

Special Conditions

Permit Number 8414, PSDTX328M4, and PSDTX485M1

General

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates (MAERT)," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.
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 maximum allowable emission rates table (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.
3. Waste gas from process point sources (such as process vents and relief valves) containing hydrocarbons or sulfur compounds, except for analyzer vents, shall be directed to Emission Point Number (EPN) EMERFLARE.
4. All acid gas and tail gas from this plant (such as from the amine system) must be processed in one of the Sulfur Recovery Units (SRU) (EPN E4-A or E4-B) and the Tail Gas Incinerator (TGI), respectively. It is not permissible under any conditions to vent the acid gas or tail gas directly to the atmosphere.
5. With the exception of fugitive sources, the holder of this permit shall clearly label all equipment at the property that has the potential of emitting air contaminants. Permitted emission points shall be clearly labeled corresponding to the emission point numbering on the MAERT.
6. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.
7. The following changes shall be implemented on or before March 6, 2021. Emissions designated as "Plant Flare MSS" in the MAERT are not authorized until both of these changes are implemented.
 - A. SRU process controls and instrumentation shall be upgraded, and EPNs E4-A and E4-B shall be subject to the specified post-project emission rates.
 - B. The height of each SRU incinerator stack (EPNs E4-A and E4-B) shall be raised to 213 ft.

Upon completion of both of these changes, the holder of this permit shall notify the TCEQ Regional Office and submit an alteration to the TCEQ Air Permits Division to revise the MAERT and Special Conditions.

Federal Applicability

8. 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

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promulgated for Stationary Gas Turbines and Equipment Leaks of VOC from Onshore Natural Gas Processing Plants in Title 40 Code of Federal Regulations (40 CFR) Part 60, Subparts A, GG, and KKK.

9. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories promulgated for Oil and Natural Gas Production Facilities in 40 CFR Part 63, Subparts A and HH.

Emission Standards and Operating Specifications – Gas Processing

10. Normal emission rates of nitrogen oxides (NO_x), carbon monoxide (CO), and VOC from the six inlet treated Gas Compressor Turbines (EPNs E-1-1 through E-1-6) and the three Refrigeration Compressor Turbines (E-2-1 through E-2-3) at full speed and load shall be reported on a dry basis in brake specific units of grams per horsepower-hour (g/hp-hr) and in units of pounds per hour (lbs/hr) and are limited as follows:

<u>Air Contaminant</u>	<u>Emission Rate Limit</u>
NO _x	2.41 g/hp-hr
CO	2.51 g/hp-hr
VOC	2.00 g/hp-hr

11. Emissions of NO_x from the refrigeration turbine duct burners (EPN E-2-1 through E-2-3) shall not exceed 0.12 lb/MMBTU of heat input. Turbine supplemental duct burner firing will be calculated based on the gross heating value of the natural gas. The duct burner is limited by the 85,000 lb/hr of steam capacity of the waste heat recovery boiler.

12. Emissions of NO_x from the auxiliary boiler (EPN E-3) shall not exceed 0.10 lb/MMBTU of heat input. Auxiliary boiler firing will be calculated based on the gross heating value of the natural gas. (8414-6)

13. Fuel-fired in the gas turbines and duct burners, as well as assist gas for EPN EMERFLARE is limited to pipeline-quality natural gas containing no more than 0.25 grain total sulfur per 100 dry standard cubic foot. Records of the sulfur content of this fuel, based on receipts or chemical analyses, shall be maintained and updated annually.

14. Emissions from the turbines and duct burners shall not exceed 5 percent opacity as determined by EPA Reference Method 9. A visual opacity inspection, as described in Special Condition No. 16, may first be performed to determine whether Method 9 is necessary.

Emissions Standards and Operating Specifications – Sulfur Recovery Units

15. Each tail gas incinerator (TGI) firebox temperature shall be no less than 1300°F. Each TGI firebox temperature shall be monitored continuously when waste gas is directed to it. Each temperature measurement device shall monitor the temperature at least four equally spaced times each hour and the hourly average shall be recorded. The hourly average temperature shall be used to determine compliance with each minimum temperature requirement from each TGI firebox. Each temperature monitor shall be installed, calibrated at least annually and maintained according to the manufacturer's specifications. Each device shall have an accuracy of the greater of ±2 percent of the temperature being measured expressed in degrees Celsius or ±2.5°C. There shall be no visible emissions from each TGI stack.

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16. The minimum sulfur recovery efficiency for the Sulfur Recovery Units shall be 98.5 percent.

Opacity Determination

17. Visual observation of opacity may first be performed to determine whether EPA Method 9 is necessary to demonstrate conformance with opacity standards.
- A. Visible emission observations shall be conducted for all emission units and recorded at least once during each calendar quarter while the facility is in operation, unless the emission unit is not operating for the entire calendar quarter.
 - B. Continuous demonstration of compliance with this special condition can be demonstrated by conducting and recording visible emissions observations during normal operations. This determination shall be made by first observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point(s). Up to three emissions points may be read concurrently, provided that all three emissions points are within a 70 degree viewing sector or angle in front of the observer such that the proper sun position (at the observer's back) can be maintained for all three emission points
 - C. If visible emissions are observed from the stack(s), then opacity shall be determined by EPA Reference Method 9 within 24 hours of observing visible emissions. Contributions from uncombined water shall not be included in determining compliance with this condition.
 - D. If the opacity limits of this Special Condition are exceeded, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.
 - E. Visible emissions or opacity observations for any source authorized by this permit shall be made upon demand of a representative of the TCEQ or any air pollution control program with jurisdiction. When such observations are required, the methods used and the observation period duration shall be as specified in this Special Condition unless otherwise specified by the person requiring the observation to be conducted.

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

18. Except as may be provided for in the special conditions of this permit, the following requirements apply to piping, valves, connectors, and related elements in VOC service:
- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pound per square inch, absolute (psia) at 68°F or (2) to piping and valves two inches nominal size and smaller or (3) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
 - B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers, or equivalent codes.
 - C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
 - D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made available upon request.

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- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

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

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

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

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 and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 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 and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.

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

19. Components in pipeline quality sweet natural gas lines or process streams that contain less than 1 weight percent of VOC, the weighted average Effects Screening Level (ESL) of VOC is greater than 3,500 $\mu\text{g}/\text{m}^3$, and the uncontrolled emissions are less than 1 ton per year (tpy) at any one location are exempt from the monitoring requirements specified in Special Condition No. 17. The weighted average ESL for process streams with multiple VOC species shall be determined in the following manner:

where:

$$ESL_x = \frac{1}{\frac{f_a}{ESL_a} + \frac{f_b}{ESL_b} + \frac{f_c}{ESL_c} + \dots + \frac{f_n}{ESL_n}}$$

n = total number of VOC species in process stream;

ESL_n = the ESL in $\mu\text{g}/\text{m}^3$ for the constituent being evaluated (published in the most recent edition of the list of ESLs by TARA); and

f_n = the weight fraction of the appropriate VOC species in relation to all other VOC in process stream.

Piping, Valves, Pumps, and Compressors in Hydrogen Sulfide (H₂S) Service

20. For piping and related elements in H₂S service:

- A. Audio, visual, and olfactory (AVO) checks for H₂S leaks within the operating area shall be made every shift.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
 - (1) Isolate the leak.
 - (2) Commence repair or replacement of the leaking component.
 - (3) 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.

Sulfur Dioxide Service

21. The following requirements apply to the TGIs designated as EPNs E4-A and E4-B.

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- A. For process elements used to control SO₂, either:
- (1) Conduct a once a month audio, visual, and/or olfactory (AVO) 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. The control device shall not have a bypass.
- or
- If there is a bypass for the control device, comply with either of the following requirements:
- (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.
- A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.
- C. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action.

Flares

22. Flares (EPNs EMERFLARE and FLR-1) shall be designed and operated in accordance with the following requirements:

- A. The flare system shall be designed such that the combined assist natural gas and waste stream meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.
- The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate TCEQ Regional Office to demonstrate compliance with these requirements.
- B. The flares shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flames shall be continuously monitored using infrared monitors or thermocouples and a camera. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to (and shall be calibrated at) a frequency in accordance with the manufacturer's specifications.
- C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam or air assist to the flare, as appropriate.
- D. The permit holder shall maintain a continuous flow monitor that provides a record of the vent stream flow to the Field Flare (EPN FL-1). The flow monitor sensor points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured. The Emergency Flare (EPN EMERFLARE) shall be equipped with a continuous flow monitor such that the total vent stream to the flare is measured. Flow

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readings shall be taken at least once every 15 minutes and the average hourly values of the flows shall be recorded each hour. The flow monitors shall operate as required by this section at least 95 percent of the time when the flares are operational, averaged over a 12-month period.

The flow monitors shall be calibrated on an annual basis in accordance with the manufacturer's instructions or other written procedures to meet the accuracy specification of ± 5.0 percent.

- E. The net heating value of the gas combusted in the flares shall be calculated according to the equation given in 40 CFR § 60.18(f)(3) as amended through October 17, 2000, (65 FR 61744), and reported in each flares source testing report. Actual exit velocity determined in accordance with 40 CFR §60.18(f)(4) shall be recorded at least every 15 minutes using the flares gas net heating value from the most recent flare header test results.

Initial and Continuous Determination of Compliance - Turbines

23. The holder of this permit 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 three Refrigeration Compressor Turbines with duct burners (EPNs E-2-1, E-2-2, and E-2-3) to demonstrate compliance with the MAERT. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operation at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the EPA Reference Methods. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Permitting, Remediation, and Registration, 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 OCE, Compliance Support Division.

- A. The TCEQ Regional Office in Midland 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) Procedures to be used to determine engine horsepower load during sampling period.

The purpose for the pretest meeting is to review and formalize the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, to identify each operating parameter which is significant to maintaining emission compliance and to review the format procedures for submitting the test reports. The TCEQ Regional Director or the TCEQ OCE, Compliance Support Division must approve any deviation from specified sampling procedures.

- B. Air emissions from the Refrigeration Compressor Turbines with the duct burners fired (EPNs E-2-1, E-2-2, and E-2-3) to be tested for include (but are not limited to) NO_x, oxygen, CO, VOC, and opacity. One test shall be at full turbine load with duct steam (waste heat recovery boiler limit) and another at minimum turbine load with duct burner fired at a rate to produce 85,000 lb/hr of steam or upper temperature limit of the duct burner.

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- C. Initial sampling shall occur on one of the refrigeration compressor turbines within 180 days after issuance of this initial permit. If the turbine tested exceeds any emission limits of this permit, then all refrigeration compressor turbines shall be tested within 60 days of the initial turbine test. Initial sampling shall be performed on alternating refrigeration compressor turbines every three years or as requested by the EPA or Executive Director of the TCEQ.
- D. The refrigeration compressor turbine being sampled shall operate at full load in conjunction with the duct burner fired at a rate to produce 85,000 lb/hr of steam or upper temperature limit of the duct burner 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.

If the compressor turbines are required to operate at loads more than 10 percent above or below the load range tested, the company must notify, in writing, the appropriate TCEQ Regional Office, and the source may be subject to additional sampling to demonstrate continued compliance with all applicable state and federal regulations.

- 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:

One copy to the TCEQ Regional Office in Midland.

One copy to the Air Enforcement Branch of the EPA in Dallas.

Initial Determination of Compliance – Tail Gas Incinerators

24. Sampling ports and platform(s) shall be incorporated into the design of each TGI stack according to the specifications set forth in the enclosure entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the Executive Director of the TCEQ.

25. For the plant performance test, the holder of this permit shall perform stack sampling and other testing as required to establish the quantities of air contaminants being emitted into the atmosphere from the TGI stack and the sulfur recovery efficiency. Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with applicable U.S. Environmental Protection Agency Code of Federal Regulations procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or appropriate TCEQ Regional Air Manager prior to sampling. The TCEQ Executive Director or designated representative shall be afforded the opportunity to observe all such sampling. The sampling was most recently completed in January 2009.

- A. Air contaminants to be tested from the TGI stack for include (but are not limited to) hydrogen sulfide (H₂S), sulfur dioxide (SO₂), sulfur trioxide (SO₃), carbonyl sulfide (COS), carbon disulfide (CS₂), O₂, nitrogen oxides (NO_x), volatile organic compounds (VOC), particulate matter (PM), and carbon monoxide (CO).
- B. Sampling shall occur within 60 days after start-up of the first train of the sulfur recovery unit.

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- C. The TCEQ shall be notified 30 days prior to sampling in such a manner that a representative of the Commission may be present during sampling and the notice shall include:
- (1) Date sampling will occur.
 - (2) Name of firm doing sampling.
 - (3) Type of sampling equipment to be used.
 - (4) Method or procedure to be used in sampling
- D. Within 60 days after the date of testing, one copy of the report shall be forwarded to the applicable TCEQ Regional Office.
- E. Performance test results shall include the date of sampling, flow rate, and composition of the acid gas and TGI stack streams, total sulfur rates determined and calculations demonstrating sulfur recovery efficiency. Acid gas stream analysis shall include (but is not limited to) H₂S, CS₂, and COS. TGI stack gas composition analysis shall include (but is not limited to) H₂S, SO₃, SO₂, CS₂, COS, O₂, NO_x, VOC, PM, and CO. Continuous O₂ monitoring data should also be reported for this test period.
- F. The sulfur recovery efficiency shall be determined with calculation as follows:
- $$\text{Efficiency} = \frac{(\text{S recovered}) \times (100)}{(\text{S in acid gas})}$$

Where:

Efficiency	=	sulfur recovery efficiency, percent
S recovered	=	total sulfur recovered, lbs/hr
S in acid gas	=	total sulfur in acid gas stream, lbs/hr

Total sulfur recovered shall be calculated as follows:

S recovered	=	S in acid gas - S in incinerator stack
S in incinerator stack	=	total sulfur in TGI stack, lbs/hr

- G. Future sulfur plant performance testing conducted subsequent to the initial performance test shall include (but is not limited to) one or more of the following air contaminants: H₂S, SO₂, O₂, NO_x, VOC, PM, and CO.

Continuous Demonstration of Compliance – Tail Gas Incinerators

26. The concentration of O₂ in the TGI stack shall be continuously monitored and recorded. The hourly average O₂ concentration shall be used to determine compliance with the in stack concentration requirement. The O₂ continuous monitoring system shall be subjected to quality assurance procedures as specified by the TCEQ Executive Director. These procedures shall, as a minimum, include performance testing according to Performance Specification No. 3 in Title 40 CFR Part 60, Appendix B, and daily zero and span of the analyzer. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants, in which case zero and span shall be done daily without exception. The monitoring data shall be made readily available to the TCEQ Executive Director or his designated representative upon request.

The in-stack concentration of oxygen (O₂) from the TGI shall be no less than 1 percent and no greater than 12 percent by volume.

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27. For ongoing monitoring of compliance with Special Condition No. 15 an average sulfur recovery efficiency at the plant shall be calculated for each week as follows:

$$\text{Efficiency} = \frac{(\text{S recovered}) * (100)}{(\text{S recovered} + \text{S emitted})}$$

Where: Efficiency = sulfur recovery efficiency, percent.
S recovered = total weight of sulfur recovered that week.
S emitted = total weight of sulfur emitted from the sulfur recovery unit incinerator stacks that week.

Total sulfur recovered shall be calculated by adding the total weight of sulfur removed from the sulfur pits during the week to the change in the weight of the sulfur pits' inventory since the previous week's ending inventory.

Total sulfur emitted shall be calculated by using the SO₂ emissions data recorded by the continuous emissions monitoring system (total SO₂ emitted per week multiplied by 0.50 equals total sulfur emitted per week).

Any time the calculated average efficiency is below 98.5 percent for four consecutive weeks, the company must notify the TCEQ Executive Director in writing and propose a plan to improve efficiency. The source may be subject to additional stack sampling to demonstrate continued compliance with all applicable state and federal regulations.

28. The permit holder shall install, calibrate, maintain and operate a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of SO₂ from Emission Point Nos. (EPNs) E4-A and E4-B.

- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (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 Permitting and Registration, Air Permits Division for requirements to be met.
- B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
 - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, 5.2.3 and any CEMS loss of valid data exceeding 5% of the time that each sulfur recovery unit is operated over the previous rolling 12-month period 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. 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 each sulfur recovery unit is 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.

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- (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.

- C. 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 pounds per hour at least once every day using the measured hourly average SO₂ concentration and the measured stack flow.
- D. 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.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

Maintenance, Startup, and Shutdown

29. This permit authorizes emissions from burning the plant site inlet gas in the Plant Flare (EPN EMERFLARE) during planned maintenance, start-up, and shutdown (MSS) activities:

The flaring of the gas streams, in any combination, shall not exceed the SO₂ and H₂S hourly or annual emission rates as authorized by the Maximum Allowable Emission Rate Table (MAERT). Emission calculations shall use the H₂S concentration based on the most recent sample for the flared gas stream.

The permit holder shall maintain records of planned MSS activities in order to show compliance. These activities shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis. These records at a minimum should include the following:

- A. The date and time of the activity and its duration,
- B. The cumulative hours of each of these activities on a 12-month basis, and
- C. The number of standard cubic feet of inlet gas flared during these activities.
- D. The H₂S concentration of the flared inlet gas based on the most recent sample.
- E. Calculations demonstrating the SO₂ and H₂S emission rates. A 98% conversion to SO₂ may be used.

Recordkeeping Requirements

30. The following records must be kept at the plant for the life of the permit. All records required in this permit must be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction:

- A. A copy of this permit
- B. The permit application dated June 6, 2016 and subsequent representations submitted to the TCEQ.

31. All other records required by the Special Conditions of this permit must be maintained by the holder of the permit in a form suitable for inspection for a period of five years after collection and must be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction. This includes the following:

- A. Records of all supplemental fuel firing rates and auxiliary boiler fuel rates.
- B. Records of the firebox temperatures, O₂ concentration in the TGI stack, all gas processing rates, heater fuel rates, sulfur production rates, and H₂S content of these streams.
- C. Records as required in the following Special Conditions:

Special Condition	Description
12	Fuel sulfur concentration
16	Opacity visual observations
17	Fugitive monitoring
19	H ₂ S service AVO inspection
20	SO ₂ service AVO inspection
21	Flare reporting
25	O ₂ in Tail Gas Incinerators
26	SRU SO ₂ efficiency
27	TGI stack SO ₂ concentration
28	MSS records

Special Conditions

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

Authorization	Source or Activity
PBR No. 76098	Select fugitive components on Tank 4884, Tank 1596, Waste Water System and Light Olefins Unit
PBR No. 102941	Dr abrasive cleaning and surface coating general maintenance

Date: March 6, 2020