

Special Conditions

Permit Number 5226

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. Additionally, this permit authorizes the emissions from Boilers for planned maintenance, startup, and shutdown (MSS) activities.

Prior to the startup of the boilers authorized through the boiler replacement project; TCEQ NSR Project 361586, the boilers identified as Utility Boiler G and H and two Rental Utility Boilers H North and South (EPNs UTBLRG, UTBLRH, UTBLRHN and UTBLRHS) are authorized through this permit.

After the startup of the boilers authorized through the boiler replacement project, the boilers identified as Utility Boiler J (FIN: UTLBLRJ, EPN: UTLBLRJ) and Utility Boiler K (FIN: UTLBLRK, EPN: UTLBLRK) shall be the only boilers authorized through this permit. **(TBD)**

All conditions and MAERT limits of this permit pertaining to Boilers G, H, and package boilers (EPNs UTBLRG, UTBLRH, UTBLRHN, UTBLRHS and NH3FUG) shall be in effect until the startup of Boilers J and K. All conditions and MAERT limits pertaining to Boilers J and K (EPNs UTLBLRJ, UTLBLRK and UTLBLRFUG) shall take effect immediately upon its startup. **(TBD)**

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. **(06/22)**

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 Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.
 - C. Subpart DDD, Standards of Performance for New Stationary Sources promulgated for VOC Emissions from the Polymer Manufacturing Industry.
 - D. Subpart VVa, affected facilities from synthetic organic chemicals manufacturing industry.
4. These facilities shall comply with all applicable requirements of the U.S. EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:
 - A. Subparts A, General Provisions.
 - B. Subpart FFFF, National Emission Standards for HAPs: Miscellaneous Organic Chemical Manufacturing

- C. Subpart DDDDD, National Emission Standards for HAPs for Major Sources: Industry, Commercial, and Institutional Boilers and Process Heaters.

Emission Standards and Operational Specifications

5. Utility Boilers G,H, J and K (EPNs UTBLRG, UTBLRH, UTBLRJ and UTBLRK) shall be limited to firing the following fuels: **(TBD)**

- A. Sweet natural gas.
- B. Olefins Unit tail gas.
- C. Hydrogen-rich fuel gas.
- D. AB3 Purge Gas.
- E. LB-1 Alkyl Deactivation Vent Gas.
- F. LB-1 Reactor Purge Gas.

The permit holder shall install and operate a totalizing fuel flow meter to measure the gas fuel usage by type or a totalizing fuel flow meter and fuel gas analyzer for each boiler and fuel usage for each shall be recorded monthly. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent.

6. Quality assured (or valid) data must be generated when the boiler is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the boiler operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.)Boilers (EPNs UTBLRHN and UTBLRHS) shall only be fired with pipeline natural gas. **(TBD)**

7. Fuel gas used in the boilers shall contain no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf) on an hourly basis and 4.1 grains of total sulfur per 100 dry standard cubic feet on a rolling 12-month basis. **(TBD)**

- A. Fuel gas shall be sampled every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement.

8. Opacity of emissions from Boilers (EPNs UTBLRHN, UTBLRHS, UTBLRJ and UTBLRK) shall not exceed 5% averaged over any six-minute period. Opacity shall be determined by EPA Test Method 9 during the initial compliance testing and at least once per year thereafter. In lieu of performing a required opacity test, the permit holder may verify that there are no visible emissions as determined by EPA Test Method 22. **(TBD)**

9. The following requirements shall apply to boiler EPNs UTBLRHN, UTBLRHS, UTBLRJ and UTBLRK : **(TBD)**

- A. NO_x, CO, and ammonia (NH₃) emissions from the Boilers (EPNs UTBLRHN and UTBLRHS) shall not exceed the following:

Contaminant	Limit
NO _x (Routine)	0.01 lb NO _x /MMBtu on an hourly average

*NO _x (MSS, Boilers Individual)	0.033 lb NO _x /MMBtu (30 ppmv @ 3% oxygen)
*NO _x (MSS, Boilers Combined)	0.027 lb NO _x /MMBtu (24 ppmv @ 3% oxygen)
CO	50 ppmvd CO corrected to 3% oxygen on an hourly average
NH ₃	10 ppmvd NH ₃ corrected to 3% oxygen on a 24-hr average
*limits authorized during MSS when the SCR is warming up/down for maintenance	

- B. NO_x, VOC, CO, PM/PM₁₀/PM_{2.5} and ammonia (NH₃) emissions from the Boilers (EPNs UTBLRJ and UTBLRK) shall not exceed the following during routine operation: **(TBD)**

Contaminant	Limit
NO _x	0.015 lb/MMBtu on an hourly average
VOC	0.0029 lb/MMBtu
CO	0.012 lb/MMBtu (13.9 ppmv @ 3% oxygen)
PM/PM ₁₀ /PM _{2.5}	0.004lb/MMBtu
NH ₃	10 ppmvd NH ₃ corrected to 3% oxygen on an hourly average

- C. Compliance with the NO_x and CO emission limits of paragraph A shall be demonstrated through the use of CEMS in accordance with Special Condition No. 17.
- D. The NH₃ concentration in the 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 NH₃ slip is only required on days when the SCR unit is in operation.
- (1) Install, calibrate, maintain, and operate, as specified under Special Condition No. 17 a CEMS to measure and record the concentration of NH₃. The NH₃ concentration shall be corrected and reported in accordance with Special Condition No. 17.
 - (2) Use a sorbent or stain tube device specific for NH₃ 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 NH₃ from being introduced in the SCR units and when operation of the SCR units have been proven successful with regard to controlling NH₃ 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 this Special Condition.

If sorbent or stain tube testing indicates an NH₃ slip concentration which exceed 5 ppm at any time, the permit holder shall begin NH₃ 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 NH₃ 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 NH₃ slip or greater. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

- (3) Install calibrate, maintain, and operate, as specified under Special Condition No. 17, a second NO_x CEMS upstream of the control device (in addition to the NO_x CEMS required under this Special Condition). Perform the measurements and calculations associated with the mass balance method specified in 30 TAC § 117.8130(1), using NO_x CEMS data to determine the NO_x concentration differential across the control device.
- (4) Install and operate a dual stream system of NO_x CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH₃ converter to convert NH₃ to

NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated according to the method specified in 30 TAC § 117.8130(2). These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

- (5) Any other method used for measuring NH₃ slip shall require prior approval from the TCEQ Regional Director.
10. The total maximum authorized fuel firing rates (annual average) for the four boilers (EPNs UTBLRG, UTBLRH, UTBLRHN, and UTBLRHS) shall be limited to 393 million British thermal units per hour (MMBtu/hr). G-Boiler and H-Boiler (EPNs UTBLRG and UTBLRH) are further and individually limited as follows: **(TBD)**
- A. G-Boiler: 210 MMBtu/hr.
- B. H-Boiler: 183 MMBtu/hr.

The total maximum authorized fuel firing rates (annual average) for the two boilers (EPNs UTBLRJ and UTBLRK) shall be limited to 760 million British thermal units per hour (MMBtu/hr) and to 380 million British thermal units per hour (MMBtu/hr) each. **(TBD)**

**Planned Maintenance, Start-up and Shutdown – Boilers J and K (EPNs UTBLRJ and UTBLRK)
(TBD)**

11. NO_x, VOC, CO, PM/PM₁₀/PM_{2.5} and ammonia (NH₃) emissions from the Boilers (EPNs UTBLRJ and UTBLRK) shall not exceed the following during MSS. These emissions only apply when the SCR is warming up/down for maintenance. Once the boilers reach 90% of the maximum firing rate listed in SC12, the boiler emission must be within routine emissions. **(TBD)**

Contaminant	Limit
NO _x	0.110 lb/MMBtu on an hourly average
VOC	0.042 lb/MMBtu for cold startup & 0.03 lb/MMBtu for warm startup
CO	0.420 lb/MMBtu for cold startup & 0.30 lb/MMBtu for warm startup
PM/PM ₁₀ /PM _{2.5}	0.045 lb/MMBtu for cold startup & 0.032 lb/MMBtu for warm startup
NH ₃	10 ppmvd NH ₃ corrected to 3% oxygen on a hourly average

12. All MSS activities shall be planned. Planned MSS events for each boiler shall be limited to 4 hours per activity up to a total of 16 hours per 12-month rolling basis. **(TBD)**
13. MSS emissions shall not exceed the hourly MSS emission rates in the MAERT. The routine and MSS emissions combined in a rolling 12-month emissions shall not exceed the annual emission rates in the MAERT. **(TBD)**
14. Each planned MSS activity performed and associated emissions shall be recorded and the rolling 12-month emissions from planned MSS emissions updated, in pounds per hour, on a monthly basis. These records shall include the following information: **(TBD)**
- A. The physical location at which the planned MSS activity occurred, including the emission point number, common name and any other identifier for the point at which the emissions were released into the atmosphere;
- B. The type of planned MSS and the reason for the activity;
- C. The date and time of the planned MSS and its duration;

- D. The estimated quantity of each air contaminant or mixture of air contaminants emitted with the data and methods used to determine such quantities and contaminants. Emissions shall be estimated using the methods identified in the permit amendment application, PI-1 form dated April 11, 2023 and subsequent application updates associated with TCEQ Project No. 356252; and
 - E. Measures taken to minimize emissions from planned MSS activities and the use of any control devices not permanently used for emission reductions for the facility.
15. Opacity of emissions of boilers (UTBLRJ and UTBLRK) shall not exceed 5% averaged over any six-minute period during MSS and shall be determined using test methods specified in special condition 8. **(TBD)**

Stack Sample

16. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Boilers (EPNs UTBLRHN, UTBLRHS, UTBLRHJ and UTBLRHK) to demonstrate compliance with the MAERT. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. EPA Reference Methods. **(TBD)**

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Regional Director. **(06/22)**

- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
 - (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.
 - (5) Method or procedure to be used in sampling.
 - (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
 - (7) Procedure/parameters to be used to determine worst case emissions (such as production rate, temperature for incinerators, etc.) during the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.
- B. Air contaminants emitted from the Boilers (EPNs UTBLRHN, UTBLRHS, UTBLRHJ and UTBLRHK) to be tested for include (but are not limited to): NO_x, CO, NH₃. **(TBD)**
- C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities (or increase in production, as appropriate)

and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

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

During subsequent operations, if the maximum production rate is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

- E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

- F. Sampling ports and platform(s) shall be incorporated into the design of the Boilers (EPNs UTBLRHN and UTBLRHS) according to the specifications set forth in the attachment entitled "Chapter 2, Guidelines For Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

Continuous Emissions Monitoring System (CEMS)

17. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, CO, NH₃, and O₂ from the Boilers (EPNs UTBLRHN, UTBLRHS, UTBLRHJ and UTBLRHK). **(TBD)**

- A. The NH₃ CEMS shall be installed, operated, maintained, and calibrated according to the manufacturer's specifications. The NH₃ CEMS shall conduct at a minimum daily (automatic) quality assurance and calibration checks. Equistar will perform an initial RATA within 60 days of the installation of the analyzer, utilizing the appropriate methodology (e.g. CTM-027 or EPA Method 320. Subpart B, C, and D of this section don't apply to the NH₃ CEMS).
- B. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
- C. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and

any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

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

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

- D. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rates in pounds per hour and lb/MMBtu (hourly average) at least once every week as follows:
- The measured hourly average concentration from the CEMS shall be multiplied by the flow rate measured during the latest stack test performed in accordance with Special Condition 16 or using 40 CFR Part 60 Appendix A Method 19 to determine the hourly emission rate. The measured fuel flow and the higher heating value (HHV) of natural gas shall be used to determine lbs/MMBtu. Method 19 shall be used to calculate the ppm value into units of lb/MMBtu, as represented in the permit application. (TBD)
- E. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- F. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA to provide them the opportunity to observe the testing.
- G. Quality-assured (or valid) data must be generated when the Boilers (EPNs UTBLRHN and UTBLRHS) are operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the Boilers (EPNs UTBLRHN and UTBLRHS) operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Piping, Valves, Connectors, Pumps, Agitators and Compressors, in contact with VOC - Intensive Directed Maintenance – 28MID (TBD)

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

- A. The requirements of paragraphs F and G shall not apply (1) where the concentration of VOC in the stream is less than 10 percent by weight or (2) where the volatile organic compounds (VOC) has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (3) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made available upon request.

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

- 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, agitators, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in 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 by the end of the 72 hours 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 with a directed maintenance program. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed 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.

An approved gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs 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.

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

- G. All new and replacement pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier

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

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

- H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. 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. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.
- I. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

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

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

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

$$(V_l + V_s) \times 100/V_t = V_p$$

Where:

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

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

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

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

- K. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard, or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

28CNTQ (Connectors Inspected Quarterly) (TBD)

19. In addition to the weekly physical inspection required by Item E of Special Condition No. 18, all accessible connectors in gas/vapor and light liquid service shall be monitored quarterly with an approved gas analyzer in accordance with Items F thru J of Special Condition No. 18.

- A. Allowance for reduced monitoring frequencies.
 - (1) The frequency of monitoring may be reduced from quarterly to semiannually if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.
 - (2) The frequency of monitoring may be reduced from semiannually to annually if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.
- B. If the percent of connectors leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph. The percent of connectors leaking used in paragraph A shall be determined using the following formula:

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

Where:

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

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

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

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

Piping, Valves, Pumps, and Compressors in contact with NH₃ – 28AVO

20. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment: **(06/22)**
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
 - 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 TCEQ upon request.

Compliance Assurance & Periodic Monitoring Requirements

21. The following requirements apply to capture systems for the G,H, J and K-Boilers (EPNs UTBLRG,UTBLRH, UTLBLRJ, and UTLBLRK): **(TBD)**
- A. If used to control pollutants other than particulate, either:
 - (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
 - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
 - B. If there is a bypass for the specified boilers, comply with either of the following requirements:
 - (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.
 - (3) A bypass does not include:
 - (a) Authorized analyzer vents.
 - (b) Highpoint bleeder vents.

- (c) Low point drains.
 - (d) Rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly.
 - (e) Equipment needed for safety purposes such as pressure relief devices. **(8/17)**
 - (4) A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service.
 - C. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.
22. All vent streams listed in Special Condition No. 5.B through 5.F shall be directed to the G, H, J and K-Boilers (EPNs UTBLRG, UTBLRH, UTLBLRJ, and UTLBLRK) as primary fuel. The boilers' (EPNs UTBLRG, UTBLRH, UTLBLRJ, and UTLBLRK) operational periods shall be monitored and recorded. **(TBD)**

Date: TBD