, portable thermal oxidizer or portable carbon canister. Fifteen potential locations of the devices were evaluated (Model IDs TO01/CC01 - TO015/CC015). The result associated with the worst-case device/location was reported by the applicant.

For control degassing and refilling of tanks, there are two control device options, portable thermal oxidizer or portable carbon canister. Sixteen potential locations of the devices were evaluated (Model IDs TKTO01/TKICE01 – TKTO16/TKICE16). The result associated with the worst-case device/location was reported by the applicant.

For flare and equipment opening to atmosphere, the total VOC emission rate (hourly and annual) were used for all pollutants, except cis-2-butene, ethylene, trans-2-butene, n-hexane, 1-pentene, and benzene. Pollutant specific emission rates were used for cis-2-butene, ethylene, trans-2-butene, n-hexane, 1-pentene, and benzene, which passed Step 3 of the MERA guidance document.

Each source was modeled in a separate source group to determine source culpability.

The following tables are being reported in order for the permit reviewer to include special conditions related to the project. The tables below represent each tank, pollutant, and process length for each MSS activity that exceeded an applicable ESL since Table 3 above only reflects the overall worst-case tank/MSS activity.

Table 5. Uncontrolled Floating-Roof Tank MSS Refilling/Standing Idle

Tank [Model ID]	Pollutant	Process Length (hrs)
6 [T6]	Toluene	8
147 [T147]	light reformate	13
151 [T151]	petroleum distillates	12
156 [T156]	petroleum distillates	13
158 [T158]	petroleum distillates	5
163 [T163]	petroleum distillates	5
164 [T164]	petroleum distillates	5
125 [T125]	petroleum distillates	24
134 [T134]	petroleum distillates	24
121 [T121]	petroleum distillates	24
516 [T516]	petroleum distillates	4
9 [T9]	petroleum distillates	10
531 [T531]	petroleum distillates	24
111 [T111]	Gasoline	36
112 [T112]	Gasoline	36

Tank [Model ID]	Pollutant	Process Length (hrs)
127 [T127]	Gasoline	24
166 [T166]	Gasoline	24
192 [T192]	Gasoline	36

Table 6. Uncontrolled Fixed-Roof Tank MSS Vented Degassing

Tank Pollutant		Process Length
[Model ID]		(hrs)
33 [T33_D]	kerosene	1
32 [T32_D]	kerosene	1
42 [T42_D]	kerosene	5
161 [T161_D]	kerosene	5
162 [T162_D]	kerosene	4
10 [T10_D]	kerosene	5
36 [T36_D]	kerosene	4
38 [T38_D]	kerosene	5
130 [T130_D]	kerosene	1
144 [T144_D]	kerosene	1
159 [T159_D]	kerosene	4
160 [T160_D]	kerosene	4
505 [T505_D]	kerosene	5
511 [T511_D]	kerosene	4
512 [T512_D]	kerosene	4
515 [T515_D]	kerosene	5

Tank [Model ID]	Pollutant	Process Length (hrs)
35 [T35_D]	kerosene	4

Table 7. Controlled Floating-Roof Tank MSS Thermal Oxidizer

Tank [Model ID]	Pollutant	Process Length (hrs)
111 [TKTO01]	gasoline	1
112 [TKTO01]	gasoline	1
127 [TKTO02]	gasoline	1
165 [TKTO03]	gasoline	1
166 [TKTO03]	gasoline	1
192 [TKTO01]	gasoline	1
121 [TKTO02]	petroleum distillates	1
517 [TKTO04]	petroleum distillates	1
518 [TKTO04]	petroleum distillates	1
531 [TKTO06]	petroleum distillates	1

Table 8. Uncontrolled Floating-Roof Tank MSS Vented Degassing

Tank [Model ID]	Pollutant	Process Length (hrs)
39 [T39_D]	kerosene	20
9 [T9_D]	petroleum distillates	1

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 151,491 people. The applicant followed EPA guidance from Section 5 of the AERMOD Implementation Guide.

B. Meteorological Data

Surface Station and ID: Angleton, TX (Station #: 12976) Upper Air Station and ID: Lake Charles, LA (Station #: 3937)

Meteorological Dataset: 2012 Profile Base Elevation: 7.3 meters

C. Receptor Grid

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

D. Building Wake Effects (Downwash)

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

4. Modeling Emissions Inventory

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

The short-term unit impact multipliers reported for Model IDs ILEA3 and ILEA4 were inconsistent with the modeling output file; however, these sources do not represent the worst-case location (Model ID ILEA7) and does not change the overall conclusions.

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

Hour-of-day scalars were used to represent limits in the operating schedule for MSS uncontrolled tanks degassing. MSS uncontrolled tank degassing will be limited from 10 am to 3 pm.

Hour-of-day scalars were used to represent limits in the operating schedule for MSS control vacuum truck loading using carbon canister. MSS control vacuum truck loading using carbon canisters will be limited from 10 am to 2 pm.

For MSS emissions associated with the FCCU (Model IDs ES12 and SNORT), hour of day scalars were used to account for operational limitations to daytime hours. The FCCU will be limited to operate from 6 am to 6 pm.

A NO_x to NO_2 conversion factor of 0.9, based on ARM2, was applied to the modeled annual and 1-hr NO_x emission rates. This is reasonable.

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.

Company Blanchard Refining Company LLC
City Texas City

County Galveston
Project Type Initial
Project Reviewer Jeff Greif

Site Name Texas City Refinery

Permit Number
Project Number
Regulated Entity Number
Customer Reference Number
Received Date

98954 170583 RN102535077 CN604166868 October 11, 2011

Project Overview

Blanchard Refining Company LLC, previously Marathon Petroleum Company LP (MPC), is applying for an initial permit for MSS at the refinery. MPC submitted an application prior to January 3, 2007 to amend the flexible permit 22433, but in response to EPA's disapproval of the flexible permit program reapplied for a regular NSR permit for the MSS. When Blanchard acquired MPC the refinery site expanded from the old BP site. This permit only addresses the original MPC site sources MSS emissions.

A hearing request was submitted on the original application to amend Permit 22433 and that request was carried over to this project.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)
PM	0.00	1.20	1.20	NA*
PM ₁₀	0.00	0.93	0.93	NA*
PM _{2.5}	0.00	0.63	0.63	NA*
voc	0.00	78.08	78.08	NA*
NOx	0.00	4.39	4.39	NA*
СО	0.00	34.90	34.90	NA*
SO ₂	0.00	10.76	10.76	NA*

^{*}Emissions are MSS activities for an existing refinery that were represented via Air general rules, inventoried and present and are now being authorized in a permit.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	1/9/2012
Site rating & classification:	Avg. 6.95
Company rating & classification:	Avg. 3.16
Has the permit changed on the basis of the compliance history or rating?	No
Did the Regional Office have any comments? If so, explain.	No

Public Notice Information

Requirement	Date
Legislator letters mailed	10/18/2011

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Requirement	Date
Date 1st notice published	11/10/2011
Publication Name: Galveston County Daily News	
Pollutants: CO, NOx, SO2, H2S, HF, Organic Compounds incl. Benzene	
Date 1st notice Alternate Language published	11/10/2011
Publication Name (Alternate Language): La Informacion	
1st public notice tearsheet(s) received	11/21/2011
1st public notice affidavit(s) received	11/21/2011
1st public notice certification of sign posting/application availability received	12/29/2011
SB709 Notification mailed	NA
Date 2 nd notice published	
Publication Name:	
Pollutants:	
Date 2 nd notice published (Alternate Language)	
Publication Name (Alternate Language):	
2 nd public notice tearsheet(s) received	
2 nd public notice affidavit(s) received	
2 nd public notice certification of sign posting/application availability received	

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Public Interest

Number of comments received	0
Number of meeting requests received	0
Number of hearing requests received	1
Date meeting held	
Date response to comments filed with OCC	
Date of SOAH hearing	

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Federal Rules Applicability

Requiremen	nt	
Subject to N	SPS?	Yes
Subparts	A, J, K , Ka, Kb & QQQ	
Subject to N	ESHAP?	Yes
Subparts	A & FF	
Subject to N	ESHAP (MACT) for source categories?	Yes
Subparts	A, CC & UUU	
Nonattainme	ent review applicability:	The refinery is an existing Major source in an ozone nonattainment county. The authorization is for Planned MSS emissions which have been present but are now required to be permitted. Nonattainment review is not required.
PSD review	applicability:	The refinery is an existing Major source. The authorization is for Planned MSS emissions which have been present but are now required to be permitted. PSD review is not required.

Title V Applicability - 30 TAC Chapter 122 Rules

Requirement

Title V applicability: Yes, operating under SOP

Periodic Monitoring (PM) applicability: Periodic monitoring is applied to all MSS activities permitted in this action except for Inherently low emitting activities (ILEAs). Tank and vessel clearing of higher volatility VOCs, and non-combustion control is subject to concentration monitoring. All activities are subject to engineering calculation accounting based on the known materials handled. Plant and portable flares controlling emissions are subject to the requirements of 40 CFR 63.671 *Requirements for flare monitoring systems*. ILEAs were estimated at the maximum potential rate and assumptions for the estimates are reevaluated annually

Compliance Assurance Monitoring (CAM) applicability: No sources of MSS are estimated to be major, but the plant flares can receive and emit a major amount of VOC. The flares are subject to the continuous monitoring requirements of 40 CFR 63.671 *Requirements for flare monitoring systems*, and the capture systems are monitored in Permit 22433.

Process Description

This is the initial site-wide MSS permit for the Marathon Refinery that became Blanchard and is now adjacent to the old BP refinery that has a site wide MSS permit that is now also Blanchard. The MSS activities were addressed in 6 general groups of activities. Specifically, (1) Startup/Shutdown/Equipment Clearing; (2) Fixed Roof Tanks; (3) Floating Roof Tanks; (4) Frac Tanks and Vacuum Trucks; (6) FCCU Specific MSS; and (6) Inherently Low Emitting Activities. The

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emissions were grouped on the MAERT to six EPNs: MSS_Flare, which are plant flares (EPNs ES16 and ES17), MSS_CONTROL, which are temporary control devices for tank degassing, MSS_PROCESS for MSS activities venting directly to atmosphere, ES12 the FCCU regenerator vent, SNORT the FCCU reactor vent, and ILEA for inherently low emitting MSS activities.

Startup/Shutdown/Equipment Clearing is the process vessel clearing for planned full and partial unit shutdowns for maintenance and then restarts, which includes flaring, EPN MSS_FLARE, and venting to atmosphere, EPN MSS_PROCESS. The units addressed included Crude units (#4 & #5 Toppers), FCCU, Gas Con, Propylene unit, Alkylation Unit, Amine Recovery and Regeneration, Sour Water Stripper, Sulfur Recovery Units and Tail Gas Treating, and the Merox unit. The Platformer and UDEX units were originally included but were later noted to be shutdown indefinitely. MSS was broken down into four stages. Unit/Equipment shutdown where gas may be directed to the flare, periodic compressor maintenance, catalyst/clay treater regeneration and closed vent system maintenance were specifically noted. Unit/Equipment Preparation is conducted where material is pushed to other units to the extent practicable and then depressurized to the flare followed by steam or nitrogen purge to the flare and/or water wash and chemical cleaning. Unit/Equipment Opening to Atmosphere where residual vapors are released or blown into the atmosphere, minor volumes < 500 cf were addressed as a separate routine activity. Unit/Equipment Startup equipment may be purged with nitrogen to remove oxygen before startup and the nitrogen with some potential VOC is directed to the flare as the unit is started up. Filter/Dryer Changeout and Pump and Heat Exchanger Maintenance Emissions fugitive component repair (line breaks) and small vessel repair and replacement (all < 500 ft3) opening to atmosphere are part of the routine maintenance activities in Attachment B of the SCS with simplified recordkeeping allowed.

<u>FCCU startup and hot standby MSS Operations</u> were specifically addressed with respect to torch oil firing in the regenerator and a reactor overhead snort vent. The torch oil combustion brings the catalyst to temperature or maintains catalyst temperature and results in higher than normal CO exhausting through the wet gas scrubber, EPN ES12. Relief from the CO requirements in 30 TAC 117.310(c)(1)(A) of 400 ppmvd @ 3% O₂ on a 24-hr avg basis is required. The reactor snort vent releases nitrogen purge air as the hot catalyst is circulated during start up to remove oxygen. The release is through reactor cyclones and carries catalyst PM fines out the vent, EPN SNORT.

<u>Fixed Roof Tanks</u>, 30 fixed roof storage tanks were identified and noted to periodically be deinventoried and cleaned. The tanks were primarily associated with kerosene and heavier liquids. The tanks are not heated tanks, but some of the heavier liquids are being received hot (> 95°F) from the process and where this was occurring the stored liquid vapor pressure would be less than that of kerosene (noted to be 0.09 psia @ 95°F). Slop oil represented with a vapor pressure of 5.53 psia at 95°F was noted to be stored in 9 of the tanks, with normal operation directed through carbon control or thermal oxidizer (note two were >25,000 gal capacity). There is triethylene glycol and an amine (MDEA) tank with very low vapor pressure contents (<0.002 psia at 95°F), and a very large gas oil tank (0.02 psia @ 95°F), where emissions were accounted separate from the kerosene and slop oil tanks. The tanks are pumped out normally and then portable equipment may be employed to remove standing liquid. Where tanks have residual solids, water or cutter stock (diesel) may be circulated to remove the solids. Controlled tank degassing is employed on the slop oil tanks, with emissions accounted in EPN MSSCONTROL. The degassing to atmosphere is accounted in EPN MSS_PROCESS.

Floating Roof Tanks, 20 IFR (6 were taken out of service) and 21 EFR Floating roof storage tanks at the site were divided into 11 stock liquid categories for roof landing, clearing, cleaning and refill activities. The categories were finished gasoline/light components (all grades and RVPs), heavy gasoline components (all gasoline blend stocks generally with RVP 6 excluding benzene and aromatic streams), benzene, crude oil/slop oil, BTX reformate (refinery fraction with higher BTX content), kerosene and heavier petroleum fractions, toluene, xylene and heavier aromatics, sour water (with hydrocarbon layer), and wastewater sludge (including oily sludge, wastewater sludge and wastewater); Udex solvent, Udex mixed aromatics (udex extraction stream with high BTX content were removed and replaced by a solvent liquid., MSS emission activities include pump out or de-inventory after landing the floating roof and subsequent standing idle emissions, controlled vapor space purge and continued forced ventilation to control with continued liquid recovery, uncontrolled forced ventilation with personnel entry for cleaning continuing, tank refill to refill to float roof (note benzene tanks are controlled during the refloat process). Floating roof tanks may also be landed and emptied and refloated without cleaning or degassing to change products uncontrolled (benzene tank refills will be controlled). Controlled emissions are accounted in EPN MSS_CONTROL and uncontrolled emissions are accounted in EPN MSS_PROCESS.

Temporary Portable Control Devices include thermal oxidizers (TO), internal combustion engines (ICE) and

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carbon adsorption systems (CAS), used to control high concentration organics where connection to the plant flares is not available, with emission accounting in EPN MSS CONTROL.

<u>Frac Tanks and Vacuum Trucks</u>, Vacuum Trucks are utilized to remove liquids from process equipment when direct connection to other equipment is not available and/or the residual liquids cannot be moved by the process equipment. Vacuum trucks are controlled (typically by a liquid scrubber and carbon canisters) to minimize emissions when the VOC vapor pressure is greater than 0.5 psia and as needed based on other regulatory requirements. Frac tanks are used for the temporary storage of liquids generated during maintenance activities. Frac tanks are controlled (typically by a liquid scrubber and carbon canisters) to minimize emissions when the VOC vapor pressure is greater than 0.5 psia and as needed based on other regulatory requirements. These emissions are accounted in MSS_PROCESS and MSS_CONTROL.

Inherently Low Emitting Activities, include instrumentation, analyzer and quill injector maintenance and filter change outs; process sampling; sight glass/level instrument maintenance; carbon canister maintenance/replacement; paint, small equipment opening (< 30 ft³), solvent and degreaser aerosol can use; sand and gravel replacement in the river water filters; and soap and aqueous based cleaner use. Emissions are accounted in EPN ILEA.

Project Scope

MSS activities with emissions associated with fluids and solids in the process equipment at the old Marathon refinery are being authorized as required by the air general rules.

Best Available Control Technology

Source Name	EPN	Best Available Control Technology Description
All process units and ancillary equipment	MSS_FLARE	Units and equipment with fluid VOC vapor pressures ≥ 0.50 psia which are shutdown, de-inventoried, depressurized, vapor space purged, and started up with nitrogen purge are directed to the plant flares until concentrations are less than 10,000 ppmv or startup is complete. Units and equipment are first de-inventoried to other vessels as practicable. The flares meet BACT by assuring continuous compliance with 40 CFR 63.670 Requirements for flare control devices.
All process units and ancillary equipment	MSS_PROCESS	Units and equipment with fluid VOC vapor pressures ≥ 0.50 psia which are shutdown, de-inventoried, depressurized, vapor space purged are directed to the plant flares until concentrations are less than 10,000 ppmv and then they may be opened and ventilated to atmosphere. Units and equipment are first de-inventoried to other vessels as practicable. No additional control is required.
FCCU Regenerator startup and hot standby	ES12	Emissions are directed through the FCCU scrubber with air contaminates other than CO meeting the construction permit limitations. Torch oil combustion shall be < 2000 ppmv CO, accepted as BACT
FCCU Reactor startup, snort vent	SNORT	FCCU reactor process catalyst cyclone control assuring no visible emissions.
Floating roof tanks, roof landing and refloat	MSS_CONTROL	Upon roof landing, where liquids stored or refilled have VOC vapor pressures ≥ 0.50 psia vapors under the roof shall be purged to control until residual liquids are controlled and vapor space VOC concentration is less than 10,000 ppmv. BACT controls are flares meeting 40 CFR 63.670 Requirements for flare control devices, carbon adsorption systems controlling to

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Source Name	EPN	Best Available Control Technology Description
		100 ppmv, thermal oxidizers assuring 1400°F and 0.5 sec residence time or tested 99% DRE, IC Engines tested for 99% DRE, liquid scrubbing upstream of carbon absorption controlling to 100 ppmv, and closed loop refrigerated vapor recovery.
Floating roof tanks, roof landing and refloat	MSS_PROCESS	After degassing to control to 10,000 ppmv, tanks may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. Tanks must be emptied in a continuous fashion after landing if vapors during emptying are not directed to control. The uncleaned refills for change of service are limited to 10 tpy
Controlled fixed roof tanks,	MSS_CONTROL	Where liquids stored or refilled have VOC vapor pressures ≥ 0.50 psia vapors in the tank shall be purged to control until residual liquids are devolatilized or removed and vapor space VOC concentration is less than 10,000 ppmv. BACT controls are flares meeting 40 CFR 63.670 Requirements for flare control devices, carbon adsorption systems controlling to 100 ppmv, thermal oxidizers assuring 1400°F and 0.5 sec residence time or tested 99% DRE, IC Engines tested for 99% DRE, liquid scrubbing upstream of carbon absorption controlling to 100 ppmv, and closed loop refrigerated vapor recovery.
Frac tanks, holding process and tank de-inventory	MSS_CONTROL	Where liquids stored have VOC vapor pressures ≥ 0.50 psia, the tanks shall be directed to carbon adsorption systems with or without liquid scrubbers, controlling to 100 ppmv. The tanks must be white, or aluminum and bottom filled unless they store less than 450 gal.
Frac tanks, holding process and tank de-inventory	MSS_PROCESS	Where liquids stored have VOC vapor pressures <0.50 psia, the tanks must be white or aluminum and bottom filled unless they store less than 450 gal, in which case they must be closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
Vacuum trucks, controlled vacuuming of process and cleaning liquids	MSS_CONTROL	Where liquids stored have VOC vapor pressures ≥ 0.50 psia, the tanks shall be directed to carbon adsorption systems with or without liquid scrubbers, controlling to 100 ppmv.
Vacuum trucks, uncontrolled vacuuming of process and cleaning liquids	MSS_PROCESS	No control is required.
Inherently Low Emitting Activities	ILEA	Instrumentation/analyzer/injection quill maintenance and calibration, Instrumentation/analyzer filter changeouts, Small Equipment <30 ft³ Opening, Process sampling, Sight glass/level instrument maintenance, Carbon canister maintenance/replacement, Aerosol cans - paint/solvent/degreaser/misc, transitional use of Containers, Miscellaneous solid materials handling (i.e. insulation, lime, sand, salt and refractory), Soap and other aqueous based cleaner use. These frequent activities involve minor volumes of air contaminates that are not expected to be practical to control

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Construction Permit Source Analysis & Technical Review

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Permits Incorporation

Permit by Rule (PBR) / Standard Permit / Permit Nos.	,	Action (Reference / Consolidate / Void)
106.263 (unregistered)	Various MSS Activities	Consolidated

Imp	acts Evaluation					
	Was modeling conducted?	Y es		Type of Modeling:	AERMOD refined screen	mode
	Is the site within 3,000 feet o	f any sch	nool?			No
	Additional site/land use information residential housing.	mation:	The area is industrial	except for the north fe	nce line which boarders Texas	City

Modeled emission impacts of the MSS activities for the old Marathon site were reviewed by the Air Dispersion Modeling Team for Minor Source NSR and Air Toxics Analysis. The air quality analysis (AQA) is acceptable for all review types and pollutants, as summarized in the ADMT memo document number 630514. GLCmax impacts of H₂S, SO₂, PM₁₀, PM_{2.5}, NO₂, and CO were below de minimis for all averaging times for State property line and NAAQS standards.

The Air Toxics analysis was conducted on the following chemical species emitted: benzene, 1-butene, n-hexane, cis-2-butene, cyclopentane, ethane, ethylene, gasoline, isobutane, isobutene, isopentane, kerosene, light reformate (contains 8-12% benzene), N-methyldiethanolamine, n-butane, neopentane, n-pentane, 1-pentene, petroleum distillates, propane, propylene, tetraethylene glycol, toluene, trans-2-butene, xylene. GLCmax impacts were less than the ESL for these chemical species except for the short term 1 hr averaging of gasoline, kerosene, light reformate, petroleum distillates, toluene, and xylene. Worst case impacts were evaluated for potential frequency and were within MERA guidance Step 5. The impacts exceeding the ESL were associated with uncontrolled floating-roof tank refilling and degassing, floating-roof tank degassing to temporary control and uncontrolled fixed-roof tank degassing. The emission potential is conservatively established, and the specific emissions of each tank MSS activity is limited as represented in addition to the MAERT caps. No adverse impacts associated with the permitted MSS activities are expected.

Project Reviewer	Date	Section Manager	Date
Jeff Greif		Rebecca Partee	

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Compliance History					
RE Name:	BLANCHARD REFINING GALVESTON BA	Y REFINERY	RN:	RN102535077	
Classification:	SATISFACTORY	Rating:	21.51	Publication Date:	Nov 15, 2021
Customer Name	BLANCHARD REFINING COMPANY LLC		CN:	CN604166868	
Classification:	SATISFACTORY	Rating:	11.21	Publication Date:	Nov 15, 2021
Repeat Violator Ind:	NO				

Compliance History Start: 08/31/2021 End: 09/01/2016

1-37 of 37 Enforcement Action Records

Enforcement Acti	ons			
Туре	Effective Date	Citation/Requirement Provision	Abbv. Description	Violation Classification (Trk No)
ADMINORDER	May 23, 2019	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 1; OP STC No. 23	Failed to prevent unauthorized emissions. Specifically, the Respondent released 7,844.97 lbs of SO2, 1,963.51 lbs of VOC, 814.22 lbs of CO, 159.79 lbs of NOx, and 83.46 lbs of H2S from Flare 8, EPN 400, during an emissions event (Incident No. 238699) that began on July 14, 2016 and lasted two hours and 14 minutes. The emissions event occurred when the presence of water led to overpressuring of the crude overhead drums, resulting in flaring.	MODERATE (618205)
ADMINORDER	Dec 18, 2019	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT 47256, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (Category A12 (i)(6))	MODERATE (687399)
ADMINORDER	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.110(a); 30 TAC Chapter 122, SubChapter B 122.143(4)	Failure to obtain authorization prior to operation (Category A2.a).	MAJOR (643276)
ADMINORDER	Dec 18, 2019	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT 47256, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. [Category A12 (i)(6)]	MODERATE (686754)
ADMINORDER	Nov 10, 2020	30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) OP FOP O1380 GTC and STC No. 21; PERMIT 22433, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. [Category A12 (i)(6)]	MODERATE (697476)
ADMINORDER	Jul 1, 2019	30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failed to comply with the permitted hourly MAER.	MODERATE (605298)

ADMINORDER	Dec 18, 2019	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT 47256, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. Category A12 (i)(6)	MODERATE (665982)
ADMINORDER	Jul 1, 2019	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4) OP STC No. 23; PERMIT Special Condition 1	Failed to prevent unauthorized emissions. The emissions event was determined to be an excessive emissions event.	MODERATE (606471)
ADMINORDER	Aug 27, 2020	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); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) OP FOP O1541 GTC and STC 27; PERMIT 47256, 2612,6488 Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (Category A12 (i)(6))	MODERATE (687398)
ADMINORDER	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 106, SubChapter A 106.6(b); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 24	Failure to comply with certified Permit-by-rule representations for T280-4002 (EPN: 280-4002) (Category A4 General Critereon 2).	MODERATE (643306)
ADMINORDER	Jul 20, 2020	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT NSR 47256, Special Condition 1; OP FOP O1541 Special Condition No. 28	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. Category A12 (i)(6))	MODERATE (704249)
ADMINORDER	Dec 18, 2019	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a) OP O1380; PERMIT 22433	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during and emissions event.	MODERATE (665870)
ADMINORDER	Jul 20, 2020	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) OP FOP O1541 Special Condition No. 28; PERMIT NSR Permit 47256 Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (Category A12 (i)(6))	MODERATE (704248)
ADMINORDER	Aug 5, 2019	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter G 116.715(a); 30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 101, SubChapter A 101.4; 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms and Conditions No. 23; PERMIT 47256, Special Condition 1	Failed to prevent unauthorized emissions and a nuisance condition. Specifically, Respondent released 5,255 lbs of PM, 115 lbs of CO, and experienced 100% opacity from EPN 93 and released 4,403 lbs of VOC, 3,859 lbs of CO, 1 lb of H2S, 757 lbs of NOx, and 170 lbs of SO2 from EPN 331, during Incident No. 233495 on May 31, 2016 that lasted 243 hours. The emissions event occurred when the ESP was taken offline due to safety concerns during shutdown, resulting in a release and nuisance conditions.	MODERATE (630940)
ADMINORDER	May 23, 2019	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 1; OP STC No. 23	Failed to prevent unauthorized emissions. Respondent released 5,858 lbs of SO2, 2,523 lbs of VOC, 558 lbs of CO, 109 lbs of NOx, and 62 lbs of H2S from EPN 501 and as CFHU Fugitives, EPN F-470, during an emissions event	MODERATE (610626)

			(Incident No. 233493) that began on May 18, 2016 and lasted 15 hours and 38 minutes. The emissions event occurred when a tube in the CFHU Heater ruptured due to excessive heat, resulting in flaring.	
ADMINORDER	May 23, 2019	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4) OP STC No. 23; PERMIT 47256 Special Condition 1	Failed to prevent unauthorized emissions. Respondent released 1,166 lbs of SO2 from EPN 384 during an Incident No. 248668 on December 13, 2016 and lasted 1 hr and 10 min. The emissions event occurred when two successive valve failures caused the K-2B Air Blower Turbine to fail, leading to the D Sulfur Train and D Shell Clause Off-gas Treater tripping offline due to low air flow and resulting in a release to the atmosphere.	MODERATE (649573)
ADMINORDER	Jun 20, 2017	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. [Category A.12.i.6]	MODERATE (596811)
ADMINORDER	May 23, 2019	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 1; OP STC No. 23	Failed to prevent unauthorized emissions. Respondent released 3,477 lb of SO2, 37 lbs of H2S, 5 lbs of CO, 1 lb of NOx, and 2 lbs of VOC from EPN 400, during an emissions event (Incident No. 232980) that began on May 10, 2016 and lasted 46 minutes. The emissions event occurred when an operator opened a bypass valve that led to low pressure in the boiler feed water, causing a safety interlock to shut down the Train C Claus Unit and resulting in flaring.	MODERATE (609854)
ADMINORDER	Jul 20, 2020	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4) PERMIT SC No. 1; PERMIT 47256, Special Condition 1; OP O1541 GTC and STC No. 27	Failure to prevent an excessive emissions event. Category A12(i) (9)	MAJOR (645677)
ADMINORDER	Jul 20, 2020	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter G 116.715(a) PERMIT NSR 47256, Special Condition 1; OP FOP O1541 Special Condition No. 28	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (Category A12 (i)(6))	MODERATE (705948)
ADMINORDER	Feb 7, 2017	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 101, SubChapter A 101.20(3) PERMIT Special Condition 1	Failure to prevent unauthorized emissions from an emissions event that failed to meet the compliance demonstrations. [Category A12.i.6]	MODERATE (591516)
ADMINORDER	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for COKR-B201 (EPN: 72) (Category B13).	MODERATE (643293)

	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for UU4- B402A/B/C (EPN: 213) (Category B13).	MODERATE (643294)
ADMINORDER	May 23, 2019	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.116(b)(1)	Failed to obtain a permit amendment. Specifically, the Respondent did not accurately represent the total gas flow to the WWTP Thermal Oxidizer, EPN 293, in the permit application for NSR Permit No. 22107 and operated the unit without obtaining a permit amendment.	MINOR (643248)
ADMINORDER	Jul 1, 2019	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) OP Special Terms & Conditions 23; PERMIT Special Condition 9	Failed to comply with the permitted emissions limit.	MINOR (614859)
ADMINORDER	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 122, SubChapter B 122.145(2)(A) OP General Terms & Conditions	Failure to report all instances of deviation (Category B3).	MODERATE (643316)
ADMINORDER	Jul 1, 2019	30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 115, SubChapter H 115.725(a)(1)(C) OP Special Term & Condition 1H	Failed to comply with the minimum O2 content limit.	MODERATE (605314)
ADMINORDER	Oct 27, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 117, SubChapter B 117.310(c)(1)(A); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Term & Condition 1A	Failure to prevent exceedance of the 24-hour CO concentration for UU3-302BA/B/C (EPN: 162) (Category B13).	MODERATE (718600)
ADMINORDER	Apr 2, 2020	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) PERMIT Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for AU2-B601 (EPN: 601) (Category B13).	MODERATE (643297)
ADMINORDER	Jul 1, 2019	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.116(b)(1)	Failed to comply with permit representations for NSR Permit No. 2231.	MODERATE (605362)
ADMINORDER	Apr 2, 2020	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 117, SubChapter B 117.310(c)(1)(A); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1A	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration on UU4-B401A (EPN: 211) (Category B13).	MINOR (643383)
ADMINORDER	Jul 1, 2019	30 TAC Chapter 117, SubChapter B 117.310(c)(1) (A); 5C THSC Chapter 382 382.085(b)	Failed to maintain CO emissions below 400 ppmv at 3% O2, dry basis.	MODERATE (614862)
ADMINORDER	Apr 2, 2020	30 TAC Chapter 115, SubChapter D 115.352(4); 30 TAC Chapter 115, SubChapter H 115.783(5); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 116, SubChapter G 116.715(a); 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 VV 60.482-6(a)(1); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1); 40 CFR Chapter 61, SubChapter C, PT 61, SubPT V 61.242-6(a)(1); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(1); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 11E; PERMIT Special Condition 4E; PERMIT Special Condition 4E; PERMIT Special Condition 51E; OP	Failure to prevent open ended lines (Category C10).	MINOR (643247)

		Special Terms & Conditions 1A & 23; PERMIT Special Condition 9E; PERMIT Special Condition 4E		
ADMINORDER	Sep 13, 2016	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter G 116.715(a); 30 TAC Chapter 101, SubChapter A 101.20(3) PERMIT Special Condition 1	Failure to demonstrate that Blanchard UU4 met the demonstration criteria for an affirmative defense for unauthorized emissions during an avoidable emissions event. [Subcategory A.12 (I)(6)]	MODERATE (563505)
ADMINORDER	Sep 13, 2016	30 TAC Chapter 101, SubChapter A 101.20(3); 30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) OP FOP Special Term & Condition 23; PERMIT NSR Special Condition 61B1	Failure to control degassing until the VOC concentration is less than 10,000 ppm or 10 percent of the LEL. Category B13	MODERATE (545482)
ADMINORDER	Sep 13, 2016	30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) OP FOP Special Term & Condition (ST&C) 22	Failure to maintain benzene concentration below the 1 ppm limit for carbon canisters for water separators. Category B13	MODERATE (547188)
ADMINORDER	Sep 13, 2016	30 TAC Chapter 122, SubChapter C 122.210(a); 5C THSC Chapter 382 382.085(b)	Failure to cite each applicable requirement to ensure compliance with the permit. Category C3	MODERATE (547200)

0 convictions returned

Criminal Convictio	ns				
Conviction Date	N	umber of		Violations	
Conviction Date	Felonies	Misdemeanors	Citation/Requirement Provision	Abbv. Description	Classification (Trk No)

0 events returned

Chronic Excessive Emissions	s Events		
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Jul 14, 2016	Compliance Invest File Review	Sep 15, 2016
Jul 21, 2016	Compliance Invest File Review	Sep 15, 2016
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Aug 31, 2016	Compliance Invest File Review	Sep 19, 2016
Aug 31, 2016	Compliance Invest File Review	Sep 20, 2016
Aug 11, 2016	Compliance Invest File Review	Sep 20, 2016
Aug 18, 2016	Compliance Invest File Review	Sep 20, 2016
Jul 20, 2016	Compliance Invest File Review	Sep 20, 2016
Sep 16, 2016	Compliance Invest File Review	Sep 22, 2016
Aug 31, 2016	Compliance Invest File Review	Sep 23, 2016
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Sep 14, 2016	Compliance Invest File Review	Sep 23, 2016
Sep 23, 2016	Compliance Invest File Review	Sep 28, 2016
Sep 19, 2016	Compliance Invest File Review	Sep 29, 2016
May 13, 2016	Compliance Investigation	Oct 7, 2016

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Notice	Notice of Violations						
NOV Date	Status Code	Citation	Allegation	Classification (Trk No)	Self- Report		
Oct 17, 2016	RESOLVED	1 1 1		MINOR (600663)	NO		

		116, SubChapter G 116.715(a) OP Special Term and Conditions (1)(A); PERMIT Special Conditions 39 (E)	report by the report submittal deadline. Category C3.		
Dec 31, 2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a); 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE (634201)	YES
Jan 3, 2017	RESOLVED	30 TAC Chapter 111, SubChapter A 111.111(a)(4) (A); 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); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.18(c)(1); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.11(b) (4) PERMIT Special Conditions (SC) 5C; OP Special Terms & Conditions (ST&C) 1A; OP Special Terms & Conditions (ST&C) 21; OP Special Terms & Conditions (ST&C) 24; OP Special Terms & Conditions (ST&C) 3A(i)	Failure to prevent visible emissions from Main Flare (EPN P-200) (Category B18)	MODERATE (622963)	NO
Jan 3, 2017	RESOLVED	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) OP Special Terms & Condition (ST&C) 24; OP Special Terms & Condition (ST&C) 21; PERMIT Special Condition (SC) 35	Failure to maintain one-hour exhaust oxygen (O2) concentrations in the tailgas incinerator (TGI) for Unit ID SRU-1 (Category B19.g.1)	MODERATE (625857)	NO
Jan 3, 2017	RESOLVED	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) OP Special Terms & Conditions (ST&C) 21; OP Special Terms & Conditions (ST&C) 24	Failure to maintain Firebox Exit 6-minute average Temperatures for Sulfur Recovery Unit (SRU) Tailgas Incinerator for Unit ID: SRU-1 (Category B19.g.1)	MODERATE (626598)	NO
Jan 3, 2017	RESOLVED	30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.103(a); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT UUU 63.1565(a)(1) OP Special Terms & Conditions (ST&C) 1A	Failure to maintain Carbon Monoxide (CO) emissions (Category B18)	MODERATE (622949)	NO
Jan 3, 2017	RESOLVED	30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 122, SubChapter B 122.145(2)(A); 5C THSC Chapter 382 382.085(b) OP General Terms and Conditions (GT&C)	Failure to report all instances of deviations (Category B3)	MODERATE (622940)	NO
Jan 3, 2017	RESOLVED	30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter G 116.715(c)(10) OP Special Terms & Conditions (ST&C) 24A; ORDER Alternative Monitoring Plan	Failure to maintain minimum Filter Module Pressure drop of 2.8 inches of water (H2O) limit in Fluid Catalytic Cracking Unit (FCCU) (EPN P-93) (Category B19.g.1)	MODERATE (622950)	NO
Jan 3, 2017	RESOLVED	40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.104(a)(1); 30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions (ST&C) 1A	Failure to maintain hydrogen sulfide (H2S) limit in fuel gas for the UDEX Reboiler Oil Heater (EPN H-9) (Category B18)	MODERATE (622951)	NO
Jan 3, 2017	RESOLVED	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) OP Special Terms & Conditions (ST&C) 21; OP Special Terms & Conditions (ST&C) 24; PERMIT Special Condition (SC) 37	Failure to maintain pH in the Sulfur Recovery Unit (SRU) Scrubber (EPN T-301STACK) (Category B19.g.1)	MODERATE (622952)	NO
Jan 23, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(c); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition No. 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. Category B19	MODERATE (628056)	NO
	RESOLVED	30 TAC Chapter 111, SubChapter A 111.111(a)(1) (B); 30 TAC Chapter 122, SubChapter B 122.143(4);	Failure to prevent visible emissions (Category C4).	MINOR (628364)	NO

Feb 1, 2017		5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 3B			
Feb 1, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT EEEE 63.2382(d) (1)	Failure to submit Notice of Compliance Status (NOCS) (Category C3).	MINOR (628365)	NO
Feb 1, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 117, SubChapter B 117.345(c)(1); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1A	RATA results not submitted within 60 days (Category C3).	MINOR (628366)	NO
Feb 6, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition No. 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (Category B13)	MODERATE (630693)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 117, SubChapter B 117.310(c)(1)(A); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1A	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration for ULC-104BA/BB (EPN: 205) (Category B19(g)(1)).	MODERATE (633113)	NO
Mar 10, 2017	RESOLVED	30 TAC Chapter 117, SubChapter B 117.310(c)(1) (A); 30 TAC Chapter 122, SubChapter B 122.143 (4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 1A	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration for UU3 306B (EPN: 167) (Category B19(g)(1)).	MODERATE (633115)	NO
Mar 10, 2017	RESOLVED	30 TAC Chapter 116, SubChapter B 116.116(a)(1); 5C THSC Chapter 382 382.085(b)	Failure to prevent exceedance of the maximum tank throughput representations (Tank T280-533) (Category B19(g)(1).	MODERATE (633101)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.116(a)(1)	Failure to prevent exceedance of the maximum tank throughput representations (T280-1041) (Category B19(g)(1).	MODERATE (633103)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.116(a)(1)	FFailure to prevent exceedance of the maximum tank throughput representation for T280-185 (Category B19(g)(1)).	MODERATE (633104)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 115, SubChapter H 115.725(a)(1)(C); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1H	Failure to maintain the minimum oxygen content for DDU-101B (EPN: 202) (Category B19(g)(1)).	MODERATE (633105)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 115, SubChapter H 115.725(a)(1)(C); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1H	Failure to maintain the minimum oxygen content for PS3B-401BA (EPN: 41) (Category B19(g)(1)).	MODERATE (633107)	NO
Mar 10, 2017	RESOLVED	30 TAC Chapter 115, SubChapter H 115.725(a)(1) (C); 30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 1H	Failure to maintain the minimum oxygen content for PS3A-102BA (EPN: 53) (Category B19(g)(1)).	MODERATE (633108)	NO
Mar 10, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 115, SubChapter H 115.725(a)(1)(C); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1H	Failure to maintain the minimum oxygen content for UU3-302BA (EPN: 162) (Category B19(g)(1)).	MODERATE (633109)	NO
Mar 10, 2017	RESOLVED	30 TAC Chapter 117, SubChapter B 117.310(c)(1) (A); 30 TAC Chapter 122, SubChapter B 122.143 (4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 1A	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration for UU4-B401A (EPN: 211) (Category B19(g)(1)).	MODERATE (633110)	NO
Mar 10, 2017	RESOLVED	30 TAC Chapter 117, SubChapter B 117.310(c)(1) (A); 30 TAC Chapter 122, SubChapter B 122.143	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration for AU2-B621A/B	MODERATE (633112)	NO

		(4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 1A	(EPNs: 171 & 173)(Category B19 (g)(1)).		
May 15, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT 47256, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event.	MODERATE (630673)	NO
Jun 13, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT 47256, Special Condition 1	Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event.	MODERATE (643256)	NO
Jul 31, 2017	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a); 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE (655621)	YES
Aug 31, 2017	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a); 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE (659655)	YES
Aug 31, 2017	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a); 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE (659656)	YES
Sep 29, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(a); 30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for TCH-DDU (EPN: 396A) (Category B13).	MODERATE (643313)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for UU4-404B (EPN: 215) (Category B13).	MODERATE (643314)	NO
Sep 29, 2017	RESOLVED	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) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for UU3-305B (EPN: 165) (Category B13).	MODERATE (643315)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.116(b)(1)	Failed to obtain a permit amendment. Specifically, the Respondent did not accurately represent the total gas flow to the WWTP Thermal Oxidizer, EPN 293, in the permit application for NSR Permit No. 22107 and operated the unit without obtaining a permit amendment.	MINOR (643248)	NO
Sep 29, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(a); 30 TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) OP Special Terms & Condition 23; PERMIT Special Condition 61(B)(1)	Failure to control degassing until the VOC concentration is less than 10,000 ppm or 10 percent of the LEL (Category B13).	MODERATE (643278)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 115, SubChapter H 115.725(d)(4); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 1A	Failure to take sample within 10 hours of flare on-line analyzer downtime (Category B1).	MINOR (643279)	NO
Sep 29, 2017	RESOLVED	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) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for COKR-B301 (EPN: 74) (Category B13).	MODERATE (643295)	NO
Sep 29, 2017	RESOLVED	30 TAC Chapter 122, SubChapter B 122.143(4); 30 TAC Chapter 117, SubChapter B 117.310(c)(1)(A); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 1A	Failure to prevent exceedance of the rolling 24-hour CO ppm concentration (Category B13).	MODERATE (643281)	NO
	RESOLVED	30 TAC Chapter 116, SubChapter B 116.115(e); 30 TAC Chapter 116, SubChapter G 116.715(a); 30		MINOR (643282)	NO

Sep 29, 2017		TAC Chapter 122, SubChapter B 122.143(4); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 5; PERMIT Special Condition 27; OP Special Terms & Conditions 23	Failure to prevent exceedance of the hourly CO ppm concentration (Category B13).		
Sep 29, 2017	RESOLVED	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) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for PS3A- 101BA/BB (EPN: 51) (Category B13).	MODERATE (643305)	NO
Sep 29, 2017	RESOLVED	30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.654(c)(4)(i); 30 TAC Chapter 116, SubChapter G 116.715(a); 5C THSC Chapter 382 382.085(b) PERMIT Special Condition 46; PERMIT Special Condition 3; OP Special Terms & Conditions 1A & 23	Failure to collect monthly cooling tower samples (Category B1).	MINOR (643283)	NO
Sep 29, 2017	RESOLVED	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) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for NDU1-80 (EPN: 80) (Category B13).	MODERATE (643307)	NO
Sep 29, 2017	RESOLVED	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) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for PS3A-103B (EPN: 55) (Category B13).	MODERATE (643308)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4) PERMIT Special Condition 5; PERMIT Special Condition 8; OP Special Terms & Conditions 23; PERMIT Special Condition 9	Failure to prevent exceedance of the NOx lb/MMBtu limit (Category B13).	MODERATE (643285)	NO
Sep 29, 2017	RESOLVED	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) PERMIT Special Condition 1; OP Special Terms & Conditions 23	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for UU4-B401B (EPN: 212) (Category B13).	MODERATE (643309)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 116, SubChapter B 116.115(c); 30 TAC Chapter 122, SubChapter B 122.143(4) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for UU4-B405 (EPN: 216).	MODERATE (643310)	NO
Sep 29, 2017	RESOLVED	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) OP Special Terms & Conditions 23; PERMIT Special Condition 1	Failure to prevent exceedance of the Maximum Allowable Emission Rate (MAER) for PS3A- 102BA/BB (EPN: 53) (Category B13).	MODERATE (643311)	NO
Sep 29, 2017	RESOLVED	5C THSC Chapter 382 382.085(b); 30 TAC Chapter 122, SubChapter B 122.143(4); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Kb 60.113b(b)(5); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT WW 63.1066(b)(1) OP Special Terms & Conditions 1A	Failure to submit tank inspection notifications (Category B3).	MINOR (643289)	NO
Sep 29, 2017	RESOLVED	30 TAC Chapter 116, SubChapter G 116.715(c)(2); 30 TAC Chapter 122, SubChapter B 122.143(4); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.7(a)(1); 5C THSC Chapter 382 382.085(b) OP Special Terms & Conditions 23	Failure to submit the start of construction notification (Category B3).	MODERATE (643290)	NO

Notice of Violations: (Page $1 \ge 3 \le 1-50$ of 220 Records)

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Environmental Audits	
	Disclosure Of Violation

Notice of	DOV		Violations	
Audit Date	Date	Classification	Citation/Requirement Provision	Abbv. Description
Sep 28, 2017	Apr 30,2018	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(d)(8); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.104a(i)(6)(ii)(C)	Failure to conduct initial compliance test with a run at 70% or greater for the UU3 313B heater. Initial compliance testing conducted failed to include a rum 70% or greater of the rated heat capacity of the heater as required by NSPS Ja.
Sep 28, 2017	Apr 30,2018	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.13; 40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.13(a)	Failure to conduct CEMS audits in accordance with timeframes specified in Appendix F.
Sep 28, 2017	Apr 30,2018	MINOR	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(a)(2)(iii); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.105(a)(12)(ii); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(c)(1); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(c) (2); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(c)(3); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(c)(4); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(c)(5); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(d) (1)	Failure to locate Quality Control (QC) program written procedures for Continuous Emissions Monitoring Systems (CEMS). Additionally, records and documentation required by the QC written procedures relating to monthly preventative maintenance for the SRU SO2 CEMS could not be located. Many parts required by SRU SO2 CEMS were out of stock.
Feb 27, 2017				
Nov 17, 2020				
Jan 27, 2021				
Apr 29, 2021				
Jul 2, 2021				
Jul 13, 2021				
Aug 5, 2021				
Aug 13, 2021				
Aug 25, 2021				
Sep 13, 2021				
Sep 8, 2021				
Oct 7, 2021				
Feb 14, 2018				
Nov 2, 2017				

Jun 27, 2017				
Aug 14, 2017				
Aug 23, 2017	Apr 30,2018	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.103a(c)(1)(ii); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.103a(c)(1)(iii)	Failure to conduct a "root cause" analysis of events with flare gas recovery water seal drum breakthroughs and discharges to flare in excess of 5000,000 scfs above baseline.
Aug 23, 2017	Apr 30,2018	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a	Failure to pass a CGA for the AU2 flare. The AU2 flare failed its quarterly (1Q2017) CGA without subsequently passing a CGA that quarter.
Aug 23, 2017	Apr 30,2018	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(e)(1)(iii); 40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(e)(2)(ii)	Failure to ensure that Flare H2S CEMS meet certain sulfur monitoring requirements for assessing root cause analysis thresholds of affected flares pursuant to NSPS Ja.
Aug 23, 2017	Apr 30,2018	MINOR	40 CFR Chapter 60, SubChapter C, PT 60, SubPT Ja 60.107a(e)(2)(iii)	Failure to maintain Quality Control (QC) program written procedures for flare H2S Continuous Emissions Monitoring Systems (CEMS).
Aug 23, 2017	Apr 30,2018	MODERATE	30 TAC Chapter 115, SubChapter H 115.725(d)(2)(A)(i)	Failure to use calibration gases on flares as required by Performance Specification 9.
Aug 12, 2016	Apr 25,2017	MINOR	40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.641	Tank 184 shows a MACT CC G2 status. The contents of the tank is toluene, which is a Gl HAP. The tank is >40,000 gal, the vapor pressure can be >0.75 psia (Oct 2016 emission report shows the TVP at 0.77 psia) and the annual average HAP liquid concentration is >4 percent by weight total organic HAP. The potential deficiency is: incorrect MACT CC group status.
Aug 12, 2016	Apr 25,2017	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a); 30 TAC Chapter 115, SubChapter H 115.781(f) PERMIT SC 10.e.	During the field review there were 5-10 OELs identified in voe service.
Aug 12, 2016	Apr 25,2017	MINOR	30 TAC Chapter 116, SubChapter G 116.721(b)(2)	12 internal floating roof storage tanks had inaccurate floating roof deck fitting representations: TKs 14, 15, 18, 22, 81, 115, 129, 143, 163, 164, 184 and 561
Aug 12, 2016	Apr 25,2017	MINOR	30 TAC Chapter 116, SubChapter G 116.721(b)(1)	20 external floating roof storage tanks had inaccurate floating roof deck fitting representations: TKs 9, 16, 44, 111, 112, 121, 125, 127, 134, 153, 165, 166, 192, 513, 514, 516,517,518,520 and 521
Aug 12, 2016	Apr 25,2017	MINOR	30 TAC Chapter 115, SubChapter H 115.782(b)(1)	Plant had missing or late documentation for repairs or monitoring verification of repairs.
Aug 12, 2016	Apr 25,2017	MINOR	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)	Failed to have oil tote containers in the LeakDAS database for inspections for initial and quarterly visual inspection, initial, and annual NDE monitoring.
Aug 12, 2016	Apr 25,2017	MINOR	30 TAC Chapter 115, SubChapter D 115.354(11); 30 TAC Chapter 115, SubChapter D 115.354(2)(C); 30 TAC Chapter 115, SubChapter H 115.781(b); 30 TAC	Failed to monitor components that were in the database during their scheduled periods.

			Chapter 115, SubChapter H 115.781(b)(3); 40 CFR Part 63, Subpart H 63.163; 40 CFR Part 63, Subpart H 63.168; 40 CFR Part 63, Subpart H 63.174; 40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.648(a) PERMIT SC 10.e.	
Aug 12, 2016	Apr 25,2017	MINOR	40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.343(a)(1)(i)(A); 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 61.346(a)(1)(i)(A); 40 CFR Chapter 61, SubChapter C, PT 61, SubPT FF 61.349(a)(1)(i)	Failed to verify the monitoring of all known BWON components.
Aug 12, 2016	Apr 25,2017	MODERATE	30 TAC Chapter 115, SubChapter D 115.352; 30 TAC Chapter 115, SubChapter H 115.780; 40 CFR Chapter 63, SubChapter C, PT 63, SubPT CC 63.640 PERMIT SC 10.a.	Several components were discovered that were not identified in the LDAR program and are subject to regulatory requirements.
Aug 12, 2016	Apr 25,2017	MINOR	40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.486(c)(3); 40 CFR Chapter 63, SubChapter C, PT 63, SubPT AA 63.648(a); 40 CFR Part 63, Subpart H 63.181 (i); 30 TAC Chapter 115, SubChapter D 115.354(1)(B); 30 TAC Chapter 115, SubChapter D 115.354(1)(C) PERMIT SC 10.j.	Difficult to Monitor (DTM) and Unsafe to Monitor (UTM) Plans or explanations were missing or not accurately identified.
Aug 26, 2019				
Sep 13, 2019				
Jun 14, 2019				
Aug 29, 2019				
May 24, 2019	Oct 25,2019	MODERATE	40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.13(a)	Failure to conduct a performance audit through the full sample system for Torch 2, 3, 4, 6, 8, AU2 Flare, CFHU Flare, DDU Flare and ULC Flare.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.310(c)(1)(A)	Failure to comply with CO emission limitations. FCCU3 exceeded 400 ppm CO @ 3% O2 on a 24 hour average during normal operations and no deviation was reported. This occurred while a temporary CEMS was being used.
Jan 25, 2018	Oct 9,2018	MODERATE	30 TAC Chapter 117, SubChapter B 117.340(c)(1)(G)	Failure to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) to monitoring exhaust NOx at the bay Plant alky Heater (EPN: ES20).
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.345(b); 30 TAC Chapter 117, SubChapter B 117.345(c); 30 TAC Chapter 117, SubChapter G 117.8100(a)(1)(B); 30 TAC Chapter 117, SubChapter H 117.9020(2)(A)	Failure to certify temporary CEMS. The temporary CEMs used for FCCU3 during portions of 2016 and 2017 was not certified.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter G 117.8140(b)	Failure to timely perform quarterly operation checks for engines. The affected units include: Bay Plant #4 Water Well Engine; Bay Plant Lift Station 30 Engine, Bay Plant West Plant Air Compressor; Bay Plant ICE-4, South Fire Water Pump Driver, Bay Plant ICE-5, North Fire

				Water Pump Driver; Bay Plant ICE-6, West Fire Water Pump Driver; Bay Plant ICE-7, East Fire Water Pump Driver.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.345(b)(1); 30 TAC Chapter 117, SubChapter B 117.345(b)(2); 30 TAC Chapter 117, SubChapter B 117.345(c)	Failure to submit post-testing and post RATA notifications and failure to copy the local air pollution control agency on reports.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.345(d)(3)	Failure to include the nature of system repairs or adjustments for Bay Plant CEMs downtime reports. Bay Plant CEMS downtime reports have not included the nature of system repairs or adjustments.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.345(f)(10)	Failure to timely complete engine biennial test. Biennial stack testing for the Bay Plant Lift Station 30 Pump engine was not conducted during the biennial period.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 101, SubChapter H 101.359(a)	Failure to report the correct level of activity (LOA) and/or emission factor on the submitted ECT 1 forms for the DOCK TO. Prior to 2017, the ECT-1 form, Dock TO (EPNs 294-1, 294-2, and 294-3) entries on the annual MECT compliance reports listed activity levels in MMBTU/yr and emission factors in lbs/MMBTU.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.340(c)(3)(E)(i); 30 TAC Chapter 117, SubChapter B 117.340(c)(3)(E) (ii); 30 TAC Chapter 117, SubChapter B 117.340(c)(3) (E)(iii)	Failure to use the correct data substitution procedures when the NOx CEMS was off-line for FCCU3. Data substitution methods did not meet the methods specified in 117.340(c)(3)(e)(i)-(iii) for the temporary CEMS used for FCCU3 during portions of 2016 and 2017.
Jan 25, 2018	Jul 16,2019	MODERATE	30 TAC Chapter 117, SubChapter B 117.345(d)	Failure to report CEMS downtime for certain sources. CEMS semi-annual downtime reports submitted for Bay Plant have excluded the Boiler (FINs: B-2B and B-2C; common stack EPN ES15) and #5 Topper Heater (FIN: H92; EPN ES8A).
Jan 25, 2018	Mar 28,2019	MODERATE	30 TAC Chapter 101, SubChapter H 101.359(a)	Failure to include engine 16B (FIN: J16B) in the 2015 MECT Annual Report.

Environmental Audits: (Page 1 2 > 1-50 of 96 Records)

0 systems returned

Environmental I	Environmental Management Systems				
Туре	Tier	Certification Date	Implementation Date		

$0 \ assessments \ returned$

Voluntary On-Site Compliance Assessments			
Start Date	Status Code	Status Date	

0 programs returned

Voluntary Pollution Reduction Programs		
Name	Level	Start Date of Participation

0 early compliance actions returned

o earry compnance actions returned
Early Compliance

Date Description

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TCEQ AIR QUALITY PERMIT NUMBER 98954

APPLICATION BY	§	BEFORE THE
BLANCHARD REFINING COMPANY	§	TEXAS COMMISSION ON
LLC	§	TEAAS COMMISSION ON
TEXAS CITY REFINERY	§	ENVIRONMENTAL QUALITY
TEXAS CITY, GALVESTON COUNTY		

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the New Source Review Authorization application and Executive Director's preliminary decision.

As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received timely comments from the following persons: Franklyn Tarver. 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

Blanchard Refining Company LLC (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the construction of a new facility that may emit air contaminants.

This permit will authorize the Applicant to begin planned maintenance, start-up and shutdown (MSS) activities at the Texas City Refinery, previously owned by Marathon Petroleum Company LLC. The facility is located at 502 10th St., S Texas City, Galveston County. Contaminants authorized under this permit include carbon monoxide, 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

Before work is begun on the construction of a new facility that may emit air contaminants, the person planning the construction must obtain a permit from the commission. This permit application is for an initial issuance of Air Quality Permit Number 98954 to authorize planned MSS activities that have historically occurred and continue to occur at the site. Permitting these activities was required to maintain the affirmative defense for the emissions as specified in 30 TAC § 101.122(h).

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 2 of 9

A permit application to amend flexible permit 22433 was received on January 5, 2007 and declared administratively complete on March 13, 2007. The Notice of Receipt and Intent to Obtain an Air Quality Permit for the application was published in English on April 9, 2007, in The Texas City Sun and in Spanish on April 9, 2007, in El Dia. This application received the request for a hearing on May 7, 2007, which is being addressed in the Comments and Responses. The application to amend 22433 was subsequently withdrawn November 19, 2012 and Blanchard submitted the current application for initial issuance of Permit No. 98954 to authorize the planned MSS emissions. The comment and hearing request were carried forward to the new application. The application for Permit No. 98954 was received on October 11, 2011 and declared administratively complete on October 18, 2011. 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 10, 2011, in the Galveston County Daily News and in Spanish on November 10, 2011, in La Informacion. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice) was published on June 3, 2021, in English in the Galveston County Daily News and in Spanish on June 03, 2021, in *La Informacion*.

COMMENTS AND RESPONSES

Health Effects/Air Quality

1. **Comment**: Commenters are concerned about being near the site due to the effect of the air emissions and carcinogens, noting their health is harmed by benzene, sulfur and organic compounds from the site. (Franklyn Tarver)

Response: 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 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. 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

^{1 40} CFR 50.2

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 3 of 9

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 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}).

The Applicant conducted a NAAQS analysis for Nitrogen Dioxide (NO_2), Carbon Monoxide (CO), and total Particulate Matter (PM) suspended in the atmosphere, including total particulate matter equal to or less than 10 microns in diameter (PM_{10}) and particulate matter equal to or less than 2.5 microns in diameter ($PM_{2.5}$). The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations ($PCM_{2.5}$) 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	GLCmax (μg/m³)	De Minimis (μg/m³)
NO ₂	1-hr	3.3	7.5
NO_2	Annual	0.03	1
СО	1-hr	285	2000
СО	8-hr	219	500
PM_{10}	24-hr	4.6	5
$PM_{2.5}$	24-hr	1.16	1.2
PM _{2.5}	Annual	0.004	0.2
SO ₂	1-hr	7.7	7.8
SO ₂	3-hr	7	25

The pollutant emissions below the de minimis level should not cause or contribute to an exceedance of the NAAQS and are protective of human health and the environment.

Effects Screening Levels

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

³ The GLCmax is the maximum ground level concentration predicted by the modeling.

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 4 of 9

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. The MERA is a tool to evaluate impacts of noncriteria 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. For this permit, all pollutants satisfy the MERA criteria and therefore are not expected to cause adverse health effects. Benzene fell out of the review at Step 3 with impacts less than 10% of the ESLs. Table 2 identifies the pollutants with the highest impact evaluated which satisfied the MERA criteria at Steps 5 and 6, and Table 3 identifies the frequency of ESL exceedance for the Step 5 evaluation.

Table 2. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Worst-case Scenario	Averaging Time	GLCmax (µg/m³)	ESL (μg/m³)
gasoline 8006-61-9	Uncontrolled Floating- Roof Tank MSS - Refilling/Standing Idle (T127) + ILEA at worst-case location (ILEA7)	1-hr	13,440	3500

⁴ See APDG 5874 guidance document.

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Pollutant & CAS#	Worst-case Scenario	Averaging Time	GLCmax (μg/m³)	ESL (µg/m³)
kerosene 8008-20-6	Uncontrolled Fixed- Roof Tank MSS - Vented Degassing (T161) + ILEA at worst-case location (ILEA7)	1-hr	8375	1000
light reformate (contains 8-12% benzene) NA	Uncontrolled Floating- Roof Tank MSS - Refilling/Standing Idle (T147) + ILEA at worst-case location (ILEA7)	1-hr	1586	1250
petroleum distillates 8002-05-9	Uncontrolled Floating- Roof Tank MSS - Refilling/Standing Idle (T164) + ILEA at worst-case location (ILEA7)	1-hr	13,821	3500

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Pollutant & CAS#	Worst-case Scenario	Averaging Time	GLCmax (µg/m³)	ESL (μg/m³)
toluene 108-88-3	Uncontrolled Floating- Roof Tank MSS - Refilling/Standing Idle (T6) + ILEA at worst-case location (ILEA7)	1-hr	5862	4500
uncontrolled Floating- Roof Tank MSS - Vented Degassing (T22) + ILEA at worst-case location (ILEA7)		1-hr	1374.44	2200

Table 3. Minor NSR MSS Hours of Exceedance for Health Effects

Pollutant	Averaging Time	1 X ESL GLCmax	2 X ESL GLCmax	4 X ESL GLCmax
gasoline	1-hr	24	24	0
kerosene	1-hr	5	5	5
light reformate (contains 8-12% benzene)	1-hr	13	0	0
petroleum distillates	1-hr	5	5	0
toluene	1-hr	8	0	0

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 7 of 9

State Property Line Analysis (30 TAC Chapter 112)

Because this application has sulfur emissions, the Applicant conducted a state property line analysis to demonstrate compliance with TCEQ rules for net ground-level concentrations for sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and sulfuric acid (H_2SO_4), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard as shown in Table 4.

Pollutant	Averaging Time	GLCmax (µg/m³)	De Minimis (μg/m³)
SO ₂	1-hr	7.7	14.3
H_2S	1-hr	2.16	71 (If property is residential, recreational, business, or commercial)
H_2S	1-hr	3.24	113 (If property is not residential, recreational, business, or commercial)

Table 4. Project-Related Modeling Results for State Property Line

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project.

Compliance History

2. **Comment:** Commenter asked about the compliance history of the applicant and site. (Franklyn Tarver)

Response: During the technical review of the permit application, a compliance history review of both the company and the site is conducted based on the criteria in 30 TAC Chapter 60. These rules may be found at the following website: https://www.tceq.texas.gov/rules/index.html.

The compliance history is reviewed for the five-year period prior to the date the permit application was received and includes multimedia compliance-related components about the site under review. These components include: enforcement orders, consent decrees, court judgments, criminal convictions, chronic excessive emissions events,

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 8 of 9

investigations, notices of violations, audits and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs, and early compliance. However, the TCEQ does not have jurisdiction to consider violations outside of the State of Texas.

A company and site may have one of the following classifications and ratings:

- High: rating below 0.10 complies with environmental regulations extremely well;
- Satisfactory: rating 0.10 55.00 generally complies with environmental regulations;
- Unsatisfactory: rating greater than 55.00 fails to comply with a significant portion of the relevant environmental regulations.

This site has a rating of 6.95 and a classification of Satisfactory. The company rating has a rating of 3.16, and a classification of Satisfactory. The company rating reflects the average of the ratings for all sites the company owns in Texas.

Executive Director's Response to Public Comment Blanchard Refining Company LLC, Permit No. 98954 Page 9 of 9

CHANGES MADE IN RESPONSE TO COMMENT

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

Guy Henry, Acting Deputy Director Environmental Law Division

Ashley Rich, Staff Attorney Environmental Law Division State Bar Number: 24109284 PO Box 13087, MC 173 Austin, Texas 78711-3087 (512) 239-4113

REPRESENTING THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Hearing Requestors - BLANCHARD REFINING COMPANY LLC 98954



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: 1/14/2022
CRF 0061146
Cartographer: cschrade

Facility Boundary

Requestor

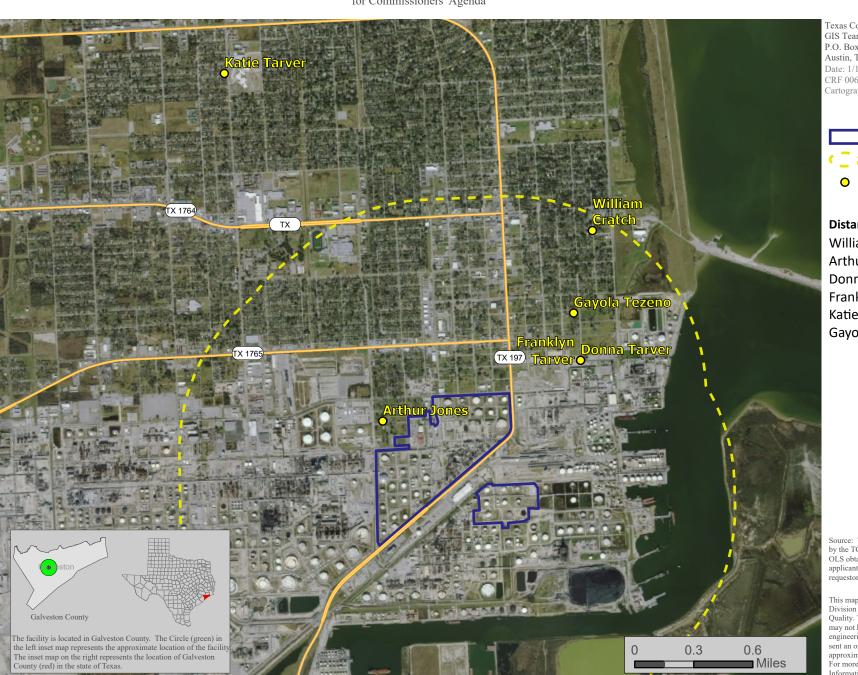
Distance from Facility Boundary: William Cratch - 0.93 mi

Arthur Jones - 0.10 mi Donna Tarver - 0.40 mi Franklyn Tarver - 0.40 mi Katie Tarver - 1.95 mi Gayola Tezeno - 0.52 mi

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.



Appendix

Name	Distance from Facility Boundary	Address	City	State	e Zip	Latitude	Longitude
William Cratch	0.93 mi	102 7th Ave. N	Texas City	TX	77590	29.3918	-94.8951
Arthur Jones	0.10 mi	1322 6th Ave. S	Texas City	TX	77590	29.3785	-94.9135
Donna Tarver	0.40 mi	220 2nd Ave. N	Texas City	TX	77590	29.3823	-94.8966
Franklyn Tarver	0.40 mi	220 2nd Ave. N	Texas City	TX	77590	29.3823	-94.8966
Katie Tarver	1.95 mi	2106 21st Ave. N	Texas City	TX	77590	29.4046	-94.9255
Gayola Tezeno	0.52 mi	217 2nd Ave. N	Texas City	TX	77590	29.3858	-94.897