Special Conditions

Permit Number 169454

1. This permit covers only those sources of emissions listed in the attached table entitled “Emission Sources - Maximum Allowable Emission Rates” (MAERT), and those sources are limited to the emission limits and other conditions specified in that table.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

Federal Applicability

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(TBD)**

   A. Subpart A, General Provisions.

   B. Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units.

   C. Subpart Kb, Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

   D. Subpart Kc, Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023.

   E. Subpart IIII, Stationary Compression Ignition Internal Combustion Engines.

   F. Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines.

4. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:

   A. Subpart A, General Provisions.

   B. Subpart ZZZZ, Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Production Limit

5. Annual production from the permitted unit will not exceed throughput contained in the Table 2 submitted with application form PI-1 dated June 22, 2022. Production records shall be updated monthly and rolling 12 months to date.

Boilers

6. Emissions from Steam Boiler #1 (EPN FB021) and Standby Steam Boiler #2 (EPN FB022) shall not exceed 0.011 lb/MMBtu NO_X during any rolling 12-month period.

7. The Standby Steam Boiler #2 (EPN FB022) is limited to 4,380 hours/year of operation.

8. The Hot Oil Boiler (EPN FB170) is subject to the following requirements:

   A. Emissions from Hot Oil Boiler (EPN FB170) shall not exceed the following during any rolling 12-month period. Compliance with the NO_X emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) unit.

Pollutant	Emission standard
NO_x	0.012 lb/MMBtu based on the higher heating value of the fuel
CO	50 ppmvd corrected to 3% O_2

   B. The ammonia (NH_3) concentration in the Hot Oil Boiler (EPN FB170) exhaust stack shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for NH_3 slip is only required on days when the SCR unit is in operation.

      (1) Use a sorbent or stain tube device specific for NH_3 measurement in the 5 to 10 parts per million (ppm) range. The frequency of sorbent/stain tube testing shall be performed daily for the first 60 days of operation, after which the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH_3 from being introduced in the SCR units and when operation of the SCR units have been proven successful with regard to controlling NH_3 slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

      If sorbent or stain tube testing indicates an NH_3 slip concentration which exceed 5 ppm at any time, the permit holder shall begin NH_3 testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH_3 slip is 4 ppm or less, the Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 5 ppm NH_3 slip or greater. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

      (2) Convert NH_3 to NO using molybdenum oxidizer and measure NH_3 slip by difference using a NO analyzer. The NO analyzer shall be quality-assured in accordance with manufacturer's specifications and with a quarterly CGA with a ten ppmv reference sample of NH3 passed through the probe and confirming monitor response to within 2.0 ppmv. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

      (3) Any other method used for measuring NH_3 slip shall require prior approval from the Texas Commission on Environmental Quality (TCEQ) Regional Director.

Fuel Gas

9. Fuel gas for the Steam Boiler #1 (EPN FB021) and Steam Boiler #2 (EPN FB022) shall be fired with pipeline quality natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf). Fuel gas for the Hot Oil Boiler (EPN FB170) shall be fired with pipeline quality natural gas and/or process waste gas containing no more than 5 grains of total sulfur per 100 dscf.

Storage Tanks

10. Storage tank throughput and service shall be limited to the following: **(TBD)**

Tank Identifier	Service	Fill rate (gallons/hour)	Rolling 12 Month Throughput (gallons)	Control
T-103	Recovered raw material	111	N/A	EPN FB170
T-104	Recovered Cooling Water Tank	85	N/A	EPN FB170
T-105	Recovered raw material	294	N/A	EPN FB170
T-302	Alcohol	10,447	N/A	Atmosphere
T-303	Alcohol	10,447	N/A	Atmosphere
T-304	Alcohol	10,447	N/A	Atmosphere
T-305	Alcohol	10,447	N/A	Atmosphere
T-306	Alcohol	10,447	N/A	Atmosphere
T-310	50% solution of raw material	5,224	N/A	EPN FB170
T-320	60% solution of raw material	10,447	N/A	EPN FB170
T-357	TA product	7,925	N/A	EPN FB170
T-353	TA product	7,925	N/A	EPN FB170
T-355	TA product	7,925	N/A	EPN FB170
T-358	TA product	7,925	N/A	EPN FB170
T-352	TA product	10,447	N/A	EPN FB170
T-354	TA product	7,925	N/A	EPN FB170
T-356	TA product	7,925	N/A	EPN FB170
T-359	TA product	7,925	N/A	EPN FB170
T-360	TA product	7,925	N/A	EPN FB170
T-001	Diesel	1,500	3,480	Atmosphere
T-002	Diesel	1,500	3,480	Atmosphere

11. Storage tanks are subject to the following requirements. Volatile organic liquid storage tanks constructed, reconstructed, or modified after October 4, 2023, shall comply with the requirements of CFR Part 60, Subpart Kc as applicable.: **(TBD)**

    A. For tanks T-001 and T-002, except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white. All

tanks except for T-001 and T-002 shall be fully insulated on the top and side. Storage tanks must be equipped with permanent submerged fill pipes.

For tank exterior surfaces represented as "new" in the permit application using the calculation methodology provided in Chapter 7 of AP-42 dated June 2020, the paint must retain a fresh shine of having been recently applied or for mill-finish aluminum, the surface must maintain a shiny finish. For such "new" exterior tank surface representations, the permit holder must maintain this "new" condition and review the exterior tank conditions at least once every 12 months and record this observation by taking photographs that clearly show the exterior surface of the tank. The records must include, but not limited to, the observation personnel, locations, date, and photographs of the tanks in observation and shall be made readily available upon request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.

B. Vents from Tanks (T-103, T-104, T-105, T-310, T-320, T-352, T-353, T-354, T-355, T-356, T-357, T-358, T-359, and T-360) shall be routed to the Hot Oil Boiler (EPN FB170).

C. For all tanks except the diesel tanks (T-001 and T-002), the permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions from the tanks shall be calculated using the methods that were used to determine the MAERT limits in the permit application, Form PI-1 dated June 22, 2022. Sample calculations from the application shall be attached to a copy of this permit at the plant site.

D. For the diesel tanks (T-001 and T-002), the permit holder shall maintain a record of tank throughput for the previous month and the past consecutive 12 month period for each tank.

Loading Operations

12. Loading operations are limited to the liquids identified in the confidential section of the permit application, Form PI-1 dated June 22, 2022, and shall not exceed the rates below. All loading shall be submerged.

Loading Method	Gallons per Hour
Tank truck	12,000
Rail car	12,000
Drums	1,000

13. The permit holder shall maintain and update a monthly emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12-month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from

unheated tanks which receive liquids at or below ambient temperatures. Emissions shall be calculated using the TCEQ publication titled "Air Permit Technical Guidance for New Source Review Loading Operations."

14. All lines and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections.

Cooling Tower

15. The VOC associated with Cooling Tower #1 (EPN CWT-01) and Cooling Tower #2 (EPN CWT-02) water shall be monitored monthly with an air stripping system meeting the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or an approved equivalent sampling method. The results of the monitoring, cooling water flow rate and maintenance activities on the cooling water system shall be recorded. The monitoring results and cooling water hourly mass flow rate shall be used to determine cooling tower hourly VOC emissions. The rolling 12 month cooling water emission rate shall be recorded on a monthly basis and be determined by summing the VOC emissions between VOC monitoring periods over the rolling 12 month period. The emissions between VOC monitoring periods shall be obtained by multiplying the total cooling water mass flow between cooling water monitoring periods by the higher of the two VOC monitored results. **(TBD)**

16. The cooling towers (EPNs CWT-01 and CWT-02) shall be operated and monitored in accordance with the following: **(TBD)**

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

    B. Total dissolved solids (TDS) shall not exceed 900 parts per million by weight (ppmw). Dissolved solids in the cooling water drift are considered to be emitted as PM, PM_{10}, and $PM_{2.5}$ as represented in the permit application calculations.

    C. Cooling towers shall be analyzed for particulate emissions using one of the following methods:

        (1) Cooling water shall be sampled at least once per day for total dissolved solids (TDS); or

        (2) TDS monitoring may be reduced to weekly if conductivity is monitored daily and TDS is calculated using a ratio of TDS-to-conductivity (in ppmw per µmho/cm or ppmw/siemens). The ratio of TDS-to-conductivity shall be determined by concurrently monitoring TDS and conductivity on a weekly basis. The permit holder may use the average of two consecutive TDS-to-conductivity ratios to calculate daily TDS; or

        (3) TDS monitoring may be reduced to quarterly if conductivity is monitored daily and TDS is calculated using a correlation factor established for each cooling tower. The correlation factor shall be the average of nine consecutive weekly TDS-to-conductivity ratios determined using C(2) above provided the highest ratio is not more than 10% larger than the smallest ratio.

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

D. A sample of cooling tower water shall be taken from the circulated water stream(s) entering the cooling tower. The analysis shall be conducted using the approved methods below:

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

(2) Alternate sampling and analysis methods may be used to comply with D(1) with written approval from the TCEQ Regional Director. If approved by the TCEQ Regional Director, the permit holder shall submit a permit application to incorporate the alternative sampling and analysis method into the permit within 2 months of the date of written approval.

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

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

Emergency Engine

17. The following requirements apply to the emergency generator (EPNs EMERG GEN-01), and the emergency firewater pumps (EPNs G-071 and G-072): **(TBD)**

A. Fuel for the engines shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 ppmw total sulfur.

B. The firewater pumps engines shall be limited to 100 hours per year during non-emergency situations, as defined at 40 CFR § 63.6640(f).

C. The emergency engines shall be limited to 52 hours per year during non-emergency situations, as defined at 40 CFR § 63.6640(f).

D. The engines shall be equipped with a non-resettable hour meter.

E. Each emergency generator and firewater pump shall not exceed the following emission limits. Compliance with these emission limits shall be demonstrated by retaining a copy of the manufacturers' certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

Source	NO_X (g/hp-hr)	CO (g/hp-hr)	VOC (g/hp-hr)	Particulate (lb/MMBtu)
Firewater pump	2.64	0.7	0.09	0.11
Emergency engine	1.0	3.0	1.0	0.0095

Fugitives

Piping, Valves, Connectors, Pumps, Agitators, and Compressors – 28VHP

18. The following requirements apply to piping, valves, connectors, pumps, agitators, and compressors containing or in contact with fluids that could reasonably be expected to contain greater than or equal to 10 weight percent volatile organic compounds (VOC) at any time.

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

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

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

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

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

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

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve;

or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72-hour period following the creation of the open-ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

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

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

G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

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

I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and the TCEQ Executive Director may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

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

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

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

28CNTA (Connectors Inspected Annually)

19. In addition to the weekly physical inspection required by Item E of Special Condition No. 18, all connectors in gas\vapor and light liquid service shall be monitored annually with an approved gas analyzer in accordance with Items F thru J of Special Condition No. 18. Alternative monitoring frequency schedules ("skip options") of Title 40 Code of Federal Regulations Part 63, Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, may be used in lieu of the monitoring frequency required by this permit condition. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations. **(TBD)**

Piping, Valves, Pumps, and Compressors in Contact with Ammonia – 28AVO

20. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment: **(TBD)**

A. Audio, olfactory, and visual checks for leaks within the operating area shall be made every four hours.

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

(1) Isolate the leak.

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

(3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

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

Physical Inspections of Piping, Valves, Pumps, and Compressors – 28PI

21. Except as may be provided for in the special conditions of this permit, the following requirements apply to the catalyst streams: **(TBD)**

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

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

C. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined in Title 30 Texas Administrative Code (30 TAC) Chapter 115, shall be identified in a list to be made available upon request.

D. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter.

E. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

F. All piping components shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

G. Damaged or leaking valves, connectors, compressor seals, and pump seals found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

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

Chemical Flexibility

22. Except as provided for below, use of compounds at the TA Plant is limited to those identified in the initial application, Form PI-1 dated June 22, 2022, and as updated in the amendment application, Form PI-1, dated January 2, 2025. New compounds may be authorized through the use of the procedure below, 30 TAC Chapter 106, or 30 TAC Chapter 116.

A. Short-term (pounds per hour [lb/hr]) and annual (TPY) emissions and calculations shall be completed for each chemical at each affected source. Emission rates (ER) shall be calculated in accordance with the methods documented in the permit application, PI-1 dated June 22, 2022. The calculated ER shall not exceed the maximum allowable emissions rate at any emission point.

B. The Effect Screening Level (ESL) for the compound shall be obtained from the Toxicity Factor Database. If the compound is not on the current ESL list and does not belong to a category of compounds on the list, the permit holder shall request confirmation from the Toxicology Division that an ESL need not be created for authorization through this condition. If the Toxicology Division determines that an ESL is not required under this condition, the applicant shall ensure that all requirements of this condition except E, F, and G are satisfied. Confirmation that no ESL is required shall be kept on file by the applicant.

C. The new materials shall serve the same basic function, and the emissions shall emit at the same Emission Point Nos. (EPNs) as the emissions currently authorized.

D. All the constituents of the new compound shall be known; i.e., the weight percentages of the constituents add to 100 percent or more.

E. Any air contaminant in the new compound is exempt from paragraphs F and G below if it meets E(1) or E(2) below:

(1) The compound's annual ESL ≥ 10 percent of the compound's short term ESL, is emitted at a rate, and has a short-term effects screening level (ESL), as stated in the following table:

Emission Rate (lbs/hr)	Short-term ESL (µg/m_3)
≤ 0.04	≥ 2 and < 500
≤ 0.10	≥ 500 and < 3,500
≤ 0.40	≥ 3,500

(2) It has a true vapor pressure at 104˚F of less than 0.01 mm Hg.

F. For all other new or increases in existing air contaminants, the following procedure shall be completed to determine if the short-term impacts are acceptable.

(1) Determine the emission rate of each air contaminant including emissions of the same air contaminant (if an existing air contaminant) from the currently authorized materials that may be emitted at the same time from each emission point.

(2) Multiply the emission rate of the air contaminant by the unit impact multiplier for each emission point from the following table to determine the off-property impact Ground Level Concentration (GLC) for each emission point.

Emission Point Number	Unit Impacts (µg/m_3 per lb/hr)
FB170	1.76

T-302	303.87
T-303	182.51
T-304	404.98
T-305	364.89
T-306	314.12
LOADING	93.21
DRUMS	862.51
UNF-WW	88.50
FUG-01	106.51
T-001	2536.12
T-002	3039.94
MSSTANKS	226.16
MISC-ILE	103.59
MISCROUT	100.57

(3) Sum the impacts from each emission point/emission point group to determine a total short-term off-property impact (Total GLC_{MAX}) for the new or existing air contaminant.

(4) Compare the total off-property impact to the short-term ESL for the air contaminant as shown below to determine if it less than or equal to the ESL.

Total $GLC_{MAX} < ESL_{SHORT}$

Where:

Total GLC_{MAX} = the sum of the short-term GLCs from each emission point.

ESL_{SHORT} = the short-term ESL of the new or existing air contaminant from the most current ESL list published by the TCEQ or as specifically derived by TCEQ Toxicology Division. The ESL shall be obtained in writing prior to the use of the new or increased air contaminant.

G. For all other new or increases in existing air contaminants, the following procedure shall be completed to determine if the annual impacts are acceptable.

(1) Multiply the total off-property impact (Total GLC_{MAX}) determined above in Special Condition F by 0.08 to determine an annual off-property impact (Annual GLC_{MAX}) for the new or existing air contaminant.

(2) Compare the annual off-property impact to the annual ESL for the air contaminant as shown below to determine if it less than or equal to the ESL.

Annual $GLC_{MAX} < ESL_{ANNUAL}$

Where:

ESL_{ANNUAL} = the annual ESL of the new or existing air contaminant from the most current ESL list published by the TCEQ or as specifically derived by TCEQ Toxicology Division.

H. The short-term or annual emission rates from new or existing air contaminants shall not cause any increases in the short-term or annual emission rates as listed on the maximum allowable emission rates table (MAERT).

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

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

(2) True vapor pressure at maximum hourly and annual average storage temperature.

(3) Molecular weight.

(4) Storage tanks, loading areas, and fugitive areas where the material is to be handled and the emission control device to be utilized.

(5) Date new compound handling commenced.

(6) Safety Data Sheet.

(7) Maximum concentration of the chemical in mole percent (or in weight percent for fugitive areas) in the affected facilities.

Planned Maintenance, Startup and Shutdown

23. This permit authorizes the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Special Condition No. 24).

Special Condition No. 24 identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Special Condition No. 24 shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Special Condition No. 24 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 Special Condition No. 24may be tracked through the work orders or equivalent. Emissions from activities identified in Special Condition No. 24 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 Paragraphs A and B of Special Condition No. 24 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.

24. All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities listed in this Special Condition, and (c) does not operate as a replacement for an existing authorized facility.

    Planned startup and shutdown emissions due to the activities identified in this Special Condition are authorized from the facilities and temporary equipment and control devices identified in the Special Conditions of the permit.

    A. Inherently low emitting maintenance activities

        Management of sludge from sumps

        Instrumentation/analyzer maintenance

    B. Routine maintenance

        Pump repair/replacement

        Fugitive component (valve, pipe, flange) repair/replacement (isolated volume ≤ 50 $ft.^3$)

        Vessel repair/replacement (isolated volume < 50 ft^3)

    C. MSS Activity Summary

Facility	Activity	EPN
All storage tanks	Ventilation and cleaning	MSS - TANKS
Routine maintenance activities	See paragraph B	MISC-ROUTINE
Inherently low emitting activities	See paragraph A	MSS-ILE

25. Fixed roof storage tanks are subject to the following requirements. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of Special Condition No. 25.

    A. The tank shall not be opened or ventilated without control, unless the air circulation in the tank vapor space is minimized and meets the requirements of (1) and (2) below, until one of the criteria in Part B of this condition is satisfied.

        (1) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary 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.

        (2) Access points shall be closed when not in use.

    B. The tank 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. These 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 (8260B or 5030 with 8015 from SW-846 may also be used).

(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 No. 26.

(3) No standing liquid verified through visual inspection.

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

C. If the ventilation of the vapor space is controlled, the emission control system shall meet the following requirements.

(1) Any gas or vapor removed from the vapor space 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 when degassing to the control device or controlled recovery system.

(2) The vapor space 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 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 No. 26.

(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.

D. The following records shall be maintained:

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

(2) 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,

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

(4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events (1) and (3) with the data and methods used to determine it. The emissions associated with degassing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.

26. 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. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

(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 calibration gas shall be documented in the site safety procedures.

(2) The detector shall be calibrated within 30 days of use with a certified gas standard at 25% of the lower explosive limit (LEL) for the calibration gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(3) 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 the calibration gas. 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.

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

27. The control device required by this permit for emissions related to applicable fixed roof storage tanks subject to Special Condition No. 25 from planned MSS activities is limited to the Hot Oil Boiler (EPN FB170). Control devices shall be operated with no visible emissions except periods not to exceed a total of 5 minutes during any two consecutive hours. The control device used must meet all the requirements identified for that type of control device (Special Condition No. 8).

28. Additional occurrences of MSS activities not 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.

29. All permanent facilities must comply with all operating requirements, limits, and representations in the permit during planned startup and shutdown unless alternate requirements and limits are identified in this permit.

Date: TBD