United States Environmental Protection Agency

OECA – Air Enforcement Division

INSPECTION REPORT

Inspection Date(s):	December 19, 2024	
Media Program:	Air	
Regulatory Program(s)	CAA, Title V, NSPS	
Company Name:	**Enterprise Midland Basin Midstream LLC**	
Facility Name:	**Newberry Gas Plant**	
Facility Physical Location:	31.852054, -101.775121	
(city, state, zip code)	Midland, TX 79706	
Mailing address:	PO Box 4324	
(city, state, zip code)	Houston, TX 77210	
County/Parish:	Midland County	
Facility Phone Number	713-381-6595	
Facility Contacts:	Jon E. Fields Robert Dunaway	Director, Field Environmental Environmental Manager
	jefields@eprod.com; (713)-381-6684 rhdunaway@eprod.com; (575)-307-9378	
FRS Number:	110070236062	
Identification/Permit Number:	Permit 03959, RN109272526	
Media Identifier Number:	TX0000004832900186	
NAICS:	211111 – Crude Petroleum and Natural Gas Extraction 211112 – Natural Gas Liquid Extraction	
SIC:	1321 – Natural Gas Liquids	

Personnel participating in inspection:

Patrick Foley	EPA AED	Senior Environmental Engineer
Hans Buenning	EPA NEIC	Environmental Engineer
Cindy Schafer	EPA NEIC	Environmental Engineer
Prince Nfodzo	EPA Region 6 ECAD	Environmental Engineer
Dan Roper	ERG	EPA Contractor
Brian Schath	ERG	EPA Contractor
Maria Lerma	Enterprise	Environmental Supervisor
Robert Dunaway	Enterprise	Environmental Manager
Christopher Putzel	Enterprise	Plant Superintendent
Nathan Krull	Enterprise	Regional Manager
Alejandro Franco	Enterprise	Plant Staff

EPA Lead Inspector Signature/Date	PATRICK FOLEY Digitally signed by PATRICK FOLEY Date: 2026.04.02 12:40:54 -04'00'	
	Patrick Foley	Date
Supervisor Signature/Date	GREGORY FRIED Digitally signed by GREGORY FRIED Date: 2026.04.22 10:27:53 -04'00'	
	Gregory Fried	Date

6ENFORM-019-R8.2 (02/12/2020)

Section I – INTRODUCTION

Purpose of Inspection

EPA inspectors Patrick Foley (Air Enforcement Division), Hans Buenning (National Enforcement Investigations Center), Cynthia Schafer (National Enforcement Investigations Center), and Prince Nfodzo (Region 6), along with Eastern Research Group, Inc. (ERG) contractors Dan Roper and Brian Schath, arrived at approximately 12:45 PM at the Spraberry Gas Plant office as directed by Enterprise Products Operating LLC Field Environmental Director, Jon E. Fields. Robert Dunaway received the inspectors upon arrival. The inspectors signed into the facility and met with Enterprise staff members Robert Dunaway, Maria Lerma, Christopher Putzel, and Nathan Krull. Patrick Foley informed Enterprise staff that the inspectors would be conducting a focused Clean Air Act (CAA) inspection of the Newberry Gas Plant flare systems utilizing the Mantis Lite and an Optical Gas Imaging (OGI) camera (model FLIR Gx320) and tanks using OGI.

Facility Description

The inspectors inquired about the operations and equipment at the Spraberry and Newberry Gas Plants. Enterprise staff reported that the Spraberry Gas Plant had been out of operation since 2018, with its flares air gapped. The Newberry Gas Plant was in operation and had two unassisted flares (Flare 1 and Flare 2). Both receive a continuous stream of acid gas from corresponding process trains (Train 1 and Train 2). Both receive acid gas from separate amine glycol systems, with Train 1 handling the main flare gas stream, startup, shutdown, and malfunction (SSM) and emergency flare gas streams for Train 1 processes, while Train 2 handles the same streams for Train 2 processes and also received gas from a dehydration (DEHY) system.

Enterprise staff identified four condensate storage tanks including two 10,000-barrel tanks (2350A and 2350B), and two 750-barrel tanks (235A and 235B). It was noted that the smaller tanks were no longer in service. Inspectors were also informed of a Nitrogen Removal Unit (NRU) and tank truck loading operations.

Section II – OBSERVATIONS

The meeting concluded at 1:08PM, after which all personnel departed the Spraberry office and regrouped at the Newberry Gas Plant. A safety briefing was held at 1:12PM followed by the onsite inspection. Inspectors observed the flares from a northwest vantage point facing southeast. Both flares were operating. The equipment was restarted at 1:34 PM, and measurements concluded at 2:07 PM. Measurements of Flare 2 commenced at 2:12 PM and concluded at 2:43 PM. OGI was conducted throughout the inspection. Initial OGI video of the flares was taken from the Mantis Lite observation point (FLIR 271, 272, and 273) that detected significant trailing organic vapor plumes. Inspectors Foley, Roper, and Schath, accompanied by Enterprise staff, proceeded on a facility tour of the tanks and loading area.

Upon arriving at Tanks 2350A and 2350B, the inspectors noted three large metal containers with extensive hosing leading to the top of Tank 2350B. Enterprise staff explained that these containers constituted a carbon bed system for capturing organic vapor emissions. OGI observations indicated no emissions from the carbon bed system outlet (FLIR 280, 284). Further investigation with OGI detected organic vapor emissions from the top of Tank 2350B, though the source was not definitively identifiable from ground level (FLIR 274, 275). Inspectors Roper and Schath, along with Alejandro Franco operating a FLIR camera on behalf of Enterprise, ascended Tank 2350A for closer examination. While approaching the stairs, they passed the open outlet of Tank 2350A and observed that it had been emptied. At the top of Tank 2350A, OGI revealed continuous organic vapor emissions from three of the five eyebrow vents on Tank 2350B (FLIR 276).

During this time, inspector Foley discussed current facility operations with Enterprise staff Nathan Krull and Maria Lerma. The Enterprise staff disclosed that the internal floating roofs (IFRs) of both tanks had sunk, prompting the removal of Tank 2350A from operation and the installation of a carbon bed system on Tank 2350B. Facility staff also stated that the eyebrow vents had been sealed with tape to prevent emissions release. After descending from Tank 2350A, OGI observations of Tanks 235A and 235B (FLIR 277, 278, 279) showed that both contained liquid, particularly Tank 235A, with organic vapor emissions detected from a thief hatch on its roof. Facility staff were unaware that these tanks were still in service and held condensate.

The inspection continued to the loading area, where OGI identified organic vapor emissions from piping on top of the Slop Tank (FLIR 281) and from hosing equipment placed beneath a truck during loading operations (FLIR 282, 283). Enterprise staff explained that the hosing was used for vapor balancing during the loading process. The hosing carrying organic vapors from the truck was lying on the ground and not connected to any facility equipment and vented directly to the atmosphere during the observed truck loading event. The inspectors regrouped at the Mantis Lite observation point near the end of the observation period of Flare 2. During this time, Chris Putzel increased the flow of residue gas to Flare 1, which was measured at approximately 240 BTU/scf by the Mantis Lite.

All personnel proceeded to the tanks for further observation of the carbon bed system and organic vapor emissions from Tank 2350B. Inspectors Buenning, Schafer, and Nfodzo ascended Tank 2350A with the FLIR camera to document findings (FLIR 285). Inspectors then requested detailed information from facility staff regarding tank conditions. Chris Putzel provided most of the information, explaining that the IFRs had failed multiple times since December 2021, with the most recent failure occurring in August 2024. He stated that the facility had recently received approval to begin repairs. The failures were attributed to a change in buoyancy of Enterprise's stored product, which exceeded the IFRs' operational design limits at a specific gravity of approximately 0.75. Facility staff identified this as the root cause of all previous IFR failures.

CLOSING CONFERENCE

Inspector Foley led a closing conference, and the inspectors departed the facility at 3:30PM, requesting that Enterprise provide reports and records related to the tank failures. Enterprise requested, and EPA agreed, that EPA would submit a request for the records by email at a later date.

SECTION III – FOLLOW UP

Documentation requested from Enterprise included records pertaining to the failure of the IFRs, operation and maintenance of flares, and general facility documents including the PFDs and P&IDs, site plan, amongst others.

Section IV – AREAS OF CONCERN

AOC 1: Tanks 2350A and 2350B Use of Floating Roof to Comply with NSPS Subpart Kb Control Requirement

Tanks 2350A and 2350B (TK-3 and TK-4 in the Title 5 permit) are storage vessels that were constructed on or about 2019, are 420,000 gallons in volumetric capacity, and store volatile organic liquid with a maximum TVP >3.5 kPa (0.5 psia). See page 1-2 of Appendix C "TCEQ Non-Rule Standard Permit Registration" which is the permit application for construction of the facility. NSPS subpart Kb is specified as applicable to Tanks 2350A and 2350B in the Title V permit. 40 CFR § 60.112b(a) requires an external floating roof, internal floating roof, or a closed vent system and control device achieving 95% control. 40 CFR 60.112b(b) requires that each storage vessel with a design capacity greater than or equal to 75 m^3 (19,813 gallons) which contains a volatile organic liquid that, as stored, has a maximum true vapor pressure (TVP) greater than or equal to 76.6 kPa (11.1 psia) shall equip each storage vessel with a closed vent system and control device as specified in § 60.112b(a)(3) (or an equivalent system approved pursuant to § 60.114b). Tanks 2350A and 2350B have used internal floating roof controls to comply since original construction until the floating roofs sank, as described in AOC 1A below. Based on data provided in the permit application, Tanks 2350A and 2350B appear to hold condensate with a TVP>11.1 psia. Page 122 of the pdf of Appendix C has a "Certificate of Analysis" (COA) for a composition of "Stabilized Condensate" which is what is stored in Tanks 2350A and 2350B. Tank 2350A has never had a closed vent system and control device since its original construction. The internal floating roof on Tank 2350A failed on or before September 24, 2024, and Tank 2350A was taken out of service at some unspecified point after that. Tank 2350B has not had a closed vent system designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions and a control device from original construction until at least March 10, 2025.

Applicable regulations: 40 CFR Part 60 Subpart Kb and Title V Permit

AOC 1A: Tank 2350B Vapor Emission Leak and NSPS Subpart Kb Control Requirement

40 CFR § 60.112b(a) requires an external floating roof, internal floating roof, or a closed vent system and control device achieving 95% control. 40 CFR § 60.112b(a)(3) requires that closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections. While designed with an internal floating roof, the Tank 2350B floating roof failed and had sunk on or before October 4, 2024. See response 10 in Appendix B. Enterprise had neither a

floating roof, nor a closed vent system installed on Tank 2350B on October 4, 2024. Enterprise made an effort to install a closed vent system and control device when it enclosed the tank and routed emissions through dual carbon adsorption beds that were installed on November 22, 2024. See response 11 of Appendix B. However, during the inspection, the perimeter eyebrow vents were leaking continuously. See Appendix A FLIR Video Log File IDs 274-276, 280, 284 and 285. The FLIR videos indicate both visual leaks and leaks in excess of 500 ppm based on the lower visual detection limit of the FLIR. Enterprise made efforts at fixing these leaks observed on the inspection on January 6, January 16, February 11, February 26, and March 10, 2025. See response 16 of Appendix B. The FLIR videos and LEL measurements provided by Enterprise demonstrate that the efforts to seal the tank to ensure collection of all vapors and gases discharged from the tank in January and February failed. See responses 12 and 13 of Appendix B. The March 28, 2025, videos indicate no presence of leaks from the perimeter eyebrow vents. Enterprise had no floating roof and had visual leaks and emissions in excess of 500 ppmv, from its closed vent system on Tank 2350B from at least October 4, 2024, through at least March 10, 2025.

Applicable regulations: 40 CFR Part 60 Subpart Kb and Title V Permit.

AOC 1B: VOC Emissions from Tanks 2350A and 2350B and 30 TAC § 106.352 - Oil and Gas Handling and Production Facilities Non-Rule Standard Permit Registration Requirements

In September 2019, a Non-Rule Standard Permit Registration was submitted for authorization of construction of the Newberry Gas Plant included as Appendix C. On September 24, 2019, TCEQ authorized the registration in a letter included as Appendix C2. In section 5.1(a) on page 5-1, the owner at the time, Navitas, requested applicability of specific requirements not otherwise applicable: "… Navitas is voluntarily registering the Facility under the new requirements in (a) – (k). The Facility is not located in the Barnett Shale Area." The registration further states:

> "(g) Any claim under this standard permit must comply with all applicable requirements of 30 TAC §116.610; §116.611, Registration to Use a Standard Permit; §116.614, Standard Permit Fees; and §116.615, General Conditions. This standard permit supersedes: the TCEQ Non-Rule Standard Permit Registration Newberry Gas Plant September 2019 5-5 notification requirements of 30 TAC §116.615, General Conditions; and the emission limitations of 30 TAC 116.610(a)(1), Applicability. The Facility will comply with all applicable requirements of §116.610, §116.611, §116.614, and §116.615.
>
> (h) Total maximum estimated registered or certified emissions shall meet the most stringent limits in this standard permit. All emissions estimates must be based on representative worst-case operations and planned MSS activities. The emissions estimated represented in this standard permit reflect the worse-case operations for the Facility."

30 TAC §116.615(2) states:

> "(2) Standard permit representations. All representations with regard to construction plans, operating procedures, pollution control methods, and maximum emission rates in any

registration for a standard permit become conditions upon which the facility or changes thereto, must be constructed and operated. It is unlawful for any person to vary from such representations if the change will affect that person's right to claim a standard permit under this section."

In Appendix A of Appendix C, on page A-2, Table 1, the potential emissions from Tanks 2350A and 2350B are stated as 0.3 pounds per hour and 1.3 tons per year. The Tanks 4.0.9d emission model runs are in Appendix B of Appendix C, described as Newberry Tanks 3-4. The model runs do not account for propane and butane flash emissions, and assume a Reid Vapor Pressure (RVP) of 9 psia. If flash emissions from propane and butane are accounted for, and if a TVP is calculated using the composition described in the COA for the stabilized condensate and that TVP is used in a Tanks 4.0.9d model run, the hourly and annual emissions predicted will likely exceed 0.3 pounds per hour and 1.3 tons per year. If Tanks 2350A and 2350B have stored stabilized condensate with the composition described in the COA since original construction, it is likely that hourly and annual emissions were above these limits since then.

In Response 15 of Appendix B, Enterprise submitted emission estimates from Tanks 2350A and 2350B during the floating roof failures. According to these calculations, Tank 2350A emitted VOC at a rate of 1041 pounds per day which is the equivalent of 43.4 pounds of VOC per hour from 9/23/2024 to 10/15/2024 and at a rate of 220.97 pounds of VOC per day which is the equivalent of 9.2 pounds of VOC per hour from 10/15/2024 to 10/30/2024. For the period from 9/23/2024 to 10/30/2024, using these estimated daily emissions, Enterprise estimates that Tank 2350A emitted 13.2 tons of VOC. Using the calculations provided by Enterprise in Response 15 of Appendix B, Tank 2350B emitted at a rate of 1041 pounds of VOC per day which is the equivalent of 43.4 pounds of VOC per hour from 9/14/2024 to 10/30/2024. For the period from 9/14/2024 to 10/30/2024, using these estimated daily emissions, Enterprise estimates that Tank 2350B emitted 24.5 tons of VOC.

AOC 2: Vapor Emission Leaks from Tanks 235A and 235B and NSPS Subpart Kb Control Requirements

Tanks 235A and 235B (TK-1 and TK-2 in the Title 5 permit) are storage vessels that were constructed on or about 2019, are 30,000 gallons in volumetric capacity, and store volatile organic liquid with a maximum TVP >3.5 kPa (0.5 psia). See page 1-2 of Appendix C. The Title V permit specifies NSPS subpart Kb as applicable to Tanks 235A and 235B. 40 CFR § 60.112b(a) requires an external floating roof, internal floating roof, or a closed vent system and control device achieving 95% control. 40 CFR § 60.112b(a)(3) requires that closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections. Tanks 235A and 235B have closed vent systems installed and collected vapors are routed to a thermal oxidizer for combustion and control. See responses 18 and 19 of Appendix B. Continuous emission releases were observed from Tanks 235A and 235B during the inspection, likely from manways, thief hatches and/or pressure relief devices on the roofs of the tanks. See Appendix A FLIR Video Log File IDs 277-279. The FLIR videos indicate both visual leaks and that emissions exceed 500 ppmv from a closed vent system, based on the lower visual detection limit of a FLIR. Enterprise made no documented efforts at fixing these leaks observed on the inspection through the date of submittal of inspection follow-up information. See response 22 of Appendix B. Tanks 235A and 235B contain condensate but have not added or removed condensate from 7/1/2024 through 12/31/2024. See response 17 of Appendix B.

Applicable regulations: 40 CFR Part 60 Subpart Kb and Title V Permit.

AOC 2A: VOC Emissions from Tanks 235A and 235B and 30 TAC § 106.352 - Oil and Gas Handling and Production Facilities Non-Rule Standard Permit Registration Requirements

In Appendix A of Appendix C to this inspection report, on page A-2, Table 1, the potential emissions from each of Tanks 235A and 235B are stated as 0.04 pounds of VOC per hour and 0.18 tons of VOC per year after 98% control. The Tanks 4.0.9d emission model runs are in Appendix B of Appendix C, described as Newberry Tanks 1-2. The model runs do not account for flash emissions of propane and butane, and assume an RVP of 9 psia. If flash emissions of propane and butane are accounted for, and if a TVP is calculated using the composition described in the COA for the stabilized condensate and that TVP is used in a Tanks 4.0.9d model run, the hourly and annual emissions predicted will likely exceed 0.04 pounds per hour VOC and 0.18 tons per year VOC. If Tanks 235A and 235B have stored stabilized condensate with the composition described in the COA for the stabilized condensate since original construction, it is likely hourly and annual emissions of VOC have exceeded these limits since then.

AOC 2B: FLIR Videos of Leaks from Tanks 235A and 235B and Standard Permit Tanks Requirements

Requirement (e)(6)(D) of the Standard Permit at Appendix C2 states:

> "(D) Tank hatches, not designed to be completely sealed, shall remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling, gauging, loading, unloading, or planned maintenance activities."

Continuous emission releases were observed from Tanks 235A and 235B during the inspection, likely from manways, thief hatches and/or pressure release devices on the roofs of the tanks, indicating that the hatches may not have been fully closed. See Appendix A FLIR Video Log File IDs 277-279.

AOC 3: Vapor Emission Leaks from Slop Tank and NSPS Subpart OOOOa Control Requirements

The Slop Tank (TK-5 in the Title 5 permit) is a storage vessel that was constructed on or about 2019, is 8820 gallons in volumetric capacity, and stores volatile organic liquid with a maximum TVP >3.5 kPa (0.5 psia). See page 1-2 of Appendix C. The Slop Tank is controlled by a closed vent system that routes emissions to a thermal oxidizer. See Responses 18 and 19 to Appendix B. The Slop Tank is described as not subject to the NSPS subpart Kb regulation in the Title 5 permit. The Slop Tank is potentially subject to NSPS subpart OOOOa based on its size, date of construction and material stored. A single storage vessel that commenced construction, reconstruction, or modification after September 18, 2015 and on or before November 16,2020 is a storage vessel affected facility if its potential for VOC emissions is equal to 6 tons per year or more as determined in accordance with the applicable regulatory provisions. The Non-Rule Standard Permit Registration (Appendix C) at page 144 of the pdf, provides a Tanks 4.0.9d model run that predicts emissions of 13,270 pounds of VOC per year or 6.6 tons of VOC per year, prior to control, which is greater than 6 tons per year. This Tanks model analysis uses an RVP of 9. If the slop oil contains a condensate layer similar to what is stored in Tanks 2350A and 2350B, the RVP is likely much higher and therefore the predicted uncontrolled emissions would be much higher as well.

NSPS subpart OOOOa exempts tanks with potential emissions of less than 6 tons per year of VOC from the control requirements of subpart OOOOa. The determination of potential emissions may consider a legally and practicably enforceable limit. See 40 CFR § 60.5365a(e)(1). In Appendix A of Appendix C, on page A-2, Table 1, the potential emissions from TK-5 are stated as 0.03 pounds per hour and 0.13 tons of VOC per year. If the Non-Rule Standard Permit Registration (Appendix C) and the Title 5 permit (Appendix D) do not contain provisions establishing legally and practically enforceable limits that reduce the tanks potential emissions below 6 tpy, TK-5 may be required to comply with NSPS Subpart OOOOa control requirements. 40 CFR § 60.5395a(a)(2) allows compliance through use of the thermal oxidizer. 40 CFR § 60.5395a(b)(1) requires a cover and closed vent system meeting specific design and operational requirements to prevent emissions, and a control device meeting 95% control. 40 CFR § 60.5411a requires that the cover of the tank shall form a continuous impermeable barrier, that each cover opening be in a closed and sealed position, and that the thief hatch be equipped, maintained and operated to ensure that the lid remains seated and sealed under normal operating conditions. The Slop Tank has a closed vent system installed and collected vapors are routed to a thermal oxidizer for combustion and control. See responses 18 and 19 of Appendix B. Continuous emission releases were observed from the roof of the Slop Tank during the inspection, likely from a pressure release device (the thief hatch) on the roof of the tank. See Appendix A FLIR Video Log File ID 281. Based on the significant continuous release observed in the FLIR video, it appears there is an opening in the cover that is not maintained in a sealed position. Enterprise made no documented efforts at fixing the observed emissions on the inspection through the date of submittal of inspection follow-up information. See response 22 of Appendix B. The Slop Tank contains slop oil and water and was in daily use with a total of 60,650 barrels removed by truck from 7/1/2024 through 12/31/2024. See response 17 of Appendix B.

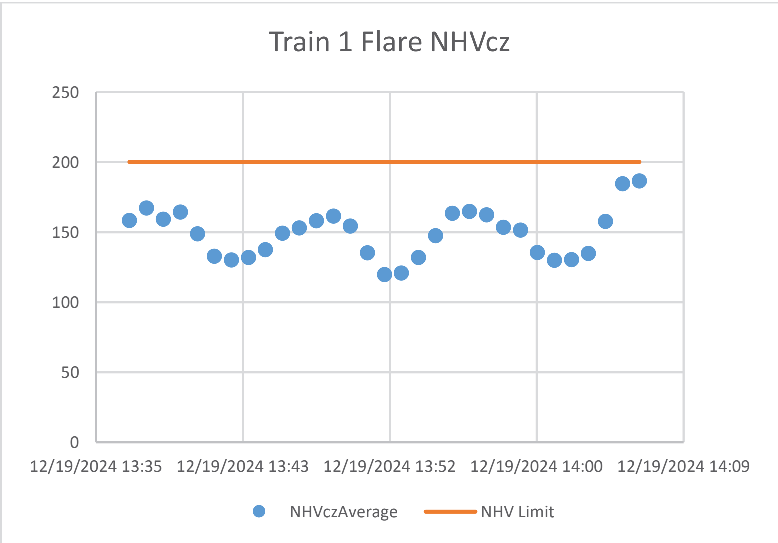
Applicable regulations: 40 CFR Part 60 Subpart OOOOa and Title V Permit.

AOC 3A: VOC Emissions from the Slop Tank and 30 TAC § 106.352 - Oil and Gas Handling and Production Facilities Non-Rule Standard Permit Registration Requirements

In Appendix A of Appendix C to this inspection report, on page A-2, Table 1, the potential emissions from the Slop Tank are stated as 0.03 pounds of VOC per hour and 0.13 tons of VOC per year after 98% control. The Tanks 4.0.9d emission model run is in Appendix B of Appendix C, described as Newberry Tank 5. The model run assumes an RVP of 9 psia, resulting in a model estimated TVP of 5.1 psia. The TVP is likely higher if the composition of the stabilized condensate stored in Tanks 235A and 235B is used and the hourly and annual emissions predicted will likely exceed 0.03 pounds of VOC per hour and 0.13 tons of VOC per year.

AOC 4: Low NHV in Gas Combusted in Trains 1 and 2 Acid Gas Flares and 40 CFR § 60.5412a(d)(3) and 40 CFR §60.18(c)(3)(ii)

40 CFR § 60.5380a(a-d) and § 60.5415a(b)(2)(vii) require compliance with 40 CFR § 60.18(b-f) for flares used as control devices. 40 CFR § 60.5400a requires compliance with 40 CFR §§ 60.482-1a(a), (b), (d), and (e), 60.482-2a, and 60.482-4a through 60.482-11a, including 40 CFR 60.482-10a that, for flares used as control devices, requires compliance with 40 CFR 60.18(b-f). The Title 5 Permit (Appendix D) in the Applicable Requirements Summary, states that 40 CFR § 60.18(c)(3)(ii) is applicable to Trains 1 and 2 Acid Gas Flares. 40 CFR § 60.18(c)(3)(ii) requires that the gas combusted in such unassisted flares be 200 BTU/scf or greater. Enterprise has centrifugal compressor and pneumatic pump seals and other equipment controlled by closed vent systems that can route to the Trains 1 and 2 Acid Gas Flares for control of VOC emissions. Trains 1 and 2 Acid Gas Flares are unassisted flares. FLIR video IDs 271 through 273 show infrared images of significant organic plumes trailing from the combustion zones from the Train 1 and 2 Flares (shorter Train 1 Flare on left and taller Train 2 Flare on right), indicating poor combustion. The Mantis Lite measured NHVcz values significantly below 200 BTU/scf as indicated by the graph below:



During the observation period for Train 1 Flare, the measured NHVcz remained below the 200 BTU/scf limit. Sampling data submitted to EPA by Enterprise after the inspection in Response 8 of Appendix B, indicate that two out of five samples for Train 2 Acid Gas Flare had a Gross Calorific Value (GCV) at or below 100 BTU/scf, which will likely result in an NHV for these two samples well below the 200 BTU/scf limit.

AOC 4A: VOC Emissions from Trains 1 and 2 Main and Acid Gas Flares and 30 TAC § 106.352 - Oil and Gas Handling and Production Facilities Non-Rule Standard Permit Registration Requirements

In Appendix A of Appendix C to this inspection report, on page A-21, Table 22, the potential emissions from the Train 1 Main and Acid Gas Flares are stated as 3.61 pounds of VOC per hour and 15.79 tons of VOC per year and on page A-22, Table 23, the potential emissions from Train 2 Main and Acid Gas flare

are stated as 5.34 pounds of VOC per hour and 23.41 tons of VOC per year after 98% control assumed for the flares. Based on flare header composition data and flare flow rates provided by Enterprise, hourly and annual VOC emissions likely exceed these limits.

AOC 5: Very High Exit Velocities for Trains 1 and 2 Main and Acid Gas Flares and 40 CFR § 60.5412a(d)(3) and 40 CFR §60.18(c)(4)(i)

40 CFR § 60.5380a(a-d) and § 60.5415a(b)(2)(vii) require compliance with 40 CFR § 60.18(b-f) for flares used as control devices. 40 CFR § 60.5400a requires compliance with 40 CFR §§ 60.482-1a(a), (b), (d), and (e), 60.482-2a, and 60.482-4a through 60.482-11a, including 40 CFR 60.482-10a that, for flares used as control devices, requires compliance with 40 CFR 60.18(b-f). The Title 5 Permit (Appendix D) in the Applicable Requirements Summary, states that 40 CFR § 60.18(c)(4)(i) is applicable to Trains 1 and 2 Main and Acid Gas Flares. 40 CFR § 60.18(c)(4)(i) requires that the exit velocity remain below 60 feet/sec. Enterprise has centrifugal compressors and pneumatic pump seals and other equipment constructed on or about 2019 that are controlled by closed vent systems that can route to the Trains 1 and 2 Main and Acid Gas Flares for control of VOC emissions. Based on the tip diameters provided by Enterprise in responses 4 and 5 of Appendix B, Enterprise likely exceeded the 60 feet/sec exit velocity limit in 40 CFR § 60.18(c)(4)(i) from July 1, 2024 to December 31, 2024.

AOC 6: Exceeding Flare Capacities for Trains 1 and 2 Acid Gas Flares and Process Safety Management Requirements

Flare capacities were provided in Responses 4 and 5 of Appendix B. The flare flow rates indicate that for Train 1 Acid Gas Flare and Train 2 Acid Gas Flare, Enterprise exceeded the capacity of the flare. Operating flares many times their design rate, for extended periods of time, risks rupture of the flare stack and tip from overpressure, and resulting explosion, and strongly indicates Process Safety Management requirements are not being met.

AOC 7: Trains 1 and 2 Acid Gas Flare Sulfur Loading and §§60.5365a(g), 60.5405a through 60.5407a, 60.5410a(g) and 60.5415a(g)

Using the hourly maximum flow rate and the maximum H_2S concentration in gas sent to Trains 1 and 2 Acid Gas Flares obtained from flow data in Response 7 and sampling provided in Response 8 of Appendix B, the capacity of Train 2 is likely exceeding the 2 long tons per day (LTPD) capacity threshold for applicability of control requirements in 40 CFR §60.5365a(g), and the control requirements of 40 CFR §§ 60.5405a through 60.5407a, 60.5410a(g) and 60.5415a(g) may apply. 40 CFR § 60.5405a and Tables 1 and 2 require SO_2 emission reduction efficiencies based on a sulfur feed of >2 LTPD and <10 percent H_2S in acid gas that achieves a minimum initial 79 percent and ongoing 74 percent removal. Enterprise has no equipment that can remove and recover any of the sulfur from acid gas and instead flares and combusts all of the acid gas producing SO_2 that is emitted directly to the atmosphere.

AOC 8: Construction of the Plant and Prevention of Significant Deterioration Requirements for a Permit and Installation of Best Available Control Technology for SO2, NOx, VOC and GHGs

Enterprise constructed the plant, including all four flares, in two phases in or about 2019. Enterprise obtained a minor new source review permit for construction of the plant, but did not obtain a major Prevention of Significant Deterioration (PSD) permit. Based on flare gas composition and flare gas flow rates provided by Enterprise, the SO2, NOx, VOC, and GHG emissions from all four flares combined likely exceed major stationary source levels for each of those pollutants as defined in the Prevention of Significant Deterioration (PSD) permitting requirements of 40 CFR 52.21(b)(1)(i)(B) and (b)(49)(iv)(A). A new major stationary source is required to apply Best Available Control Technology (BACT) to newly constructed emission units for each regulated NSR pollutant that the source would have the potential to emit above major stationary source levels as specified at 40 CFR 52.21(j). Because Enterprise did not obtain a PSD permit, Enterprise did not conduct a BACT review and may not have installed controls that meet the requirements of PSD required BACT on all newly constructed emission units that emit each regulated NSR pollutant.

AOC 8A: Construction of the Plant and 30 TAC § 106.352 - Oil and Gas Handling and Production Facilities

30 TAC § 106.352(c) states:

"(2) All authorizations under this section shall meet the following:
(A) new, changed, or replacement facilities shall not exceed the thresholds for major source or major modification as defined in § 116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), and in Federal Clean Air Act, §112(g) or §112(j)."

Based on flare gas composition and flare gas flow rates provided by Enterprise, the SO2, NOx, VOC, and GHG emissions from all four flares likely exceed major stationary source levels for each of those pollutants as defined in the Prevention of Significant Deterioration (PSD) permitting requirements of 40 CFR 52.21(b)(1)(i)(B) and (b)(49)(iv)(A).

EPA notes that Enterprise submitted a detailed additional response to the Areas of Concern described in the inspection report on January 15, 2026. EPA will further evaluate Enterprises's response during follow up compliance review.

Section V LIST OF APPENDICES

Appendix A FLIR Video Log
Appendix B Inspection Follow-up Information Request Responses
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Appendix A
FLIR Video Log

Appendix A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FLIR Video Log

Location: **Newberry Gas Plant /Enterprise Midland Basin Midstream LLC**		
City: **Midland**	**Midland County**	State: **TX**

Video File Name: FLIR Video 271
Date of Video: 12/19/2024
Time of Video: 12:28 PM
Videographer: Schath
Description: Flares

Video File Name: FLIR Video 272
Date of Video: 12/19/2024
Time of Video: 12:34 pm
Videographer: Schath
Description: Flares

Video File Name: FLIR Video 273
Date of Video: 12/19/2024
Time of Video: 12:35 pm
Videographer: Schath

Video File Name: FLIR Video 274
Date of Video: 12/19/2024
Time of Video: 12:44 pm
Videographer: Schath
Description: Tanks

Video File Name: FLIR Video 275
Date of Video: 12/19/2024
Time of Video: 12:46 pm
Videographer: Schath
Description: Tanks

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FLIR Video Log

Location: **Newberry Gas Plant /Enterprise Midland Basin Midstream LLC**		
City: **Midland**	**Midland County**	State: **TX**

Video File Name: FLIR Video 276
Date of Video: 12/19/2024
Time of Video: 12:57pm
Videographer: Schath
Description: Tank

Video File Name: FLIR Video 277
Date of Video: 12/19/2024
Time of Video: 1:00 pm
Videographer: Schath
Description: Tanks

Video File Name: FLIR Video 278
Date of Video: 12/19/2024
Time of Video: 1:06 pm
Videographer: Schath
Description: Tanks

Video File Name: FLIR Video 279
Date of Video: 12/19/2024
Time of Video: 1:08 pm
Videographer: Schath
Description: Tanks

Video File Name: FLIR Video 280
Date of Video: 12/19/2024
Time of Video: 1:10 pm
Videographer: Schath
Description: Carbon Bed

Appendix A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

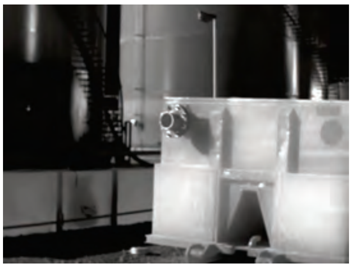
FLIR Video Log

Location: **Newberry Gas Plant /Enterprise Midland Basin Midstream LLC**		
City: **Midland**	**Midland County**	State: **TX**

Video File Name: FLIR Video 281
Date of Video: 12/19/2024
Time of Video: 1:19 pm
Videographer: Schath
Description: Tank

Video File Name: FLIR Video 282
Date of Video: 12/19/2024
Time of Video: 1:21 pm
Videographer: Schath
Description: Loading Operations

Video File Name: FLIR Video 283
Date of Video: 12/19/2024
Time of Video: 1:24 pm
Videographer: Schath
Description: Loading Operations



Video File Name: FLIR Video 284
Date of Video: 12/19/2024
Time of Video: 2:00 pm
Videographer: Schath
Description: Carbon Beds

Video File Name: FLIR Video 285
Date of Video: 12/19/2024
Time of Video: 2:06 pm
Videographer: Schath
Description: Tank

Appendix B
Inspection Follow-up Information Request Responses

From:	Foley, Patrick
To:	Spina, Providence; Johnstone, Lauren
Subject:	FW: Enterprise Products Partners Inspection Follow-up
Date:	Monday, March 17, 2025 2:59:54 PM

From: Fields, Jon <JEFIELDS@eprod.com>
Sent: Monday, March 17, 2025 3:27 PM
To: Foley, Patrick <Foley.Patrick@epa.gov>
Subject: RE: Enterprise Products Partners Inspection Follow-up

Patrick,

Enterprise is submitting information related to EPAs data request from 3/3/2025 for the Newberry Gas Plant. A Syncplicity link was submitted to you to access our responses. This is a partial response. Enterprise is working diligently gathering the remainder of the information and is targeting completion by 3/31/2025. The narrative below memorializes the questions for which Enterprise is providing data today:

1. Provide a digital plot plan for the facility that identifies major pieces of equipment, process units, and emission points.

 Enterprise response to item 1: Please refer to the permit documents included in the file "Response 1, 2, and 3" that we have included with this response.

2. Provide a Block Flow Diagram (BFD) for the plant as a whole that shows how gas and liquids enter the facility, are processed in each of the process units, and then exit the facility.

 Enterprise response to item 2: Please refer to the permit documents included in the file "Response 1, 2, and 3" that we have included with this response.

3. Process Flow Diagrams (PFDs) for each process unit in the facility.

 Enterprise response to item 3: Please refer to the permit documents included in the file "Response 1, 2, and 3" that we have included with this response.

6. Identify the manufacturer and model number of the flare tip installed on each flare.

 Enterprise response to item 6: Please refer to the documents included in the file "Response 6" that we have included with this response. This response contains information marked as Confidential Business Information.

9. Provide the design capacity in long tons per day (LT/D) of hydrogen sulfide (H2S) in the acid gas, expressed as sulfur, for each sweetening unit. Provide supporting design documents and explain all assumptions made to support the design basis.

 Enterprise response to item 9: Please refer to the documents included in the file "Response 9" that we have included with this response.

11. Provide the date that the carbon bed system in use on December 19, 2024, installed in

an effort to control VOC emissions from Tank 2350B was first installed. Provide all documents available on the ordering, acquisition, purchase, or rental of that system, including time of delivery and installation and any basis for sizing of the system. Provide carbon bed maintenance records, including manufacture specifications and replacement records for the carbon. Provide an estimate of the pressure drop through the system from the inlet to the flexible hose on the roof of the tank through the exit of the second carbon bed.

Enterprise response to item 11: Please refer to the documents included in the file "Response 11" that we have included with this response.

17. For Tanks 235A and 235B and the Slop Tank, for each day from July 1 to December 31, 2024, provide:

a. Whether condensate, oil, slop oil or produced water, was added to, or removed from the tank, with an estimate of the amount of each added or removed; and

b. Average volume of condensate, oil, slop oil, or produced water in each tank.

Enterprise response to item 17: Please refer to the documents included in the file "Response 17" that we have included with this response.

18. For tanks 235A and 235B and the Slop Tank, describe how vapors from the tank vent are controlled. If combusted, identify all points of possible combustion.

Enterprise response to item 18: Please refer to the documents included in the file "Response 18" that we have included with this response.

21. For Tanks 235A and 235B and the Slop Tank, provide copies of audio, visual or olfactory inspections, recorded files for all optical gas imaging taken of the roof fittings and records of PID or FID measurements taken from July 1, 2024, to date.

Enterprise response to item 21: Please refer to the documents included in the file "Response 21" that we have included with this response.

22. Describe any repairs made from December 19, 2024, to date, on the manways and pressure relief devices on Tanks 235A and 235B and the Slop Tank. State whether the roof fittings were monitored with optical gas imaging, PID or FID after the repairs, and point to the monitoring results undertaken after the repairs provided in response to 21 above.

Enterprise response to item 22: Please refer to the documents included in the file "Response 22" that we have included with this response.

Please let me know if you have any problems getting the Syncplicity file or any other questions related to this matter.

Thank you,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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From: Foley, Patrick <Foley.Patrick@epa.gov>

Sent: Monday, March 3, 2025 1:27 PM
To: Fields, Jon <JEFIELDS@eprod.com>
Subject: [EXTERNAL] Enterprise Products Partners Inspection Follow-up

[Use caution with links/attachments]
Hi Jon,

I hope you are well. As you know we inspected the Enterprise Newberry Gas Plant on December 19, 2024. During the inspection we requested documents that the facility staff were unable to produce while we were on-site and they asked we request these documents later by email. In drafting the inspection report, we identified further documents we also need to complete the inspection report and to provide you with more complete feedback on inspection findings and compliance status. As requested by the facility staff, attached are those inspection related document requests. Please provide these documents in electronic format either by email, or in a link such as an ftp link, from which we may download them, in two weeks. If you need additional time for any specific request, we can discuss. Also, if you need an ftp site to which you can upload responses, please let us know. We can provide one.

Also, below, please find an ftp link to download the optical gas imaging video files we recorded at your site with an Excel spreadsheet index of the files, and an Excel sheet of Mantis Lite data we recorded in observing your flares.   Please let us know if you have any issues with downloading or opening these files. It is our intention to include all of these files as attachments to the inspection report:

My contact information is below. Please reply to this email to confirm receipt. If you have any questions, please do not hesitate to reach out to me by email or my cell phone if you have any questions. I look forward to hearing from you.

Patrick W. Foley
Senior Environmental Engineer
Air Enforcement Division
Office of Civil Enforcement
United States Environmental Protection Agency
Cell 240-308-2721

From:	Fields, Jon
To:	Foley, Patrick
Cc:	Craft, Zachary; Jacobson, Tucker
Subject:	Enterprise Products Partners Inspection Follow-up: 4/4/2025
Date:	Friday, April 4, 2025 9:18:53 AM

Patrick,

Enterprise is submitting information related to EPAs data request from 3/3/2025 for the Newberry Gas Plant. A Syncplicity link was submitted to you to access our responses. This is the second batch of information. A partial initial response was sent you on 3/17/2025. The narrative below memorializes the questions for which Enterprise is providing data today:

4. Provide a simplified map of the flare header system for each flare that shows where each gas stream from process units enter the header, where supplemental gas can be supplied, where samples are taken, and each monitoring point for flow, temperature and pressure.

   Enterprise Response to Item 4: Please refer to the documents included in the file "Response 4 and 5" that we have included with this response. This response contains information marked as Confidential Business Information.

5. Provide the Piping and Instrumentation Diagrams (P&IDs) for each flare and flare header system serving each flare.

   Enterprise Response to Item 5: Please refer to the documents included in the file "Response 4 and 5" that we have included with this response. This response contains information marked as Confidential Business Information.

7. Provide an hourly average flow rate for gas sent to each flare for the time period from July 1, 2024, to December 31, 2024. Indicate whether the flow rate is directly measured or estimated from process parameters and provide the method of estimation. For flow measurements and process parameters used to estimate flow, indicate the location of measurement in reference to the simplified map requested in 4 above.

   Enterprise Response to Item 7: Enterprise does not have a regulatory requirement to continuously monitor flare flow data. Therefore, no information responsive to this request are being provided.

8. Provide copies of all sampling data measuring the heating value, concentration of any individual component or overall composition of gas sent to each flare for samples taken from July 1, 2024, to December 31, 2024. If fewer than 5 samples were taken in this time period, for a particular gas stream, provide copies of the last 5 samples. For each sample indicate where the sample was taken in reference to the simplified map requested in 4 above.

Enterprise Response to Item 8: Please refer to the documents included in the file "Response 8" that we have included with this response.

10. Provide a narrative history of all floating roof failures (full or partial sinking) or malfunctions (physical seal problems, liquid layer on roof from inadequate seal, etc.) for Tanks 2350A and 2350B since original construction in or around 2015 to date. For each failure or malfunction, describe the cause, the date it was detected, how it was detected, how emissions were minimized during the event, and how and when the failure or malfunction was corrected.

Enterprise Response to Item 10: Please refer to the documents included in the file "Response 10" that we have included with this response.

12. Provide copies of records of all audio, visual or olfactory inspections, and recorded files for all optical gas imaging taken of the roof vents for Tanks 2350A and 2350B and the vent hose and carbon beds installed on Tank 2350B from July 1, 2024 to date.

Enterprise Response to Item 12: Please refer to the documents included in the file "Response 12" that we have included with this response.

13. Provide copies of records of all PID or FID measurements taken of the perimeter vents from July 1, 2024, to date, and vent hose and carbon beds since installation in or about November 2024 to date.

Enterprise Response to Item 13: Please refer to the documents included in the file "Response 13" that we have included with this response.

14. Provide a narrative description of how the perimeter vents on Tank 2350B were sealed when the carbon bed system was installed in or around November 2024.

Provide any photos of the seals that were taken.

Enterprise Response to Item 14: Please refer to the documents included in the file "Response 14" that we have included with this response.

15. Provide an estimate of VOC emissions in pounds per day, from Tanks 2350A and 2350B for each day from the date of roof failure until the tank was emptied or until the carbon bed system was installed. Include a detailed description of the methodology for that estimate including all assumptions.

Enterprise Response to Item 15: Please refer to the documents included in the file "Response 15" that we have included with this response.

16. Describe any repairs made from December 19, 2024, to date, of the taped seals on the perimeter vents on Tank 2350B that had been observed leaking during the inspection. State whether the perimeter vents were monitored with optical gas imaging, PID or FID after the repairs, and point to the monitoring results provided in response to 12 and 13 above.

Enterprise Response to Item 16 Please refer to the documents included in the file "Response 16" that we have included with this response.

19. For Tanks 235A and 235B and the Slop Tank, provide closed vent system design documentation that demonstrates capability to collect all VOC vapor gases discharged from the storage vessels. Provide the pressure settings for all relief valves and thief hatches and the design pressure each tank can safely withstand in ounces per square inch.

Enterprise Response to Item 19: Please refer to the documents included in the file "Response 19" that we have included with this response.

20. For Tanks 235A and 235B and the Slop Tank, provide the uncontrolled potential to emit calculations for the storage tank and the level of control as a percentage, provided by control device.

Enterprise Response to Item 20: Please refer to the permit documents included in the file “Response 1, 2, and 3” that were included in the initial response.

Please let me know if you have any problems getting the Syncplicity file or any other questions related to this matter.

Thank you,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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From:	Fields, Jon
To:	Foley, Patrick
Cc:	Craft, Zachary; Jacobson, Tucker
Subject:	RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025
Date:	Thursday, April 17, 2025 11:09:24 AM

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Patrick,

We have gathered the requested flare flow data. We are reviewing the meter spec data with our measurement team and will respond to your request by COB April 24.

Thank you,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

From: Foley, Patrick <Foley.Patrick@epa.gov>
Sent: Tuesday, April 15, 2025 7:13 AM
To: Fields, Jon <JEFIELDS@eprod.com>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: [EXTERNAL] RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025

[Use caution with links/attachments]

Jon,

Understood. You mention data from a mass flow meter in your April 9 message. Some mass flow meters measure volumetric flow and either assume a MW or density or measure density and then calculate mass flow. Others approximate mass flow by using thermal loss or Coriolis principles. It would be most helpful to have the volumetric flow rate, if that is available from the data your meter measures. Do you have an estimate for how long it will take to provide the flow data for the flares?

Patrick

From: Fields, Jon <JEFIELDS@eprod.com>
Sent: Monday, April 14, 2025 12:11 PM
To: Foley, Patrick <Foley.Patrick@epa.gov>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Patrick,

We are gathering flare data and will provide an appropriate response as soon as possible.

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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From: Foley, Patrick <Foley.Patrick@epa.gov>
Sent: Wednesday, April 9, 2025 6:21 AM
To: Fields, Jon <JEFIELDS@eprod.com>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: [EXTERNAL] RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025

[Use caution with links/attachments]

Jon,

EPA is required to consider any credible evidence available to evaluate compliance under the Clean Air Act. We are not constrained to using only monitoring data required by regulation or permit. I do regularly use process monitor data obtained during and in follow-up to an inspection, or if necessary, obtained through a more formal Clean Air Act Section 114 Letter, in reaching conclusions from inspections and any enforcement investigations that follow. Section 114 of the Clean Air Act provides authority to EPA to obtain any information reasonably required to determine compliance during inspections and in follow-up information requests.

I intend to use the flow rate data from the monitors to assess compliance with various regulatory and permit requirements that apply to emissions of various pollutants from your flares and your plant as a whole, including, but not limited to VOC and SO2. I will consider the accuracy of the monitors in my assessment. Please provide the data as requested and also provide any information you want me to consider as to the make, model number, maintenance, calibration, and accuracy of the monitors.

On Syncplicity, after a few tries, we were able to download it all. It will hopefully work when you also submit the flow rate data I requested for the flares discussed above. I look forward to your response.

Patrick

From: Fields, Jon <JEFIELDS@eprod.com>
Sent: Wednesday, April 9, 2025 6:10 AM
To: Foley, Patrick <Foley.Patrick@epa.gov>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Patrick,

Thank you for the chance to follow up on this subject. Could you help us understand how you would intend to use that data? The mass flow meter is not required for environmental compliance and therefore is not maintained or calibrated per EPA standards, so it is not apparent to us that hourly data from it would be appropriately provided as part of an environmental compliance evaluation.

Let us know if the Syncplicity matter gets resolved or if we need to find another avenue for providing the data.

Thank you,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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From: Foley, Patrick <Foley.Patrick@epa.gov>
Sent: Tuesday, April 8, 2025 7:12 AM
To: Fields, Jon <JEFIELDS@eprod.com>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: [EXTERNAL] RE: Enterprise Products Partners Inspection Follow-up: 4/4/2025

[Use caution with links/attachments]

Jon,

We are having some trouble downloading from syncplicity. We are working on it and will get back to you on whether we were successful.

I did have a question about your email below. On item 7, it sounds like you have data on flow to the flares, but are unwilling to provide it, because you say you have no regulatory requirement to monitor it. During the inspection I believe I was told you monitor flow to each of these flares. Can you confirm whether you have flow data for the two acid gas flares? If you have the data, please reconsider whether you will provide it. Let me know if you want to discuss this.

Pat

From: Fields, Jon <JEFIELDS@eprod.com>
Sent: Friday, April 4, 2025 10:19 AM
To: Foley, Patrick <Foley.Patrick@epa.gov>
Cc: Craft, Zachary <zlcraft@eprod.com>; Jacobson, Tucker <WTJACOBSON@eprod.com>
Subject: Enterprise Products Partners Inspection Follow-up: 4/4/2025

Patrick,

Enterprise is submitting information related to EPAs data request from 3/3/2025 for the Newberry Gas Plant. A Syncplicity link was submitted to you to access our responses. This is the second batch of information. A partial initial response was sent you on 3/17/2025. The narrative below memorializes the questions for which Enterprise is providing data today:

4. Provide a simplified map of the flare header system for each flare that shows where each gas stream from process units enter the header, where supplemental gas can be supplied, where samples are taken, and each monitoring point for flow, temperature and pressure.

   Enterprise Response to Item 4: Please refer to the documents included in the file "Response 4 and 5" that we have included with this response. This response contains information marked as Confidential Business Information.

5. Provide the Piping and Instrumentation Diagrams (P&IDs) for each flare and flare header system serving each flare.

   Enterprise Response to Item 5: Please refer to the documents included in the file "Response 4 and 5" that we have included with this response. This response contains information marked as Confidential Business Information.

7. Provide an hourly average flow rate for gas sent to each flare for the time period from July 1, 2024, to December 31, 2024. Indicate whether the flow rate is directly

measured or estimated from process parameters and provide the method of estimation. For flow measurements and process parameters used to estimate flow, indicate the location of measurement in reference to the simplified map requested in 4 above.

Enterprise Response to Item 7: Enterprise does not have a regulatory requirement to continuously monitor flare flow data. Therefore, no information responsive to this request are being provided.

8. Provide copies of all sampling data measuring the heating value, concentration of any individual component or overall composition of gas sent to each flare for samples taken from July 1, 2024, to December 31, 2024. If fewer than 5 samples were taken in this time period, for a particular gas stream, provide copies of the last 5 samples. For each sample indicate where the sample was taken in reference to the simplified map requested in 4 above.

   Enterprise Response to Item 8: Please refer to the documents included in the file "Response 8" that we have included with this response.

10. Provide a narrative history of all floating roof failures (full or partial sinking) or malfunctions (physical seal problems, liquid layer on roof from inadequate seal, etc.) for Tanks 2350A and 2350B since original construction in or around 2015 to date. For each failure or malfunction, describe the cause, the date it was detected, how it was detected, how emissions were minimized during the event, and how and when the failure or malfunction was corrected.

   Enterprise Response to Item 10: Please refer to the documents included in the file "Response 10" that we have included with this response.

12. Provide copies of records of all audio, visual or olfactory inspections, and recorded files for all optical gas imaging taken of the roof vents for Tanks 2350A and 2350B and the vent hose and carbon beds installed on Tank 2350B from July 1, 2024 to date.

   Enterprise Response to Item 12: Please refer to the documents included in the file "Response 12" that we have included with this response.

13. Provide copies of records of all PID or FID measurements taken of the perimeter vents from July 1, 2024, to date, and vent hose and carbon beds since installation in or about November 2024 to date.

Enterprise Response to Item 13: Please refer to the documents included in the file "Response 13" that we have included with this response.

14. Provide a narrative description of how the perimeter vents on Tank 2350B were sealed when the carbon bed system was installed in or around November 2024. Provide any photos of the seals that were taken.

Enterprise Response to Item 14: Please refer to the documents included in the file "Response 14" that we have included with this response.

15. Provide an estimate of VOC emissions in pounds per day, from Tanks 2350A and 2350B for each day from the date of roof failure until the tank was emptied or until the carbon bed system was installed. Include a detailed description of the methodology for that estimate including all assumptions.

Enterprise Response to Item 15: Please refer to the documents included in the file "Response 15" that we have included with this response.

16. Describe any repairs made from December 19, 2024, to date, of the taped seals on the perimeter vents on Tank 2350B that had been observed leaking during the inspection. State whether the perimeter vents were monitored with optical gas imaging, PID or FID after the repairs, and point to the monitoring results provided in response to 12 and 13 above.

Enterprise Response to Item 16 Please refer to the documents included in the file "Response 16" that we have included with this response.

19. For Tanks 235A and 235B and the Slop Tank, provide closed vent system design documentation that demonstrates capability to collect all VOC vapor gases discharged from the storage vessels. Provide the pressure settings for all relief valves and thief hatches and the design pressure each tank can safely withstand in ounces per square inch.

Enterprise Response to Item 19: Please refer to the documents included in the file "Response 19" that we have included with this response.

20. For Tanks 235A and 235B and the Slop Tank, provide the uncontrolled potential to emit calculations for the storage tank and the level of control as a percentage, provided by control device.

Enterprise Response to Item 20: Please refer to the permit documents included in the file "Response 1, 2, and 3" that were included in the initial response.

Please let me know if you have any problems getting the Syncplicity file or any other questions related to this matter.

Thank you,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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From:	Fields, Jon
To:	Foley, Patrick
Cc:	Craft, Zachary; Jacobson, Tucker
Subject:	Newberry Flare Flow Data
Date:	Wednesday, April 23, 2025 2:39:07 PM
Attachments:	Flare Flow Data 07.01.24 to 12.31.24.xlsx

Mr. Foley,

Enterprise is providing the Newberry Gas Plant flare flow data as requested. The attached spreadsheet contains hourly average flow data over the specified time-period for the four (4) flares at the site. All four flow meters output flow data as MCF. As previously noted, these meters are not required monitoring devices and the Enterprise environmental team does not use this data for compliance purposes, nor do we oversee upkeep of these devices. Therefore, the accuracy of the data cannot be verified. Some information on the two (2) acid gas flare flow meters is included in this submittal:

- The Newberry T1 Acid Gas Flare flow meter is a Panametrics PanaFlow USM PF8-Z1G S/N: UE-Z1-0292. The flow output from this meter has been adjusted based on the measured flow and an assumed fixed pressure, assumed fixed temperature, and assumed fixed density/composition – these parameters are not being measured. The device adjusts the measured volume to a standard volume based on assumed fixed pressure, temperature, and density variables, making it not possible to see the measured volume before adjustment. The meter has yet to be calibrated since installation – calibration would require a process shutdown so the device could be removed and shipped off.

- The Newberry T2 Acid Gas Flare is a Panametrics PanaFlow MV80-VTP (8” Vortex Mass) S/N: 5519748. The flow output from this meter has been adjusted based on the measured mass and, internally measured temperature and pressure, and assumed fixed density/composition. The device adjusts the measured mass to a standard volume based on the internally measured temperature and pressure, and assumed fixed density variable, but it’s not possible to independently verify / calibrate the temperature and pressure readings. The meter was replaced approximately 4 years ago – calibration would require a process shutdown so the device could be removed and shipped off.

If you have any questions, please let me know.

Regards,

Jon E. Fields | Director, Field Environmental
Enterprise Products Operating LLC
1100 Louisiana St., Houston, Tx 77002-5227
(713) 381-6684 office | (832) 596-7176 cell | jefields@eprod.com

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Appendix C
TCEQ Non-Rule Standard Permit Registration
Newberry Gas Plant September 2019

TCEQ
NON-RULE STANDARD PERMIT REGISTRATION UPDATE
OIL & GAS HANDLING AND PRODUCTION FACILITIES
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
NEWBERRY GAS PLANT
MIDLAND COUNTY, TEXAS

For Information Contact:
Ms. Michelle McCracken
Manager – EH&S
Navitas Midstream Midland Basin, LLC
9303 New Trails Drive, Suite 400
The Woodlands, TX 77381
(832) 982-7091

Submitted To:
Texas Commission on Environmental Quality
Office of Air Quality
New Source Review Program
P.O. Box 13087
Austin, Texas 78711-3087

Prepared By:
Altamira, LLC
525 Central Park Drive, Suite 500
Oklahoma City, Oklahoma 73105

September 2019

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LIST OF APPENDICES

Appendix

TCEQ NON-RULE STANDARD PERMIT REGISTRATION
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
NEWBERRY GAS PLANT
MIDLAND COUNTY, TEXAS
SEPTEMBER 2019

1.0 INTRODUCTION

Navitas Midstream Midland Basin, LLC (Navitas) owns and operates the Newberry Gas Plant in Midland County, Texas (Facility). Navitas is currently authorized to operate the Facility under TCEQ Non-Rule Standard Permit for Oil and Gas Handling and Production Facilities (NRSP) Registration No. 141647. Navitas is submitting this update to add four (4) natural gas-fired compressor engines, remove two (2) natural gas-fired compressor engines remove one (1) natural gas-fired heater (H-3), and update the naming schemes for the remaining engines at the Facility. In addition, various updates to existing emissions at the Facility are proposed.

The emission sources to be included in the Non-Rule Standard Permit are as follows:

- Six (6) Caterpillar 3516B Compressor Engines (FINs: C-1680, C-1690, C-1710, C-1720, C-1730, and C-1740)
- Three (3) Caterpillar 3606 Compressor Engines (FINs: C-181, C-182, and C-183)
- Four (4) Caterpillar G3608A4 Compressor Engines (FINs: C-1750, C-1760, C-1770, and C-1780)
- Four (4) Waukesha 5794GSI Compressor Engines (FINs: C-171N, C-172N, C-173N, C-174N)
- Two (2) Amine Units (FINs: AMINE and AMINE-2)
- One (1) Amine Reboiler Hot Oil Heater (FIN: H-1)
- Two (2) Mole Sieve Regeneration Gas Heaters (FIN: H-2 and H-7)
- One (1) Cryo Trim Reboiler Hot Oil Heater (FIN: H-4)
- Two (2) Combo Hot Oil Heaters (FINs: H-5 and H-6)
- Two (2) Plant Flares (FINs: FLARE-1 and FLARE-2)
- Two (2) Process Vents to Flare (FINs: PROCESS-1, PROCESS-2)
- One (1) Tank Vent Combustor (FIN: COMB-1)

- Two (2) 750-bbl Condensate Storage Tanks (FINs: TK-1 and TK-2)
- Two (2) 10,000-bbl Condensate Storage Tanks (FINs: TK-3 and TK-4)
- One (1) 210-bbl Slop Oil Tank (FIN: TK-5)
- Twelve (12) 80-bbl Open Drain Storage Tanks (FIN: TK-6, TK-7, TK-8, TK-9, TK-10, TK-11, TK-12, TK-13, TK-14, TK-15, TK-16 and TK-17)
- One (1) Glycol Dehydration Unit (FIN: DEHY1)
- Condensate Truck Loading Operations (FIN: L-1)
- Fugitive Emissions (FIN: FUG-1 and FUG-2)
- Blowdown Emissions (FIN: VENT-1)
- Other Venting Emissions (FIN: VENT-2)
- Engine Starter Vent Emissions (FIN: VENT-3)
- MSS Emissions (FIN: MSS-1)

2.0 TCEQ STANDARD PERMIT APPLICATION FORMS

The following TCEQ permit application forms are included in this section:

- PI-1S Form
- Table 29 – C-1680
- Table 29 – C-1690
- Table 29 – C-1710
- Table 29 – C-1720
- Table 29 – C-1730
- Table 29 – C-1740
- Table 29 – C-1750
- Table 29 – C-1760
- Table 29 – C-1770
- Table 29 – C-1780
- Table 29 – C-171N
- Table 29 – C-172N
- Table 29 – C-173N
- Table 29 – C-174N
- Table 29 – C-181
- Table 29 – C-182
- Table 29 – C-183
- Table 1(a)
- TCEQ Summary Table

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
Page 1)

I. Registrant Information			
A. Company or Other Legal Customer Name:			
Navitas Midstream Midland Basin, LLC			
B. Company Official Contact Information ☐ Mr. ☐ Mrs. ☒ Ms. ☐ Other: ___			
Name: Michelle McCracken			
Title: Manager - EH&S			
Mailing Address: 9303 New Trails Drive, Suite 400			
City: The Woodlands	State: TX		ZIP Code: 73154-0496
Phone: 832) 982-7091		Fax: N/A	
E-mail Address: mmccracken@navitas-midstream.com			
All permit correspondence will be sent via e-mail. MM			
C. Technical Contact Information ☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other: ___			
Name: Zachary Crowell			
Title: Assistant Air Group Manager			
Company Name: Altamira, LLC			
Mailing Address: 525 Central Park Dr., Suite 500			
City: Oklahoma City	State: OK		ZIP Code: 73105
Phone: 405) 702-1598		Fax: N/A	
E-mail Address: zachary.crowell@altamira-us.com			
II. Facility and Site Information			
A. Name and Type of Facility			
Facility Name: Newberry Gas Plant			
Type of Facility:		☒ Permanent ☐ Temporary	
For portable units, please provide the serial number of the equipment being authorized below.			
Serial No:		Serial No:	

II. Facility and Site Information continued)	
B. Facility Location Information	
Street Address:	
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).	
From the intersection of I-20 and Hwy 158 in Midland, go S approx 13 miles on Hwy 158, then go S on 1379 for approx 5 miles, then go E approx 1.5 miles on CR 230, then go S into the Facility.	
City: Midland	County: Midland | ZIP Code: 79706
Latitude (nearest second : 31.852716	Longitude nearest second): -101.777816
C. Core Data Form **required** for Standard Permits 6004, 6006, 6007, 6008, and 6013).	
Is the Core Data Form TCEQ Form 10400) attached?	☐ YES ☒ NO
If "NO," provide customer reference number CN) and regulated entity number RN) below.	
Customer Reference Number CN): 604937243	
Regulated Entity Number (RN : 109272526	
D. TCEQ Account Identification Number (if known):	
E. Type of Action: ☐ Initial Application ☒ Change to Registration ☐ Renewal ☐ Renewal Certification	
For Change to Registration, Renewal, or Renewal Certification actions provide the following:	
Registration Number: 141647	Expiration Date: 04/05/2027
F. Standard Permit Claimed: 6002-Oil Gas Handling Production Facilities	
G. Previous Standard Exemption or PBR Registration Number	
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR?	☐ YES ☒ NO
If "YES," enter previous standard exemption number s and PBR registration number s , and associated effective date in the spaces provided below.	
Standard Exemption and PBR Registration Number s	Effective Date

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
Page 3)

II. Facility and Site Information *continued)*	
H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit	
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit?	☐ YES ☒ NO
If "YES," enter standard exemption number s , PBR registration number s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.	
Standard Exemption, PBR Registration, and Standard Permit Registration Number s)	Effective Date
I. Other Air Preconstruction Permits	
Are there any other air preconstruction permits at this site?	☐ YES ☒ NO
If "YES," enter permit number(s) in the spaces provided below.	
J. Affected Air Preconstruction Permits	
Does the standard permit directly affect any permitted facility?	☐ YES ☒ NO
If "YES," enter permit number(s) in the spaces provided below.	
K. Concrete Batch Plant	
☐ Central Mix ☐ Ready Mix ☐ Specialty Mix ☐ Enhanced Controls for Concrete Batch Plants	
1. State Legislators	
State Senator:	
State Representative:	
2. County Judge	
Name:	
Mailing Address:	

City:	State:	ZIP Code:

II. Facility and Site Information *(continued*		
K. 3. Presiding Officer		
Is the facility located in a municipality or extraterritorial jurisdiction of a municipality?		☐ YES ☐ NO
If "YES," list the name of the Presiding Officer for the municipality and/or extraterritorial jurisdiction:		
Presiding Officer Name:		
Title:		
Mailing Address:		
City:	State:	ZIP Code:
L. Federal Operating Permit (FOP Requirements		
Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?		☒ YES ☐ NO ☐ To Be Determined
If the site currently has an existing FOP, enter the permit number:		O-3959
Check the requirements of 30 TAC Chapter 122 that will be triggered if this standard permit is approved *check all that apply).*		
☐ Initial Application for an FOP	☐ Significant Revision for an SOP	☐ Minor Revision for an SOP
☐ Operational Flexibility/Off Permit Notification for an SOP		☐ Revision for a GOP
☒ To be Determined		☐ None
Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *check all that apply)*		
☒ SOP	☐ GOP	☐ GOP application/revision submitted or under APD review
☐ N/A	☐ SOP application/revision submitted or under APD review	
III. Fee Information *(see Section IX. for address to send fee or go to www.tceq.texas.gov/epay to pay online)*		
A. Fee Amount: $900.00		
B. Payment Information		
Check/money order/transaction or voucher number:		
Individual or company name on check:		
Was fee paid online?		☒ YES ☐ NO

IV. **Public Notice** *if applicable)*		
A. Responsible Person (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)________		
Name:		
Title:		
Company:		
Mailing Address:		
City:	State:	ZIP Code:
Phone:	Fax No.:	
E-mail Address:		
B. Technical Contact ☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other :__		
Name:		
Title:		
Company:		
Mailing Address:		
City:	State:	ZIP Code:
Phone No.:	Fax No.:	
E-mail Address:		
C. Bilingual Notice		
Is a bilingual program required by the Texas Education Code in the School District?	☐ YES ☐ NO	
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?	☐ YES ☐ NO	
If "YES," list which language s) are required by the bilingual program?		

IV.	**Public Notice** *if applicable)* ***continued)***	
D.	Small Business Classification and Alternate Public Notice	
Does this company including parent companies and subsidiary companies) have fewer than 100 employees or less than $6 million in annual gross receipts?		☐ YES ☐ NO
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program?		☐ YES ☐ NO
Are the site emissions of any individual regulated air contaminant equal to or greater than 50 tpy?		☐ YES ☐ NO
Are the site emissions of all regulated air contaminant combined equal to or greater than 75 tpy?		☐ YES ☐ NO
E.	For Concrete Batch Plants	
1.	Public Works Project: Will the plant provide concrete to a public works project, and be located in or contiguous to the right of-way of the public works project? (If “YES,” public notice is not required.	☐ YES ☐ NO
2.	Application in Public Place	☐ YES ☐ NO
Name of Public Place:		
Physical Address:		
City:		County:
V.	**Renewal Certification Option**	
A.	Does the permitted facility emit an air contaminant on the Air Pollutant Watch List, and is the permitted facility located in an area on the watch list?	☐ YES ☐ NO
B.	For facilities participating in the Houston/Galveston/Brazoria area HGB) cap and trade program for highly reactive VOCs HRVOCs), do the HRVOCs need to be speciated on the maximum allowable emission rates table (MAERT ?	☐ YES ☐ NO
C.	Does the company and/or site have an unsatisfactory compliance history?	☐ YES ☐ NO
D.	Are there any applications currently under review for this standard permit registration?	☐ YES ☐ NO
E.	Are scheduled maintenance, startup, or shutdown emissions required to be included in the standard permit registration at this time?	☐ YES ☐ NO

V.	**Renewal Certification Option** ***continued)***	
F.	Are any of the following actions being requested at the time of renewal:	☐ YES ☐ NO
1.	Are there any facilities that have been permanently shutdown that are proposed to be removed from the standard permit registration?	☐ YES ☐ NO
2.	Do changes need to be made to the standard permit registration in order to remain in compliance?	☐ YES ☐ NO
3.	Are sources or facilities that have always been present and represented, but never identified in the standard permit registration, proposed to be included with this renewal?	☐ YES ☐ NO
4.	Are there any changes to the current emission rates table being proposed?	☐ YES ☐ NO
Note: If answers to all of the questions in Section V. Renewal Certification Option are "NO," use the certification option and skip to Section VII. of this form. If the answers to any of the questions in Section V. Renewal Certification Option are "YES," the certification option ***cannot*** *be used.*		
*If notice is applicable and comments are received in response to the public notice, the application does not qualify for the renewal certification option.		
VI.	**Technical Information Including State and Federal Regulatory Requirements** **Place a check next to the appropriate box to indicate what you have included in your submittal.** *NOTE: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the project*.	
A.	Standard Permit requirements Checklists are optional; however, your review will go faster if you provide applicable checklists.	
Did you demonstrate that the general requirements in 30 TAC Sections 116.610 and 116.615 are met?		☒ YES ☐ NO
Did you demonstrate that emission limitations in 30 TAC Sections 106.261 and 106.262 are met?		☐ YES ☐ NO N/A
Did you demonstrate that the individual requirements of the specific standard permit are met?		☒ YES ☐ NO
B.	Confidential Information (All pages properly marked "CONFIDENTIAL")	☐ YES ☒ NO
C.	Process Flow Diagram	☒ YES ☐ NO
D.	Process Description	☒ YES ☐ NO
E.	Maximum Emissions Data and Calculations	☒ YES ☐ NO
F.	Plot Plan	☒ YES ☐ NO

VI. Technical Information Including State and Federal Regulatory Requirements ***continued)*** **Place a check next to the appropriate box to indicate what you have included in your submittal.** *NOTE: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the project*.	
G. Projected Start Of Construction Date, Start Of Operation Date, and Length of Time at Site:	☒ YES ☐ NO
Projected Start of Construction provide date):	
Projected Start of Operation provide date :	
Length of Time at the Site:	
VII. Delinquent Fees and Penalties	
This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at: www.tceq.texas.gov/agency/delin/index.html.	
VIII. Signature Requirements	
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC , Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA) the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.	
Name (printed : Michelle McCracken	
Signature (original signature required): Signed Electronically via STEERS	
Date:	

Reset Form

IX. Copies of the Registration		
Copies must be sent as listed below. Processing delays will occur if copies are not sent as noted.		
Air Permits Initial Review Team (APIRT	Regular, Certified, Priority Mail Mail Code 161, P.O. Box 13087, Austin, Texas 78711-3087 OR Hand Delivery, Overnight Mail Mail Code 161, 12100 Park 35 Circle, Building C, Third Floor, Room 300 W, Austin, Texas 78753	Originals of Form PI-1S, Core Data Form, all attachments. Not required if using ePermits[2].
Revenue Section TCEQ	Regular, Certified, Priority Mail Mail Code 214, P.O. Box 13088, Austin, Texas 78711-3088 OR Hand Delivery, Overnight Mail Mail Code 214, 12100 Park 35 Circle, Building A, Third Floor, Austin, Texas 78753	Original Money Order or Check, Copy of Form PI-1S, Core Date Form. Not required if fee was paid using ePay[3].
Appropriate TCEQ Regional Office	To find your regional office address go to www.tceq.texas.gov/publications/gi/gi-002.html or call 512) 239-1250	Copy of Form PI-1S, Core Data Form, and all attachments. Not required if using ePermits[2]
Appropriate Local Air Pollution Control Program(s	To find your local air pollution control programs go to www.tceq.texas.gov/permitting/air/local_programs.html or call 512) 239-1250	Copy of Form PI-1S, Core Data Form, and all attachments

[2] ePermits located at www3.tceq.texas.gov/steers/
[3] ePay located at www.tceq.texas.gov/epay/

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3516B	Serial No. JEF03106	Manufacture Date: 10/01/2014
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1680

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

***Note:** Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3516B	JEF03124	10/01/2014
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1690

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ______

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3516B	JEF03161	01/01/2014
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	16	8:1	C-1710

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: | Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ________________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3516B	Serial No. JEF03112	Manufacture Date: 01/01/2014
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1720

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 Heat ing Value: Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ______

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3516B	JEF03104	01/01/2014
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1730

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 Heat ing Value: Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3516B	Serial No. JEF03135	Manufacture Date: 01/01/2014
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1740

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.00	992	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,442 Heat ing Value: Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☒ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.413				0.24		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3608A4	Serial No. XH700149	Manufacture Date: 01/01/2017
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1750

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: | Variable:

Manufacture Horsepower Rating**:** 2,500 | Proposed Horsepower Rating: 2,500

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.33	853	289.0

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.02			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3608A4	XH700170	01/01/2017
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	16	8:1	C-1760

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 2,500 | Proposed Horsepower Rating: 2,500

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.33	853	289.0

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.02			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ______

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3608A4	Serial No. XH700171	Manufacture Date: 01/01/2017
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1770

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing:	Fixed:	Variable:

Manufacture Horsepower Rating**:** 2,500	Proposed Horsepower Rating: 2,500

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.33	853	289.0

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755	Heat ing Value:	Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.02			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

***Note:** Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. G3608A4	Serial No. XH700701	Manufacture Date: 01/01/2017
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-1780

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 2,500 | Proposed Horsepower Rating: 2,500

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.33	853	289.0

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.02			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer: Waukesha	Model No. 5794GSI	Serial No. 5283704404	Manufacture Date: 01/12/2015
Rebuilds Date:	No. of Cylinders: 12	Compression Ratio: 8.25:1	EPN: C-171N

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☒ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☒ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☐ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☐ Lean Burn ☒ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.0	1,136	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☐ Manufacturer Data ☐ AP-42 ☐ Other (specify :

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.05			

Method of Emission Control: ☒ NSCR Catalyst ☐ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Catalytic Converter

***Note:** Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Waukesha	Model No. 5794GSI	Serial No. 5283703930	Manufacture Date: 07/24/2015
Rebuilds Date:	No. of Cylinders: 12	Compression Ratio: 8.25:1	EPN: C-172N

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☒ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☒ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☐ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☐ Lean Burn ☒ Rich Burn

Ignition/Injection Timing: Fixed: | Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	**Stack Diameter (Feet)**	**Stack Temperature (^{o}F)**	**Exit Velocity FPS**
30	1.0	1,136	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		**CO**		**SO_2**		**VOC**		**Formaldehyde**		**PM_{10}**	
g/hp-hr	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**

Source of Emission Factors: ☐ Manufacturer Data ☐ AP-42 ☐ Other (specify :

IV. Emission Factors Post Control

NO_X		**CO**		**SO_2**		**VOC**		**Formaldehyde**		**PM_{10}**	
g/hp-hr	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**
0.50		0.47				0.33		0.05			

Method of Emission Control: ☒ NSCR Catalyst ☐ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Catalytic Converter

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Waukesha	Model No. 5794GSI	Serial No. 5283704396	Manufacture Date: 01/16/2015
Rebuilds Date:	No. of Cylinders: 12	Compression Ratio: 8.25:1	EPN: C-173N

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☒ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☒ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☐ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☐ Lean Burn ☒ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.0	1,136	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☐ Manufacturer Data ☐ AP-42 ☐ Other (specify :

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.05			

Method of Emission Control: ☒ NSCR Catalyst ☐ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Catalytic Converter

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ______

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Waukesha	Model No. 5794GSI	Serial No. 5283703850	Manufacture Date: 07/09/2014
Rebuilds Date:	No. of Cylinders: 12	Compression Ratio: 8.25:1	EPN: C-174N

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☒ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☒ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☐ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☐ Lean Burn ☒ Rich Burn

Ignition/Injection Timing: Fixed: | Variable:

Manufacture Horsepower Rating**:** 1,380 | Proposed Horsepower Rating: 1,380

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.0	1,136	193.13

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,755 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☐ Manufacturer Data ☐ AP-42 ☐ Other (specify :

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.33		0.05			

Method of Emission Control: ☒ NSCR Catalyst ☐ Lean Operation ☐ Parameter Adjustment
☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Catalytic Converter

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	3606	4ZS02072	12/12/2016
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-181

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,775 | Proposed Horsepower Rating: 1,775

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	847	257.75

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,649 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.32		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ________________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data			
Manufacturer: Caterpillar	Model No. 3606	Serial No. 4ZS02071	Manufacture Date: 01/01/2016
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-182

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,775 Proposed Horsepower Rating: 1,775

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^{o}F)	Exit Velocity FPS
30	1.00	847	257.75

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,649 Heat ing Value: Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.32		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

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Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer: Caterpillar	Model No. 3606	Serial No.	Manufacture Date: 01/01/2016
Rebuilds Date:	No. of Cylinders: 16	Compression Ratio: 8:1	EPN: C-183

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☒ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: Variable:

Manufacture Horsepower Rating**:** 1,775 | Proposed Horsepower Rating: 1,775

Discharge Parameters

Stack Height Feet	Stack Diameter (Feet)	Stack Temperature (^oF)	Exit Velocity FPS
30	1.00	847	257.75

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☒ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 6,649 | Heat ing Value: | Lower Heating Value:

Sulfur Content (grains/100 scf - weight %): Negligible

III. Emission Factors Before Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv

Source of Emission Factors: ☒ Manufacturer Data ☐ AP-42 ☐ Other (specify : NSPS JJJJ

IV. Emission Factors Post Control

NO_X		CO		SO_2		VOC		Formaldehyde		PM_{10}	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.50		0.47				0.32		0.03			

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify : Oxidation Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: ____________

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Reset Form Print Form

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
C-1680	C-1680	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO_2	<0.01	0.03
			PM_{10}	0.10	0.45
			HCHO	0.10	0.46
C-1690	C-1690	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO_2	<0.01	0.03
			PM_{10}	0.10	0.45
			HCHO	0.10	0.46
C-1710	C-1710	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO2	<0.01	0.03
			PM10	0.10	0.45
			HCHO	0.10	0.46

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
NewberryCalcs_081919.xlsx 9/24/2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
C-1720	C-1720	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO2	<0.01	0.03
			PM10	0.10	0.45
			HCHO	0.10	0.46
C-1730	C-1730	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO2	<0.01	0.03
			PM10	0.10	0.45
			HCHO	0.10	0.46
C-1740	C-1740	1,380 Hp Caterpillar 3516B	NOx	1.52	6.66
			CO	1.26	5.50
			VOC[a]	0.83	3.65
			SO2	<0.01	0.03
			PM10	0.10	0.45
			HCHO	0.10	0.46

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
C-1750	C-1750	2,500 Hp Caterpillar G3608A4	NOx	2.75	12.06
			CO	2.57	11.28
			VOC[a]	1.91	8.38
			SO2	<0.01	0.04
			PM10	0.17	0.74
			HCHO	0.12	0.54
C-1760	C-1760	2,500 Hp Caterpillar G3608A4	NOx	2.75	12.06
			CO	2.57	11.28
			VOC[a]	1.91	8.38
			SO2	<0.01	0.04
			PM10	0.17	0.74
			HCHO	0.12	0.54
C-1770	C-1770	2,500 Hp Caterpillar G3608A4	NOx	2.75	12.06
			CO	2.57	11.28
			VOC[a]	1.91	8.38
			SO2	<0.01	0.04
			PM10	0.17	0.74
			HCHO	0.12	0.54

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
NewberryCalcs_081919.xlsx 9/24/2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN A)	FIN B)	NAME C)		Pounds per Hour A)	TPY B)
C-1780	C-1780	2,500 Hp Caterpillar G3608A4	NOx	2.75	12.06
			CO	2.57	11.28
			VOC[a]	1.91	8.38
			SO2	<0.01	0.04
			PM10	0.17	0.74
			HCHO	0.12	0.54
C-171N	C-171N	1,380 Hp Waukesha 5794GSI	NOx	1.52	6.66
			CO	1.43	6.26
			VOC[a]	1.16	5.06
			SO_2	<0.01	0.03
			PM_{10}	0.21	0.90
			HCHO	0.15	0.67
C-172N	C-172N	1,380 Hp Waukesha 5794GSI	NOx	1.52	6.66
			CO	1.43	6.26
			VOC[a]	1.16	5.06
			SO_2	<0.01	0.03
			PM_{10}	0.21	0.90
			HCHO	0.15	0.67
C-173N	C-173N	1,380 Hp Waukesha 5794GSI	NOx	1.52	6.66
			CO	1.43	6.26
			VOC[a]	1.16	5.06
			SO2	<0.01	0.03
			PM10	0.21	0.90
			HCHO	0.15	0.67

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
NewberryCalcs_081919.xlsx 9/24/2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
C-174N	C-174N	1,380 Hp Waukesha 5794GSI	NOx	1.52	6.66
			CO	1.43	6.26
			VOC[a]	1.16	5.06
			SO2	<0.01	0.03
			PM10	0.21	0.90
			HCHO	0.15	0.67
C-181	C-181	1,775 Hp Caterpillar 3606	NOx	1.95	8.56
			CO	1.83	8.01
			VOC[a]	1.37	5.98
			SO2	<0.01	0.03
			PM10	0.12	0.52
			HCHO	0.13	0.59
C-182 & C-183	C-182 & C-183	1,775 Hp Caterpillar 3606	NOx	1.95	8.56
			CO	1.83	8.01
			VOC[a]	1.37	5.98
			SO2	<0.01	0.03
			PM10	0.12	0.52
			HCHO	0.13	0.59

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
H-1	H-1	Amine Reboiler Hot Oil Heater (34.2 MMBTU/hr)	NOx	3.42	14.98
			CO	1.27	5.54
			VOC	0.86	3.74
			SO2	0.02	0.09
			PM10	0.16	0.72
H-2	H-2	Mole Sieve Regeneration Gas Heater 1 (9.6 MMBTU/hr)	NOx	0.94	4.12
			CO	0.79	3.46
			VOC	0.05	0.23
			SO2	<0.01	0.02
			PM10	0.07	0.31
H-4	H-4	Cryo Trim Reboiler Hot Oil Heater 1 (6.93 MMBTU/hr)	NOx	0.68	2.98
			CO	0.57	2.50
			VOC	0.04	0.16
			SO2	<0.01	0.02
			PM10	0.05	0.23

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
H-5	H-5	Combo Hot Oil Heater 1 (51 MMBTU/hr)	NOx	3.06	13.40
			CO	1.89	8.27
			VOC	1.28	5.58
			SO2	3.06	13.40
			PM10	0.24	1.07
H-6	H-6	Combo Hot Oil Heater 2 (51 MMBTU/hr)	NOx	3.06	13.40
			CO	1.89	8.27
			VOC	1.28	5.58
			SO2	0.03	0.13
			PM10	0.24	1.07
H-7	H-7	Mole Sieve Regeneration Gas Heater 2 (6.23 MMBTU/hr)	NOx	0.61	2.68
			CO	0.51	2.25
			VOC	0.03	0.15
			SO2	<0.01	0.02
			PM10	0.05	0.20

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
AMINE	AMINE	Amine Unit Vent	VOC	0.99	4.35
			H_2S	0.03	0.13
			Benzene	0.07	0.32
AMINE-2	AMINE-2	Amine Unit 2 Vent	VOC	0.87	3.82
			H2S	0.10	0.42
			Benzene	0.07	0.29
FLARE-1	FLARE-1	Plant 1 Flare	NOx	2.95	12.94
			CO	5.90	25.83
			VOC	3.61	15.79
			SO2	2.64	11.55
			H2S	0.03	0.12
			Benzene	0.07	0.31
DEHY1	DEHY1	Glycol Dehydration Unit (DEHY1)	VOCa	3.52	15.41
			Benzene	0.17	0.76
FLARE-2	FLARE-2	Plant 2 Flare	NOx	3.37	14.76
			CO	6.73	29.46
			VOC	5.34	23.41
			SO2	8.76	38.38
			H2S	0.09	0.41
			Benzene	0.07	0.29

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
NewberryCalcs_081919.xlsx 9/24/2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
COMB-1	COMB-1	Tank Vent Combustor	NOx	0.49	2.15
			CO	0.41	1.80
			VOC	2.23	9.78
			SO2	<0.01	0.01
			PM10	0.04	0.16
TK-1	TK-1	Slop Oil Storage Tank (750-bbl)	VOC	0.04	0.18
TK-2	TK-2	Slop Oil Storage Tank (750-bbl)	VOC	0.04	0.18
TK-3	TK-3	Condensate Storage Tank (10,000-bbl)	VOC	0.30	1.30
TK-4	TK-4	Condensate Storage Tank (10,000-bbl)	VOC	0.30	1.30
TK-5	TK-5	Slop Oil Storage Tank (210-bbl)	VOC	0.03	0.13
TK-6	TK-6	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-7	TK-7	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-8	TK-8	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-9	TK-9	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-10	TK-10	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-11	TK-11	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-12	TK-12	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-13	TK-13	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-14	TK-14	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-15	TK-15	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-16	TK-16	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-17	TK-17	Open Drain Storage Tank (80-bbl)	VOC	0.08	0.35
TK-18	TK-18	Gasoline Storage Tank (500-gal)	VOC	0.03	0.12

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.
[TCEQ-10153 (Revised 04/08) Table 1(a)
APDG 5178 v5)
NewberryCalcs_081919.xlsx 9/24/2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	9/24/2019	Permit Number:	NRSP No. 141647	Regulated Entity No:	RN109272526
Area Name:	Navitas Midstream Midland Basin, LLC, Newberry Gas Plant			Customer Reference No.:	CN604937243

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA

1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		Pounds per Hour	TPY
A)	B)	C)		A)	B)
TK-19	TK-19	Diesel Storage Tank (500-gal)	VOC	<0.01	<0.01
L-1	L-1	Truck Loading	VOC	15.65	37.08
FUG-1	FUG-1	Non-Monitored Site Fugitives	VOC	1.02	4.49
			H2S	0.01	0.01
			Benzene	0.01	0.01
FUG-2	FUG-2	Monitored Site Fugitives	VOC	0.74	3.24
VENT-1	VENT-1	Blowdown Vent	VOC	20.41	8.49
			Benzene	0.62	0.76
VENT-2	VENT-2	Other Venting	VOC	136.04	3.40
			Benzene	0.02	<0.01
VENT-3	VENT-3	Engine Starter Vent	VOC	9.03	3.76
			Benzene	<0.01	<0.01
MSS-1	MSS-1	MSS Emissions	VOC	9.15	3.23
			PM10	0.68	<0.01
			Benzene	<0.01	0.26
			Sitewide HAP Total	--	<25
			Sitewide Individual HAP	--	<10

EPN = Emission Point Number FIN = Facility Identification Number
[a]VOC includes formaldehyde.

SUMMARY TABLE

ESTIMATED EMISSIONS																			
EPN/Emission Source	Specific VOC or Other Pollutants	VOC		NO_x		CO		PM_{10}		$PM_{2.5}$		SO_2		H_2S		Benzene		Formaldehyde	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Unchanged Sources																			
C-1680 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1690 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1710 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1720 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1730 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1740 / 1,380 Hp Caterpillar 3516B		0.83	3.65	1.52	6.66	1.26	5.50	0.10	0.45	0.10	0.45	<0.01	0.03	--	--	<0.01	0.02	0.10	0.46
C-1750 / 2,500 Hp Caterpillar G3608A4		1.91	8.38	2.75	12.06	2.57	11.28	0.17	0.74	0.17	0.74	<0.01	0.04	--	--	<0.01	0.03	0.12	0.54
C-1760 / 2,500 Hp Caterpillar G3608A4		1.91	8.38	2.75	12.06	2.57	11.28	0.17	0.74	0.17	0.74	<0.01	0.04	--	--	<0.01	0.03	0.12	0.54
C-1770 / 2,500 Hp Caterpillar G3608A4		1.91	8.38	2.75	12.06	2.57	11.28	0.17	0.74	0.17	0.74	<0.01	0.04	--	--	<0.01	0.03	0.12	0.54
C-1780 / 2,500 Hp Caterpillar G3608A4		1.91	8.38	2.75	12.06	2.57	11.28	0.17	0.74	0.17	0.74	<0.01	0.04	--	--	<0.01	0.03	0.12	0.54
C-171N / 1,380 Hp Waukesha 5794GSI		1.16	5.06	1.52	6.66	1.43	6.26	0.21	0.90	0.21	0.90	<0.01	0.03	--	--	0.02	0.07	0.15	0.67
C-172N / 1,380 Hp Waukesha 5794GSI		1.16	5.06	1.52	6.66	1.43	6.26	0.21	0.90	0.21	0.90	<0.01	0.03	--	--	0.02	0.07	0.15	0.67
C-173N / 1,380 Hp Waukesha 5794GSI		1.16	5.06	1.52	6.66	1.43	6.26	0.21	0.90	0.21	0.90	<0.01	0.03	--	--	0.02	0.07	0.15	0.67
C-174N / 1,380 Hp Waukesha 5794GSI		1.16	5.06	1.52	6.66	1.43	6.26	0.21	0.90	0.21	0.90	<0.01	0.03	--	--	0.02	0.07	0.15	0.67
C-181 / 1,775 Hp Caterpillar 3606		1.37	5.98	1.95	8.56	1.83	8.01	0.12	0.52	0.12	0.52	<0.01	0.03	--	--	<0.01	0.02	0.13	0.59
C-182 / 1,775 Hp Caterpillar 3606 C-183 / 1,775 Hp Caterpillar 3606		1.37	5.98	1.95	8.56	1.83	8.01	0.12	0.52	0.12	0.52	<0.01	0.03	--	--	<0.01	0.02	0.13	0.59
H-1 / Amine Reboiler Hot Oil Heater (34.2 MMBTU/hr)		0.86	3.74	3.42	14.98	1.27	5.54	0.16	0.72	0.16	0.72	0.02	0.09	--	--	<0.01	<0.01	--	--
H-2 / Mole Sieve Regeneration Gas Heater 1 (9.6 MMBTU/hr)		0.05	0.23	0.94	4.12	0.79	3.46	0.07	0.31	0.07	0.31	<0.01	0.02	--	--	<0.01	<0.01	--	--
H-4 / Cryo Trim Reboiler Hot Oil Heater 1 (6.93 MMBTU/hr)		0.04	0.16	0.68	2.98	0.57	2.50	0.05	0.23	0.05	0.23	<0.01	0.02	--	--	<0.01	<0.01	--	--
H-5 / Combo Hot Oil Heater 1 (51 MMBTU/hr)		1.28	5.58	3.06	13.40	1.89	8.27	0.24	1.07	0.24	1.07	0.03	0.13	--	--	<0.01	<0.01	--	--
H-6 / Combo Hot Oil Heater 2 (51 MMBTU/hr)		1.28	5.58	3.06	13.40	1.89	8.27	0.24	1.07	0.24	1.07	0.03	0.13	--	--	<0.01	<0.01	--	--
H-7 / Mole Sieve Regeneration Gas Heater 2 (6.23 MMBTU/hr)		0.03	0.15	0.61	2.68	0.51	2.25	0.05	0.20	0.05	0.20	<0.01	0.02	--	--	<0.01	<0.01	--	--
AMINE / Amine Unit Vent		0.99	4.35	--	--	--	--	--	--	--	--	--	--	0.03	0.13	0.07	0.32	--	--
AMINE-2 / Amine Unit 2 Vent		0.87	3.82	--	--	--	--	--	--	--	--	--	--	0.10	0.42	0.07	0.29	--	--
FLARE-1 / Plant 1 Flare		3.61	15.79	2.95	12.94	5.90	25.83	--	--	--	--	2.64	11.55	0.03	0.12	0.07	0.31	--	--
DEHY1 / Glycol Dehydration Unit (DEHY1)		3.52	15.41	--	--	--	--	--	--	--	--	--	--	--	--	0.17	0.76	--	--
FLARE-2 / Plant 2 Flare		5.34	23.41	3.37	14.76	6.73	29.46	--	--	--	--	8.76	38.38	0.09	0.41	0.07	0.29	--	--
COMB-1 / Tank Vent Combustor		2.23	9.78	0.49	2.15	0.41	1.80	0.04	0.16	0.04	0.16	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	--	--
TK-1 / Slop Oil Storage Tank (750-bbl)		0.04	0.18	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-2 / Slop Oil Storage Tank (750-bbl)		0.04	0.18	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-3 / Condensate Storage Tank (10,000-bbl)		0.30	1.30	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-4 / Condensate Storage Tank (10,000-bbl)		0.30	1.30	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-5 / Slop Oil Storage Tank (210-bbl)		0.03	0.13	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-6 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-7 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-8 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-9 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-10 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-11 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-12 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-13 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-14 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-15 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-16 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-17 / Open Drain Storage Tank (80-bbl)		0.08	0.35	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	--	--
TK-18 / Gasoline Storage Tank (500-gal)		0.03	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-19 / Diesel Storage Tank (500-gal)		<0.01	<0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
L-1 / Truck Loading		15.65	37.08	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	0.19	0.46	--	--
FUG-1 / Non-Monitored Site Fugitives		1.02	4.49	--	--	--	--	--	--	--	--	--	--	0.01	0.01	0.01	0.01	--	--
FUG-2 / Monitored Site Fugitives		0.74	3.24	--	--	--	--	--	--	--	--	--	--	0.01	0.01	0.01	0.01	--	--
VENT-1 / Blowdown Vent		20.41	8.49	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	0.62	0.76	--	--
VENT-2 / Other Venting		136.04	3.40	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	0.02	<0.01	--	--
VENT-3 / Engine Starter Vent		9.03	3.76	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	--	--
MSS-1 / MSS Emissions		9.15	3.23	--	--	--	--	0.68	<0.01	0.68	<0.01	--	--	<0.01	<0.01	<0.01	0.26	--	--
TOTAL EMISSIONS (TPY):			246.73		213.33		206.52		14.05		14.05		50.86		1.09		4.08		8.75
MAXIMUM OPERATING SCHEDULE:		Hours/Day		24		Days/Week		7		Weeks/Year	52	Hours/Year		Hours/Year				8760	

Note: Engine VOC inlcudes formaldehyde.

* The NRU may be powered by C5, C6, and/or C15. Out of the three (3) engines, only two (2) will ever operate at a given time. C5, C6, and C15 will not operate more than a combined 17,520 hours annually. C15 emissions are included in C5 and C6 emission totals.

3.0 FACILITY LOCATION AND DESCRIPTION

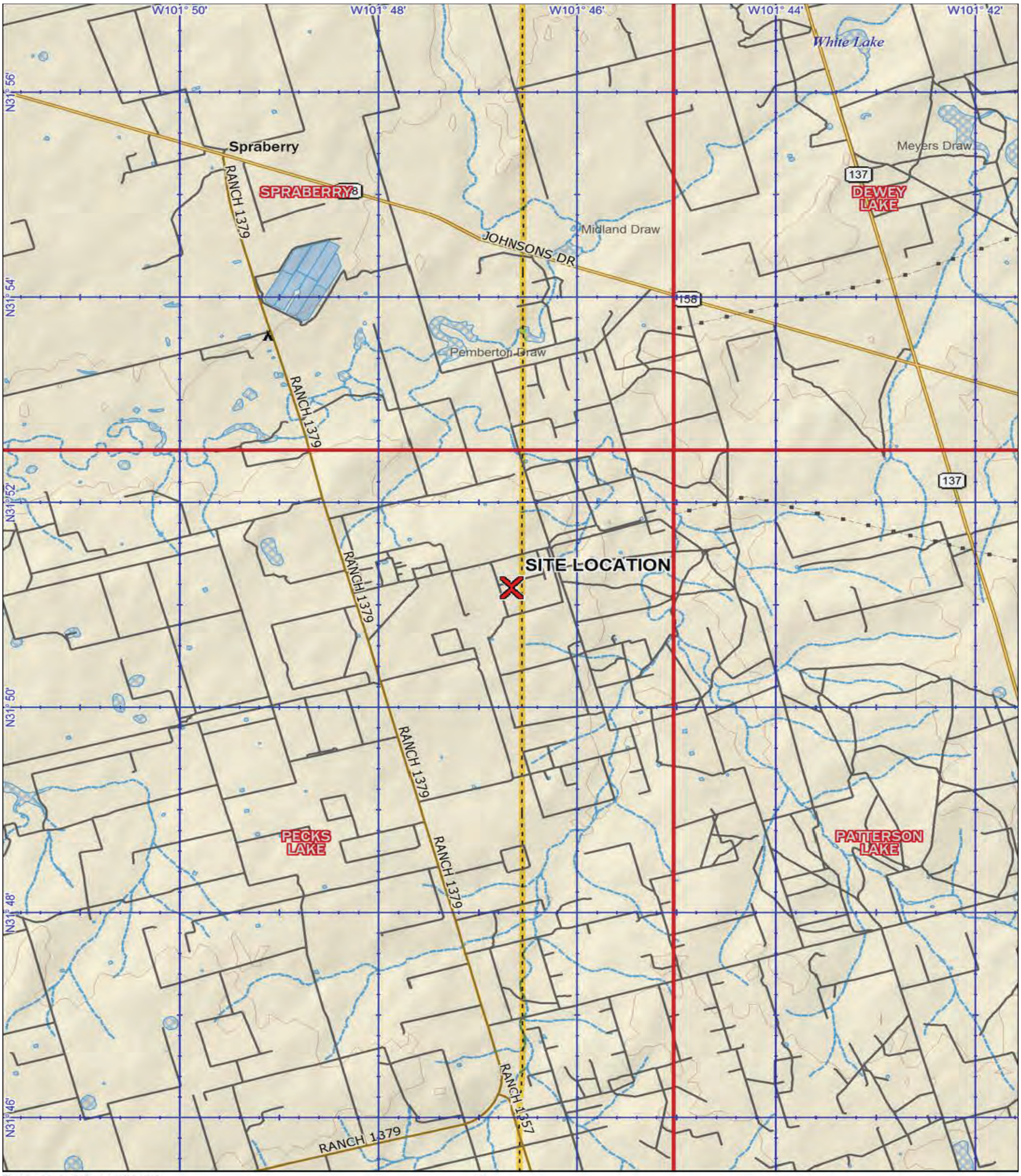
Navitas owns and operates the Newberry Gas Plant (Facility) located in Midland and Glasscock Counties, Texas. As shown on Figure 3-1, the Facility is located approximately 15 miles southeast of Midland, Texas. A Facility Plot Plan and Process Flow Diagram are provided in Figure 3-2 and Figure 3-3.

The latitude-longitude and Universal Transverse Mercator (UTM) coordinates of the Facility are:

Latitude: 31.852716
Longitude: -101.777816
UTM Coordinates: NAD 83, Zone 14
237,156 m Easting
3,527,475 m Northing

The Facility consists of two parallel cryogenic processing trains with capacities of 60 million standard cubic feet per day (MMSCFD) (Train 1, or T1) and 200 MMSCFD (Train 2, or T2) for a total plant capacity of 260 MMSCFD. Inlet gas is compressed and dehydrated at field compressor stations and enters the plant at high pressure through the Facility's slug catcher, where free hydrocarbon liquids are removed from the gas stream. The hydrocarbon liquids are reduced in pressure and stabilized in the two parallel plant stabilizer systems. From the slug catcher, inlet gas is split to the two processing trains, each of which consists of a 400 gpm amine plant for removal of CO_2 and small amounts of H_2S, cryogenic processing and demethanization, and residue compression. Acid gas components, H_2S and CO_2, absorbed by the lean amine solution in each amine contactor are liberated from the rich amine solution in the amine pre-heater and regeneration system. Regenerated, lean amine is circulated back to the amine contactors to continue the process of gas sweetening. Resultant vapors from the stabilization processes are routed back to the inlet of the plant. Gas is resaturated in the amine contactor and again dehydrated upstream of the cryogenic process to allow for processing at the cold cryogenic temperatures. For T1 this is accomplished solely with a molecular sieve dehydration and regeneration system. T2 incorporates a glycol dehydration unit upstream of molecular sieve dehydration to provide bulk water removal. The cryogenic processes include heat exchangers, a turboexpander unit, and gas/liquids separation. From the cryogenic plants, residue gas is recompressed and delivered to sales pipelines. Natural gas liquids removed from the inlet gas stream in the stabilization and cryogenic systems are filtered and pumped to sales or removed via pressurized tank truck. The Facility also incorporates a nitrogen rejection unit (NRU) to remove nitrogen in residue gas to specification which consists of various heat exchangers, separation, and recompression. Stabilized condensate will be removed from the Facility's atmospheric tanks via tank trucks in dedicated service. The vapors during truck loading will be routed to the combustor. Unstabilized condensate may be removed from the Facility's pressurized storage tanks via pressurized tank trucks. Flash vapors generated during this process will be captured and sent to the combustor.

Emissions from MSS activities are included in this application.



TN
MN (6.0°E)

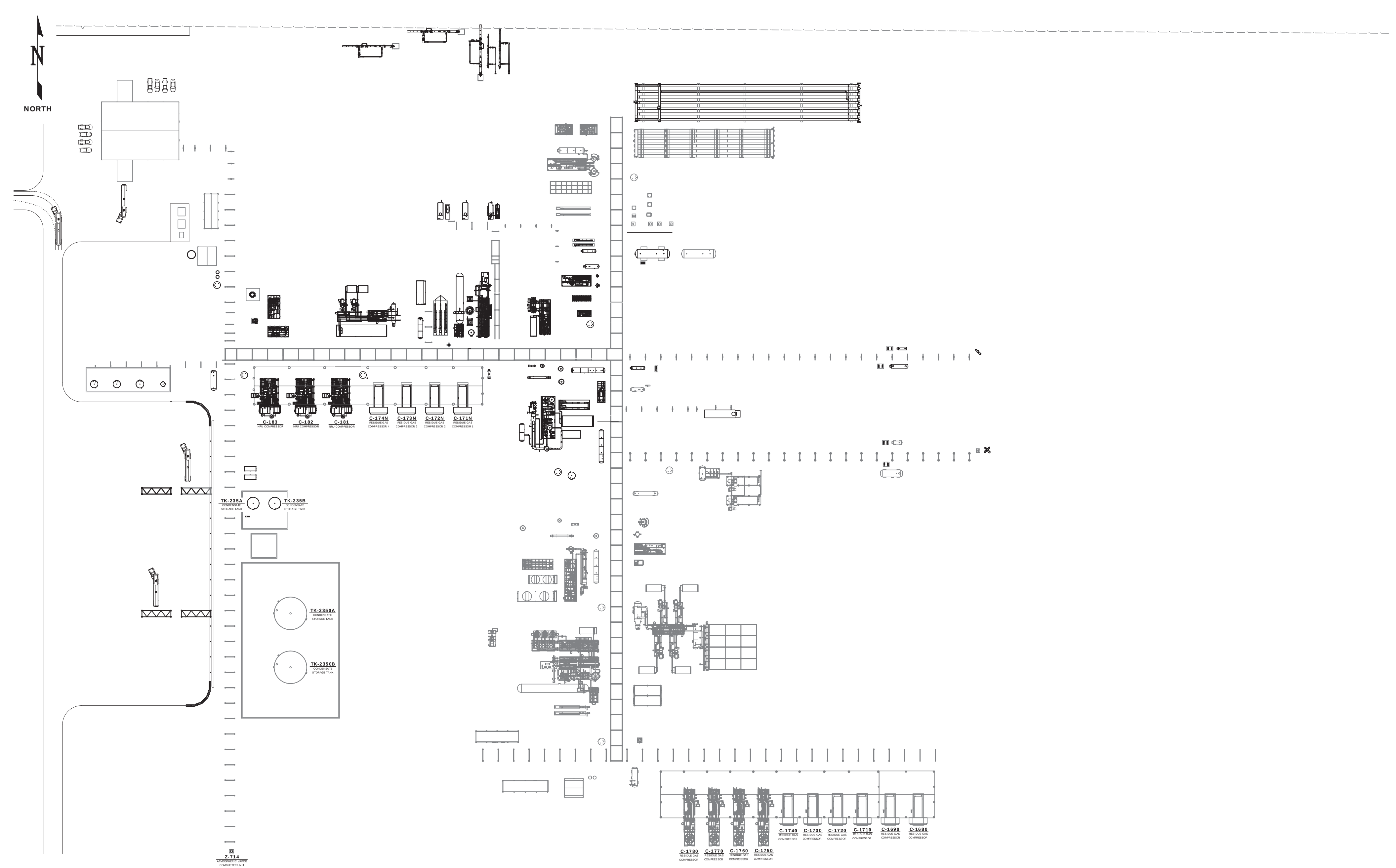
ALTAMIRA
formerly known as Enviro Clean Cardinal

525 CENTRAL PARK DR.
SUITE 500
OKALHOMA CITY, OK 73105

www.altamira-us.com

FIGURE TITLE	AREA MAP
DOCUMENT TITLE	NON-RULE STANDARD PERMIT REGISTRATION
CLIENT	NAVITAS MIDSTREAM MIDLAND BASIN, LLC
LOCATION	NEWBERRY GAS PLANT MIDLAND COUNTY, TEXAS

DATE	8/9/2019
SCALE	AS SHOWN
DESIGNED BY	AD
APPROVED BY	ZC
DRAWN BY	AD
PROJECT NUMBER	NMPATX0043
FIGURE NUMBER	3-1



REFERENCE DRAWINGS

DWG NO.	DESCRIPTION

CLIENT	PROJECT ENGINEER	LEAD ENGINEER	CHECK

REVISIONS

NO.	DESCRIPTION	DATE	BY

CLIENT	PROJECT ENGINEER	LEAD ENGINEER	CHECK

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR APPROVAL	04/16/19	JRJ

		DATE
SCALE:	NTS	
DESIGNED:	G.P. GREEN	03/22/19
DRAWN:	J. JOHNSON	03/22/19
CHECKED:	S. McCRADY	03/22/19
APPROVED:	B. VILNER	03/22/19
APPROVED:		

CLIENT: NAVITAS MIDSTREAM

NAVITAS MIDSTREAM PARTNERS

LOCATION: MIDLAND, TX

SE Samuel Engineering
We Provide Solutions
8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111
TX-REGISTERED ENGINEERING FIRM NO. F13934
Phone: 303.714.4840
Fax: 303.714.4800

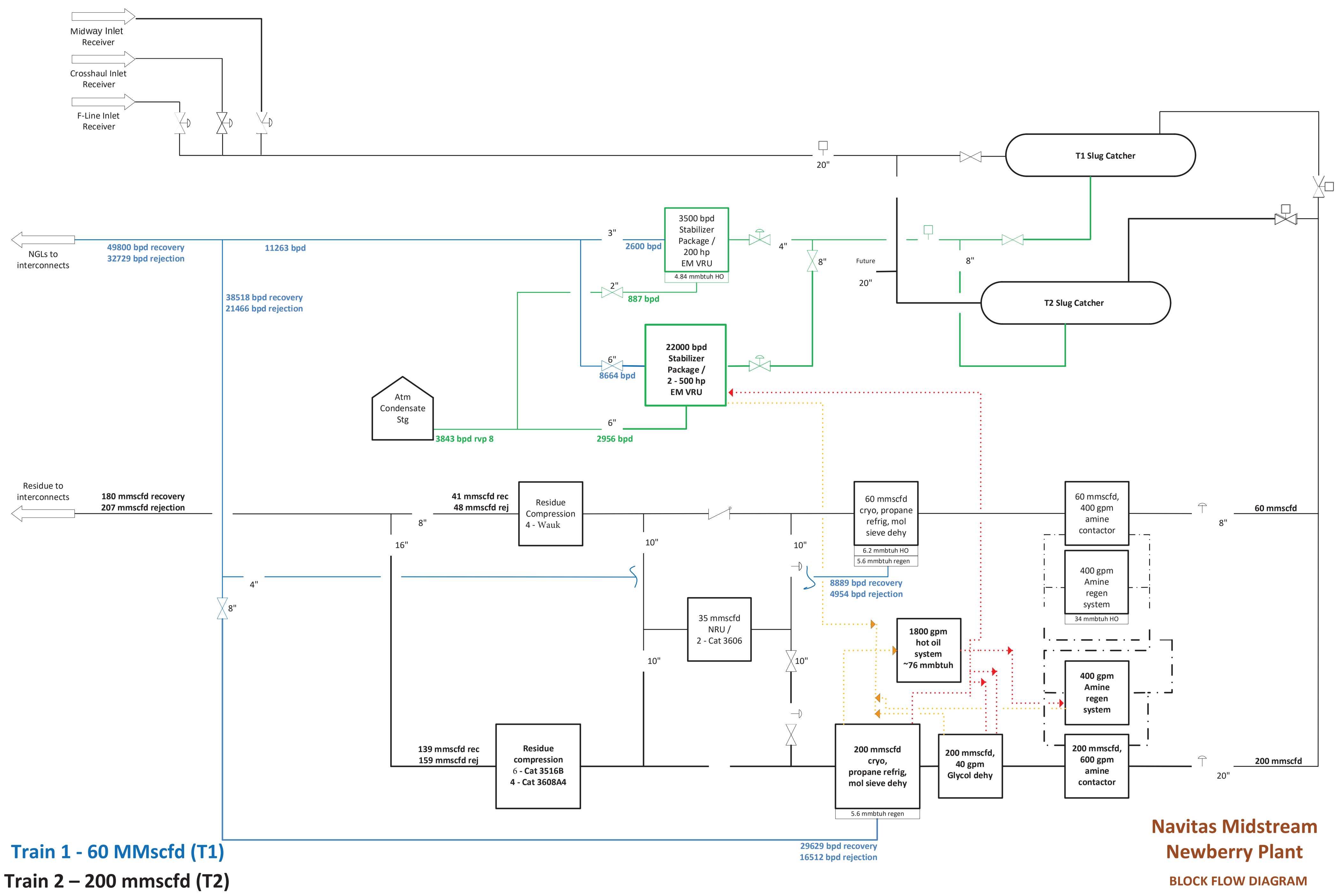
TITLE

NEWBERRY GAS PROCESSING PLANT
PLOT PLAN
OVERALL EQUIPMENT GENERAL ARRANGEMENT

PROJECT NUMBER: 18333

DRAWING NUMBER: NBP-PP-00-050

REV: A



Midway Inlet Receiver
Crosshaul Inlet Receiver
F-Line Inlet Receiver
20"
T1 Slug Catcher
T2 Slug Catcher
Future
20"
8"
3500 bpd Stabilizer Package / 200 hp EM VRU
4.84 mmbtuh HO
4"
8"
3"
2600 bpd
2"
887 bpd
22000 bpd Stabilizer Package / 2 - 500 hp EM VRU
6"
8664 bpd
6"
2956 bpd
Atm Condensate Stg
3843 bpd rvp 8
NGLs to interconnects
49800 bpd recovery
32729 bpd rejection
11263 bpd
38518 bpd recovery
21466 bpd rejection
Residue to interconnects
180 mmscfd recovery
207 mmscfd rejection
8"
41 mmscfd rec
48 mmscfd rej
Residue Compression 4 - Wauk
16"
10"
10"
60 mmscfd cryo, propane refrig, mol sieve dehy
6.2 mmbtuh HO
5.6 mmbtuh regen
8889 bpd recovery
4954 bpd rejection
60 mmscfd, 400 gpm amine contactor
400 gpm Amine regen system
34 mmbtuh HO
8"
60 mmscfd
4"
8"
35 mmscfd NRU / 2 - Cat 3606
10"
10"
1800 gpm hot oil system ~76 mmbtuh
400 gpm Amine regen system
139 mmscfd rec
159 mmscfd rej
Residue compression 6 - Cat 3516B 4 - Cat 3608A4
200 mmscfd cryo, propane refrig, mol sieve dehy
5.6 mmbtuh regen
200 mmscfd, 40 gpm Glycol dehy
200 mmscfd, 600 gpm amine contactor
20"
200 mmscfd
29629 bpd recovery
16512 bpd rejection
Train 1 - 60 MMscfd (T1)
Train 2 – 200 mmscfd (T2)
Navitas Midstream
Newberry Plant
BLOCK FLOW DIAGRAM

4.0 AIR EMISSIONS

Emissions from the engines are based on manufacturer's data, AP-42 emission factors, and New Source Performance Standards (NSPS) Subpart JJJJ. The engine emission calculations are included in Appendix A. The engine manufacturer data sheets are provided in Appendix B.

Potential VOC and HAP emissions from the glycol dehydrator still vent (DEHY1) were estimated using GRI-GLYCalc Version 4.0 software, gas analysis from a representative site, a maximum natural gas throughput of 200 million standard cubic feet per day (MMScf/d), a maximum glycol circulation rate of 41 gallons per minute (gpm), and a still vent control efficiency of 98%. The still vent vapors are initially routed to a condenser. The non-condensable vapors are routed to one of the flares which provides a 98% reduction of emissions. The glycol dehydrator will be equipped with a flash tank, and during normal operations the vapors from the flash tank will be routed to one of the flares. While the vapors may go to either flare, for calculation purposes, it was assumed that the vapors are routed to FLARE-2. The VOC and HAP emissions summary table is included in Appendix A of this application. GRI-GLYCalc output and supporting data are included in Appendix B.

Emissions from fuel gas combustion for the heaters (H-1 through H-7) are based on the AP-42 natural gas combustion factors, manufacturer provided factors, and maximum firing rates. Heater emission calculations are included in Appendix A.

Potential VOC and HAP emissions from the amine units (AMINE and AMINE-2) were calculated using a representative gas analysis and ProMax. The vapors from the flash tank vent and the acid vent will be controlled by routing the emissions to one of the plant flares (FLARE-1 or FLARE-2). The emissions will be reduced by at least 98%. For calculation purposes, it was assumed that AMINE is routed to FLARE-1 and AMINE-2 is routed to FLARE-2. The VOC and HAP emissions summary table is included in Appendix A of this Application. The ProMax flow diagram and supporting data are included in Appendix B.

EPA TANKS 4.0.9d was used to estimate volatile organic compound (VOC) emission from the storage tanks. Vapors from the fixed roof slop oil storage tanks are routed to the combustor (COMB-1) where the vapors are combusted. Tank emission calculations are included in Appendix A. TANKS 4.0.9d printouts used to calculate tank emissions are included in Appendix B

Equipment leak fugitive emissions (FUG-1) were estimated using estimated component counts (i.e., valves, flanges, etc.), TCEQ Technical Guidance Document: Equipment Leak Fugitives, and a gas analysis. Components subject to NSPS Subpart OOOOa (FUG-2) are monitored in accordance with EPA protocols. A percent reduction is applied to these components based on the monitoring frequency and leak definition. The calculations are provided in Appendix A.

Emissions from truck loading operations were estimated using the AP-42 calculation methodology assuming a 70% control. The captured vapors are routed to the combustor (COMB-1). Additionally, flash emissions resulting from condensate truck loading from the pressurized storage tanks are controlled by COMB-1. The calculations are provided in Appendix A.

Emissions from the flares (FLARE-1 and FLARE-2) were estimated using TCEQ flare factors and stream composition data from ProMax (for the amine units) and GRI-GlyCalc (for the glycol dehydrator). The stream data for PROCESS-1 and PROCESS-2 are taken from a gas sample. The process streams consist primarily of vapors from the closed drain vent systems and from pressurized NGL truck loading operations. The calculations are provided in Appendix A.

Potential VOC emissions from compressor startups and blowdowns and miscellaneous venting were determined using engineering calculations and the representative gas analysis. Emissions from other MSS activities were calculated using TCEQ default parameters and assumptions. The calculations are provided in Appendix A.

5.0 GENERAL REQUIREMENTS

As required by Section VI of the TCEQ Standard Permit Registration Form PI-1S, this section addresses Navitas' compliance with the applicable general requirements for the non-rule standard permit specified in Texas Health and Safety Code section 382.05195 and with the requirements specific to Non-Rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities.

5.1 Non-Rule Standard Permit Applicability

Navitas will meet the conditions specified in this section, specifically:

(a) Applicability

Navitas is voluntarily registering the Facility under the new requirements in (a) – (k). The Facility is not located in the Barnett Shale Area.

(b) Definitions and Scope

This Facility is not a major stationary source under Nonattainment or Prevention of Significant Deterioration Review Definitions.

(c)(1) Existing oil and gas sites (OGS) which are authorized by previous versions of this standard permit require registration unless otherwise specified.

The Facility is not authorized by any previous versions of this Standard Permit.

(c)(2)(A) All facilities shall not exceed the thresholds for major source or major modification as defined in 30 TAC §116.12, Nonattainment and Prevention of Significant Deterioration Review Definitions, and in Federal Clean Air Act §112(g) or §112(j).

This Facility is not a major stationary source under Nonattainment or Prevention of Significant Deterioration Review Definitions.

(c)(2)(B) All facilities shall comply with all applicable 40 Code of Federal Regulations (CFR), Parts 60, 61, and 63 requirements for New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT).

The engines at the Facility will comply with NSPS Subpart JJJJ requirements. By meeting the NSPS Subpart JJJJ requirements, the engines will comply with all applicable MACT Subpart ZZZZ requirements. The heaters rated of 10 MMBtu/hr are subject to NSPS Subpart Dc. The glycol dehydrator (DEHY1) will comply with the record keeping requirements of MACT Subpart HH. The compressors will comply with NSPS Subpart OOOOa, and the fugitives will comply with NSPS Subpart OOOOa. The storage tanks will be certified to have emissions less than 6 TPY of VOC per tank and will not be subject to NSPS Subpart OOOOa.

(c)(2)(C) All facilities shall comply with all applicable requirements of 30 TAC Chapters 111, Control of Air Pollution from Visible Emissions and Particulate Matter, 112, Control of Air Pollution from Sulfur Compounds, 113, Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants, 115, Control of Air Pollution from Volatile Organic Compounds, and 117, Control of Air Pollution from Nitrogen Compounds.

Navitas will comply with the applicable sections of Chapter 111, Chapter 112, and Chapter 113. Chapter 115 and Chapter 117 are not applicable because of the Facility location.

(c)(4) Co-located facilities previously authorized by, and continuing to meet, the conditions of a PBR must be incorporated into the standard permit and meet the requirements of paragraphs (e), (i), and (j). Previously authorized facilities that are unchanged do not need to meet the requirements of paragraph (h).

There are no previously authorized facilities at the Facility.

(d) Only specific facilities and groups of facilities may be evaluated for a standard permit, along with supporting infrastructure equipment and facilities.

Only authorized facilities and equipment are authorized under this standard permit.

(e)(1) All facilities which have the potential to emit air contaminants must be maintained in good working order and operate properly during facility operations. Each operator shall establish and maintain a program to replace, repair, and/or maintain facilities to keep them in good working order.

Navitas will maintain the Facility in good working order and keep all required maintenance records.

(e)(2) Any OGS facility shall be operated at least 50 feet from any property line or receptor (whichever is closer to the facility).

All new equipment authorized under this standard permit will be located more than 50 feet from the nearest property line.

(e)(3) Engine and turbines shall meet the emission and performance standards listed in Table 6 in paragraph (m).

The engines at the Facility will meet the requirements listed in Table 6.

(e)(4) Open-topped tanks or ponds containing VOCs or H_2S are allowed up to a PTE equal to 1 tpy of VOC and 0.1 tpy of H_2S.

No open-topped tanks or ponds will be located at the Facility; therefore, this subsection is not applicable.

(e)(5) All process equipment and storage facilities individually must meet the requirements of BACT listed in Table 10 in paragraph (m). Any combination of process equipment and storage facilities with an uncontrolled PTE of equal to or greater than 25 tpy of VOC must also meet the requirements of Table 10, row titled "Combined Control Requirements".

All equipment at the Facility will meet the applicable requirements of BACT in Table 10.

(e)(6) All fugitive components shall meet the requirements of this subsection.

The fugitive components are subject to a LDAR program because the uncontrolled potential to emit is < 10 TPY VOC.

(e)(7) Tanks and vessels must utilize a paint color that minimizes the effects of solar heating (including, but not limited to, white or aluminum).

All tanks located at the Facility will be painted a light color.

(e)(8) All emission estimation methods including GRI-GLYCalc, AmineCalc, E&P Tanks, and Tanks 4.0, must be used with monitoring data generated in accordance with Table 8 in subsection (m). All emission estimation methods must also be used in a way that is consistent with protocols established by the commission or promulgated in federal regulations. Where control of emissions is relied upon to meet subsection (k) of this section, control monitoring is required.

All emission estimation methods were prepared in accordance with this subsection.

(e)(9) Process reboilers, heaters, and furnaces that are also used for control of waste gas streams may claim 50 to 99% destruction efficiency for VOCs and H_2S depending on the design and level of monitoring applied.

The heaters are not used to control waste gas streams; therefore, this subsection is not applicable.

(e)(10) Vapor recovery systems (VRSs) may claim up to 100% control. The control efficiency is based on whether it is a mechanical VRU (mVRU) or a liquid VRU (lVRU). The VRUs must meet the appropriate design, monitoring, and record-keeping in Table 7 and Table 8 in paragraph (m).

No VRU will be located at the Facility; therefore, this subsection is not applicable.

(e)(11) Flares used for control of emissions from production, planned MSS, emergency, or upset events may claim design destruction efficiency of 98% for VOCs and H_2S and 99% for VOCs containing no more than three carbon atoms that contain no element other than carbon and hydrogen.

The flares (FLARE-1, FLARE-2) will meet the requirements of this subsection.

(e)(12) Thermal oxidation and vapor combustion control devices may claim design destruction efficiency from 90% to 99.9% for VOCs and H_2S depending on the design and the level of monitoring and testing applied.

The combustor (COMB-1) will meet the requirements of this subsection by meeting the flare requirements.

(f) For all previous claims of this standard permit (or any previous version of this standard permit) existing authorized facilities, or group of facilities, are not required to meet the requirements of this standard permit, with the exception of planned MSS, until a renewal under the standard permit is submitted after January 31, 2015.

There are no previous claims of this standard permit.

(g) Any claim under this standard permit must comply with all applicable requirements of 30 TAC §116.610; §116.611, Registration to Use a Standard Permit; §116.614, Standard Permit Fees; and §116.615, General Conditions. This standard permit supersedes: the

notification requirements of 30 TAC §116.615, General Conditions; and the emission limitations of 30 TAC §116.610(a)(1), Applicability.

The Facility will comply with all applicable requirements of §116.610, §116.611, §116.614, and §116.615.

(h) **Total maximum estimated registered or certified emissions shall meet the most stringent limits in this standard permit. All emissions estimates must be based on representative worst-case operations and planned MSS activities.**

The emissions estimated represented in this standard permit reflect the worse-case operations for the Facility.

(i)(1) **Prior to January 5, 2012, representations and registration of planned MSS is voluntary, but if represented, must meet the applicability limits of this standard permit. After January 5, 2012, all emissions from planned MSS activities and facilities must be considered for compliance with applicable limits of this standard permit unless otherwise specified in (b)(7). This standard permit may not be used at a site or for facilities authorized under 30 TAC §116.111 if planned MSS has already been authorized under that permit.**

All planned MSS emissions will comply with the applicable limits of this standard permit.

(i)(2) **As specified, releases of air contaminants during, or as result of, planned MSS must be quantified and meet the emission limits in this standard permit, as applicable.**

All planned MSS emissions meet the emission limits of this standard permit.

(i)(3) **Other planned MSS activities authorized by this standard permit are limited. These planned MSS activities require only recordkeeping of the activity.**

There are no other planned MSS emissions from the Facility.

(i)(4) **Engine/compressor start-ups associated with preventative system shutdown activities have the option to be authorized as part of typical operations.**

These emissions are included in this application.

(j) **All records shall be maintained at a site in written or electronic form and be readily available to the agency or local air pollution control program with jurisdiction upon request. All required records must be**

kept at the facility site. If the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site.

Navitas will maintain records at the Facility or a nearby field office.

(k) All impact evaluations must be completed on a contaminant-by-contaminant basis for only any net emissions increases resulting from a project and must meet the following as appropriate: (A) Compliance with state or federal ambient air standards shall be demonstrated for NO_2, SO_2, and H_2S at any property-line within 1 mile of a project; (B) Compliance with hourly effects screening levels (ESLs) for benzene and annual ESL for benzene, shall be determined at the nearest receptor within 1 mile of a project.

There is not a receptor within one (1) mile of the Facility. Therefore, a benzene ESL review is not required. The site-wide H_2S emission rate is greater than 0.025 lb/hr, the SO_2 emission rate is greater than 2.0 lb/hr, and the NO_x emission rate is greater than 4.0 lb/hr; therefore, impacts evaluations for NOx, H_2S, and SO_2 are required.

The SCREEN3 modeling printouts are included in Appendix C. The modeling demonstrates compliance with the applicable state and federal air quality standards for NO_2, H_2S, and SO_2.

5.2 30 TAC §116.610 Applicability

Navitas will meet the conditions specified in this section, specifically:

116.610 (a)(1) Any project that results in a net increase in emissions of air contaminants from the project other than carbon dioxide, water, nitrogen, methane, ethane, hydrogen, oxygen, or those for which a national ambient air quality standard has been established must meet the emission limitations of §106.261 of this title (relating to Facilities (Emission Limitations), unless otherwise specified by a particular standard permit.

This section is not applicable to sites authorized under the Non-Rule Standard Permit.

116.610 (a)(2) Construction or operation of the project must be commenced prior to the effective date of a revision to this subchapter under which the project would no longer meet the requirements for a standard permit.

This section is not applicable to sites authorized under the Non-Rule Standard Permit.

116.610 (a)(3) The proposed project must comply with the applicable provisions of the Federal Clean Air Act (FCAA), §111 (concerning New Source Performance Standards) as listed under 40 Code of Federal Regulations (CFR) Part 60, promulgated by the United States Environmental Protection Agency (EPA).

The Facility will comply with the applicable requirements of Part 60 NSPS Subpart Kb, Dc, JJJJ and Subpart OOOOa.

116.610 (a)(4) The proposed project must comply with the applicable provisions of FCAA, §112 (HAPS) as listed under 40 CFR Part 61.

40 CFR 61 requirements relating to hazardous air pollutants do not apply to this Facility, thus compliance is not required.

116.610 (a)(5) The proposed project must comply with the applicable maximum achievable control technology standards as listed under 40 CFR Part 63.

The Facility is not a major source of HAPs but is classified as an area source. The engines at the Facility are subject to MACT ZZZZ and will show compliance by meeting the requirements of NSPS Subpart JJJJ. The glycol dehydrator is subject to MACT Subpart HH recordkeeping requirements.

116.610 (a)(6) If subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program) the proposed facility, group of facilities, or account must obtain allocation to operate.

This project is not subject to Chapter 101, Subchapter H, Division 3 (Mass Emissions Cap and Trade Program).

116.610 (b) Any project that constitutes a new major stationary source or major modification as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions) is subject to the requirements of §116.110 of this title (relating to Applicability) rather than this subchapter.

This Facility is not a major stationary source under Nonattainment or Prevention of Significant Deterioration Review Definitions.

116.610 (c) Persons may not circumvent by artificial limitations the requirements of §116.110 of this title.

Navitas will not circumvent the requirements of §116.110.

116.610 (d) **Any project involving a proposed affected source (as defined in §116.15(1) of this title (relating to Section 112(g) Definitions)) shall comply with all applicable requirements under Subchapter E of this chapter (relating to Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources (FCAA, §112(g), 40 CFR Part 63)). Affected sources subject to Subchapter E of this chapter may use a standard permit under this subchapter only if the terms and conditions of the specific standard permit meet the requirements of Subchapter E of this chapter.**

This project does not involve an affected source, as defined in §116.15(1) of this title; therefore, this section is not applicable.

5.3 30 TAC §116.611 Registration to Use a Standard Permit

Navitas will meet the conditions specified in this section, specifically:

116.611(a) **If required, registration to use a standard permit shall be sent be certified mail, return receipt requested, or hand delivered to the executive director, the appropriate commission regional office, and any local air program with jurisdiction, before a standard permit can be used. The registration must be submitted on the required form and must document compliance with the requirements of this section.**

The standard permit shall be prepared and submitted in accordance with this section and the requirements of the Non-Rule Standard Permit.

116.611(b) **Construction may begin any time after receipt of written notification from the executive director that there are no objections or 45 days after receipt by the executive director of the registration, whichever occurs first, except where a different time period is specified for a particular standard permit.**

This section is not applicable to sites authorized under the Non-Rule Standard Permit.

116.611(c) **In order to avoid applicability of Chapter 122 of this title (relating to Federal Operating Permits), a certified registration shall be submitted.**

A PI-1S form is being submitted with this registration.

5.4 30 TAC §116.614 Standard Permit Fees

Navitas will meet the conditions specified in this section by submitting the standard permit fee of $900.

5.5 30 TAC §116.615 General Conditions

Navitas will meet the conditions specified in this section, specifically:

116.615(1) Protection of public health and welfare

The emissions from the Facility comply with all applicable rules and regulations of the TCEQ.

116.615(2) Standard permit representations

Navitas understands that the representations made in this application become conditions upon which the Facility operates.

116.615(3) Standard permit in lieu of permit amendment

The Facility does not operate under any permits authorized under 116.110.

116.615(4) Construction progress

The notification requirements do not apply to sites authorized under the Non-Rule Standard Permit.

116.615(5) Start-up notification

The notification requirements do not apply to sites authorized under the Non-Rule Standard Permit.

116.615(6) Sampling requirements

If sampling is required, Navitas will contact the Midland Regional Office to obtain the necessary forms and procedures and to obtain approval of the testing procedures.

116.615(7) Equivalency of methods

Navitas will contact the Midland Regional Office if alternate methods of controls, testing, or monitoring are proposed.

116.615(8) Recordkeeping

Navitas will maintain sufficient records to demonstrate compliance with this standard permit.

116.615(9) Maintenance of emission control

Navitas will maintain all air pollution emission capture and abatement equipment in good working order and will operate it properly during normal facility operations.

116.615(10) Compliance with rules

The Facility will comply with all applicable air quality rules.

116.615(11) Distance limitations, setbacks, and buffer zones

This section is not applicable to sites authorized under the Non-Rule Standard Permit.

APPENDICES

APPENDIX A

EMISSION CALCULATIONS

TABLE 1
POTENTIAL EMISSIONS SUMMARY
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Emissions Source	FIN/EPN	NO_x		VOC		CO		$PM_{10}/PM_{2.5}$		SO_2		H_2S		Benzene		Formaldehyde		Other HAPs[1]	
		lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr	lb/hr)	T/yr)
Updated/New Sources																			
1,380 Hp Caterpillar 3516B	C-1680	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
1,380 Hp Caterpillar 3516B	C-1690	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
1,380 Hp Caterpillar 3516B	C-1710	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
1,380 Hp Caterpillar 3516B	C-1720	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
1,380 Hp Caterpillar 3516B	C-1730	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
1,380 Hp Caterpillar 3516B	C-1740	1.52	6.66	0.73	3.20	1.26	5.50	0.10	0.45	0.01	0.03	--	--	0.005	0.02	0.10	0.46	--	--
2,500 Hp Caterpillar G3608A4	C-1750	2.75	12.06	1.79	7.84	2.57	11.28	0.17	0.74	0.01	0.04	--	--	0.01	0.03	0.12	0.54	--	--
2,500 Hp Caterpillar G3608A4	C-1760	2.75	12.06	1.79	7.84	2.57	11.28	0.17	0.74	0.01	0.04	--	--	0.01	0.03	0.12	0.54	--	--
2,500 Hp Caterpillar G3608A4	C-1770	2.75	12.06	1.79	7.84	2.57	11.28	0.17	0.74	0.01	0.04	--	--	0.01	0.03	0.12	0.54	--	--
2,500 Hp Caterpillar G3608A4	C-1780	2.75	12.06	1.79	7.84	2.57	11.28	0.17	0.74	0.01	0.04	--	--	0.01	0.03	0.12	0.54	--	--
1,380 Hp Waukesha 5794GSI	C-171N	1.52	6.66	1.00	4.39	1.43	6.26	0.21	0.90	0.01	0.03	--	--	0.02	0.07	0.15	0.67	--	--
1,380 Hp Waukesha 5794GSI	C-172N	1.52	6.66	1.00	4.39	1.43	6.26	0.21	0.90	0.01	0.03	--	--	0.02	0.07	0.15	0.67	--	--
1,380 Hp Waukesha 5794GSI	C-173N	1.52	6.66	1.00	4.39	1.43	6.26	0.21	0.90	0.01	0.03	--	--	0.02	0.07	0.15	0.67	--	--
1,380 Hp Waukesha 5794GSI	C-174N	1.52	6.66	1.00	4.39	1.43	6.26	0.21	0.90	0.01	0.03	--	--	0.02	0.07	0.15	0.67	--	--
1,775 Hp Caterpillar 3606	C-181	1.95	8.56	1.23	5.39	1.83	8.01	0.12	0.52	0.01	0.03	--	--	0.005	0.02	0.13	0.59	--	--
1,775 Hp Caterpillar 3606	C-182	1.95	8.56	1.23	5.39	1.83	8.01	0.12	0.52	0.01	0.03	--	--	0.005	0.02	0.13	0.59	--	--
1,775 Hp Caterpillar 3606	C-183											--	--					--	--
Amine Reboiler Hot Oil Heater (34.2 MMBTU/hr)	H-1	3.42	14.98	0.86	3.74	1.27	5.54	0.16	0.72	0.02	0.09	--	--	0.0001	0.0003	--	--	--	--
Mole Sieve Regeneration Gas Heater 1 (9.6 MMBTU/hr)	H-2	0.94	4.12	0.05	0.23	0.79	3.46	0.07	0.31	0.01	0.02	--	--	0.00002	0.0001	--	--	--	--
Cryo Trim Reboiler Hot Oil Heater 1 (6.93 MMBTU/hr)	H-4	0.68	2.98	0.04	0.16	0.57	2.50	0.05	0.23	0.004	0.02	--	--	0.00001	0.0001	--	--	--	--
Combo Hot Oil Heater 1 (51 MMBTU/hr)	H-5	3.06	13.40	1.28	5.58	1.89	8.27	0.24	1.07	0.03	0.13	--	--	0.0001	0.0005	--	--	--	--
Combo Hot Oil Heater 2 (51 MMBTU/hr)	H-6	3.06	13.40	1.28	5.58	1.89	8.27	0.24	1.07	0.03	0.13	--	--	0.0001	0.0005	--	--	--	--
Mole Sieve Regeneration Gas Heater 2 (6.23 MMBTU/hr)	H-7	0.61	2.68	0.03	0.15	0.51	2.25	0.05	0.20	0.004	0.02	--	--	0.00001	0.0001	--	--	--	--
Amine Unit Vent	AMINE	--	--	0.99	4.35	--	--	--	--	--	--	0.03	0.13	0.07	0.32	--	--	0.10	0.43
Amine Unit 2 Vent	AMINE-2	--	--	0.87	3.82	--	--	--	--	--	--	0.10	0.42	0.07	0.29	--	--	0.09	0.38
Plant 1 Flare	FLARE-1	2.95	12.94	3.61	15.79	5.90	25.83	--	--	2.64	11.55	0.03	0.12	0.07	0.31	--	--	--	--
Glycol Dehydration Unit (DEHY1)	DEHY1	--	--	3.52	15.41	--	--	--	--	--	--	--	--	0.17	0.76	--	--	0.26	1.16
Plant 2 Flare	FLARE-2	3.37	14.76	5.34	23.41	6.73	29.46	--	--	8.76	38.38	0.09	0.41	0.07	0.29	--	--	--	--
Tank Vent Combustor	COMB-1	0.49	2.15	2.23	9.78	0.41	1.80	0.04	0.16	0.003	0.01	0.00	0.00	0.00	0.00	--	--	--	--
Slop Oil Storage Tank (750-bbl)	TK-1	--	--	0.04	0.18	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Slop Oil Storage Tank (750-bbl)	TK-2	--	--	0.04	0.18	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Condensate Storage Tank (10,000-bbl)	TK-3	--	--	0.30	1.30	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Condensate Storage Tank (10,000-bbl)	TK-4	--	--	0.30	1.30	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Slop Oil Storage Tank (210-bbl)	TK-5	--	--	0.03	0.13	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-6	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-7	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-8	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-9	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-10	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-11	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-12	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-13	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-14	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-15	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-16	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Open Drain Storage Tank (80-bbl)	TK-17	--	--	0.08	0.35	--	--	--	--	--	--	--	--	0.00	0.00	--	--	--	--
Gasoline Storage Tank (500-gal)	TK-18	--	--	0.03	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Storage Tank (500-gal)	TK-19	--	--	0.0001	0.0003	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Truck Loading	L-1	--	--	15.65	37.08	--	--	--	--	--	--	0.00	0.00	0.19	0.46	--	--	--	--
Non-Monitored Site Fugitives	FUG-1	--	--	1.02	4.49	--	--	--	--	--	--	0.01	0.01	0.01	0.01	--	--	--	--
Monitored Site Fugitives	FUG-2	--	--	0.74	3.24	--	--	--	--	--	--	0.01	0.01	0.01	0.01	--	--	--	--
Blowdown Vent	VENT-1	--	--	20.41	8.49	--	--	--	--	--	--	0.00	0.00	0.62	0.76	--	--	--	--
Other Venting	VENT-2	--	--	136.04	3.40	--	--	--	--	--	--	0.001	0.00002	0.02	0.0004	--	--	--	--
Engine Starter Vent	VENT-3	--	--	9.03	3.76	--	--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--
MSS Emissions	MSS-1	--	--	9.15	3.23	--	--	0.68	0.001	--	--	0.00	0.00	0.003	0.26	--	--	0.17	0.03
Total Facility Emissions		**48.71**	**213.33**	**231.83**	**237.98**	**47.15**	**206.52**	**3.89**	**14.05**	**11.61**	**50.86**	**0.27**	**1.09**	**1.44**	**4.08**	**2.00**	**8.75**	**0.62**	**2.00**
Plus Formaldehyde				**2.00**	**8.75**														
Total				**233.83**	**246.73**														

Notes:
1. Other HAPs includes benzene.
2. The NRU may be powered by C5, C6, and/or C15. Out of the three (3) engines, only two (2) will ever operate at a given time. C5, C6, and C15 will not operate more than a combined 17,520 hours annually.
* C15 emissions are included in C5 and C6 emission totals.

TABLE 2
POTENTIAL EMISSIONS FROM
CATERPILLAR 3516B (C-1680)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 3
POTENTIAL EMISSIONS FROM
CATERPILLAR 3516B (C-1690)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 4
POTENTIAL EMISSIONS FROM
CATERPILLAR G3516B (C-1710)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors grams/Hp-hr) [1]	Emission Factors lb/MMBtu) [2]	Potential Emission Rate [3] lb/hr)	Potential Emission Rate [3] T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 5
POTENTIAL EMISSIONS FROM
CATERPILLAR G3516B (C-1720)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 6
POTENTIAL EMISSIONS FROM
CATERPILLAR G3516B (C-1730)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 7
POTENTIAL EMISSIONS FROM
CATERPILLAR G3516B (C-1740)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.24	--	0.73	3.20
CO	1,380	8,760	0.41	--	1.26	5.50
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.009987	0.10	0.45
HCHO	1,380	8,760	0.03	--	0.10	0.46
Benzene	1,380	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00.
   The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,442 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 8
POTENTIAL EMISSIONS FROM
CATERPILLAR G3608A4 (C-1750)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	2,500	8,760	0.50	--	2.75	12.06
VOC	2,500	8,760	0.33	--	1.79	7.84
CO	2,500	8,760	0.47	--	2.57	11.28
SO_2	2,500	8,760	--	0.000588	0.01	0.04
PM_{10}	2,500	8,760	--	0.009987	0.17	0.74
HCHO	2,500	8,760	0.02	--	0.12	0.54
Benzene	2,500	8,760	--	0.00044	0.01	0.03

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00.
   The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,755 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 9
POTENTIAL EMISSIONS FROM
CATERPILLAR G3608A4 (C-1760)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	2,500	8,760	0.50	--	2.75	12.06
VOC	2,500	8,760	0.33	--	1.79	7.84
CO	2,500	8,760	0.47	--	2.57	11.28
SO_2	2,500	8,760	--	0.000588	0.01	0.04
PM_{10}	2,500	8,760	--	0.009987	0.17	0.74
HCHO	2,500	8,760	0.02	--	0.12	0.54
Benzene	2,500	8,760	--	0.00044	0.01	0.03

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,755 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 10
POTENTIAL EMISSIONS FROM
CATERPILLAR G3608A4 (C-1770)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	2,500	8,760	0.50	--	2.75	12.06
VOC	2,500	8,760	0.33	--	1.79	7.84
CO	2,500	8,760	0.47	--	2.57	11.28
SO_2	2,500	8,760	--	0.000588	0.01	0.04
PM_{10}	2,500	8,760	--	0.009987	0.17	0.74
HCHO	2,500	8,760	0.02	--	0.12	0.54
Benzene	2,500	8,760	--	0.00044	0.01	0.03

Notes:

1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00.
   The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,755 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 11
POTENTIAL EMISSIONS FROM
CATERPILLAR G3608A4 (C-1780)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	2,500	8,760	0.50	--	2.75	12.06
VOC	2,500	8,760	0.33	--	1.79	7.84
CO	2,500	8,760	0.47	--	2.57	11.28
SO_2	2,500	8,760	--	0.000588	0.01	0.04
PM_{10}	2,500	8,760	--	0.009987	0.17	0.74
HCHO	2,500	8,760	0.02	--	0.12	0.54
Benzene	2,500	8,760	--	0.00044	0.01	0.03

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00. The SO_2 factor is scaled to 20 ppm H_2S.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,755 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 12
POTENTIAL EMISSIONS FROM
WAUKESHA 5794GSI (C-171N)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.33	--	1.00	4.39
CO	1,380	8,760	0.47	--	1.43	6.26
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.01941	0.21	0.90
HCHO	1,380	8,760	0.05	--	0.15	0.67
Benzene	1,380	8,760	--	0.00158	0.02	0.07

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data with the operation of a NSCR.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-3, 4-stroke rich-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,665 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 13
POTENTIAL EMISSIONS FROM
WAUKESHA 5794GSI (C-172N)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors grams/Hp-hr) [1]	Emission Factors lb/MMBtu) [2]	Potential Emission Rate [3] lb/hr)	Potential Emission Rate [3] T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.33	--	1.00	4.39
CO	1,380	8,760	0.47	--	1.43	6.26
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.01941	0.21	0.90
HCHO	1,380	8,760	0.05	--	0.15	0.67
Benzene	1,380	8,760	--	0.00158	0.02	0.07

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data with the operation of a NSCR.
2. Emission factors for $SO_{2,}$ PM_{10}, and benzene obtained from AP-42, Table 3.2-3, 4-stroke rich-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,665 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 14
POTENTIAL EMISSIONS FROM
WAUKESHA 5794GSI (C-173N)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors grams/Hp-hr) [1]	Emission Factors lb/MMBtu) [2]	Potential Emission Rate [3] lb/hr)	Potential Emission Rate [3] T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.33	--	1.00	4.39
CO	1,380	8,760	0.47	--	1.43	6.26
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.01941	0.21	0.90
HCHO	1,380	8,760	0.05	--	0.15	0.67
Benzene	1,380	8,760	--	0.00158	0.02	0.07

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data with the operation of a NSCR.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-3, 4-stroke rich-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,665 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 15
POTENTIAL EMISSIONS FROM
WAUKESHA 5794GSI (C-174N)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors grams/Hp-hr) [1]	Emission Factors lb/MMBtu) [2]	Potential Emission Rate [3] lb/hr)	Potential Emission Rate [3] T/yr)
NO_x	1,380	8,760	0.50	--	1.52	6.66
VOC	1,380	8,760	0.33	--	1.00	4.39
CO	1,380	8,760	0.47	--	1.43	6.26
SO_2	1,380	8,760	--	0.000588	0.01	0.03
PM_{10}	1,380	8,760	--	0.01941	0.21	0.90
HCHO	1,380	8,760	0.05	--	0.15	0.67
Benzene	1,380	8,760	--	0.00158	0.02	0.07

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data with the operation of a NSCR.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-3, 4-stroke rich-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 7,665 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 16
POTENTIAL EMISSIONS FROM
CATERPILLAR 3606 (C-181)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,775	8,760	0.50	--	1.95	8.56
VOC	1,775	8,760	0.32	--	1.23	5.39
CO	1,775	8,760	0.47	--	1.83	8.01
SO_2	1,775	8,760	--	0.000588	0.01	0.03
PM_{10}	1,775	8,760	--	0.009987	0.12	0.52
HCHO	1,775	8,760	0.03	--	0.13	0.59
Benzene	1,775	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for $SO_{2,}$ PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,649 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 17
POTENTIAL EMISSIONS FROM
CATERPILLAR 3606 (C-182, C-183)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Horsepower	Operating Hours	Emission Factors		Potential Emission Rate [3]	
			grams/Hp-hr) [1]	lb/MMBtu) [2]	lb/hr)	T/yr)
NO_x	1,775	8,760	0.50	--	1.95	8.56
VOC	1,775	8,760	0.32	--	1.23	5.39
CO	1,775	8,760	0.47	--	1.83	8.01
SO_2	1,775	8,760	--	0.000588	0.01	0.03
PM_{10}	1,775	8,760	--	0.009987	0.12	0.52
HCHO	1,775	8,760	0.03	--	0.13	0.59
Benzene	1,775	8,760	--	0.00044	0.005	0.02

Notes:
1. Emission factors for NOx, VOC, formaldehyde, and CO are based on manufacturer data.
2. Emission factors for SO_2, PM_{10}, and benzene obtained from AP-42, Table 3.2-2, 4-stroke lean-burn engines, 7/00.
3. Potential emissions based on emission factors, maximum horsepower, fuel consumption rate of 6,649 Btu/Hp-hr, and 8,760 hours of operation per year.

TABLE 18
POTENTIAL EMISSIONS FROM AMINE UNIT VENT (AMINE)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Potential Uncontrolled Acid Vent[1]	Potential Uncontrolled Flash Tank[1]	% Capture[2]	Total Emissions [3]	
	T/yr	T/yr		lb/hr	T/yr
H_2S	6.26	0.004	98%	0.03	0.13
Propane	22.36	104.95	98%	0.58	2.55
Isobutane	1.56	8.69	98%	0.05	0.20
n-Butane	8.82	32.79	98%	0.19	0.83
Isopentane	0.73	3.83	98%	0.02	0.09
n-Pentane	1.06	4.54	98%	0.03	0.11
n-Hexane	0.12	0.46	98%	0.003	0.01
Other hexanes	3.44	2.82	98%	0.03	0.13
Heptane	0.04	0.30	98%	0.002	0.01
Benzene	15.42	0.51	98%	0.07	0.32
Toluene	4.21	0.09	98%	0.02	0.09
Ethylbenzene	0.10	0.002	98%	0.0005	0.002
Xylene	0.67	0.01	98%	0.003	0.01
Octane	0.01	0.04	98%	0.0002	0.001
Nonane +	0.0001	0.001	98%	0.000005	0.00002
Total HAPs	20.53	1.08	98%	0.10	0.43
Total VOC	58.55	159.04	98%	0.99	4.35

Notes:
1. Potential emissions based on PROMAX, extended gas analysis, 60 MMSCFD.
2. Capture will be achieved by routing the emissions to the flare (FLARE-1). Assumes 98% of the amine acid vent and flash tank vapors are captured and sent to the flare and 2% of the vapors are emitted at the amine unit.
3. Controlled Emissions = (Acid Vent + Flash Tank) x (1 - Control Efficiency)

TABLE 19
POTENTIAL EMISSIONS FROM
AMINE UNIT 2 VENT (AMINE2)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Potential Uncontrolled Acid Vent[1]	Potential Uncontrolled Flash Tank[1]	% Capture[2]	Total Emissions [3]	
	T/yr	T/yr		lb/hr	T/yr
H_2S	20.79	0.02	98%	0.10	0.42
Propane	19.44	93.15	98%	0.51	2.25
Isobutane	1.33	7.60	98%	0.04	0.18
n-Butane	7.40	28.41	98%	0.16	0.72
Isopentane	0.66	3.42	98%	0.02	0.08
n-Pentane	0.95	4.01	98%	0.02	0.10
n-Hexane	0.09	0.38	98%	0.002	0.01
Other hexanes	2.81	2.40	98%	0.02	0.10
Heptane	0.04	0.25	98%	0.001	0.006
Benzene	13.82	0.44	98%	0.07	0.29
Toluene	3.62	0.08	98%	0.02	0.07
Ethylbenzene	0.09	0.00	98%	0.0004	0.002
Xylene	0.60	0.01	98%	0.003	0.01
Octane	0.004	0.03	98%	0.0002	0.001
Nonane +	0.00005	0.001	98%	0.000004	0.00002
Total HAPs	18.22	0.92	98%	0.09	0.38
Total VOC	50.85	140.17	98%	0.87	3.82

Notes:
1. Potential emissions based on PROMAX, extended gas analysis, 200 MMSCFD.
2. Capture will be achieved by routing the emissions to the flare (FLARE-2). Assumes 98% of the amine acid vent and flash tank vapors are captured and sent to the flare and 2% of the vapors are emitted at the amine unit.
3. Controlled Emissions = (Acid Vent + Flash Tank) x (1 - Control Efficiency)

TABLE 20
POTENTIAL EMISSIONS SUMMARY
GLYCOL DEHYDRATION UNIT VENT (DEHY1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

	Potential Emissions [1]		Potential	Still Vent	Flash Tank	Safety	Total Emission Rates [2]	
	Still Vent	Flash Tank	Emissions [1]	Control Efficiency	Control Efficiency	Factor		
Pollutant	T/yr	T/yr	T/yr	%	%	%	lb/hr	T/yr
n-hexane	4.11	1.34	5.45	98%	98%	10%	0.03	0.12
benzene	34.31	0.33	34.63	98%	98%	10%	0.17	0.76
toluene	10.16	0.06	10.22	98%	98%	10%	0.05	0.22
ethyl-benzene	0.33	0.00	0.34	98%	98%	10%	0.00	0.01
xylene	1.92	0.00	1.92	98%	98%	10%	0.01	0.04
Total HAPS	50.83	1.73	52.56	98%	98%	10%	0.26	1.16
Total VOC	402.17	298.19	700.37	98%	98%	10%	3.52	15.41

Notes:
1. Potential VOC and HAP emissions based on GRI-GLYCalc, extended gas analysis, maximum glycol circulation rate (41.0 gpm), and the maximum gas throughput (200 MMSCFD).
2. The glycol dehydrator still vent is routed a condenser and then to a flare, resulting in at least 98% control of vapors. The flash tank is routed to a flare, resulting in at least 98% control of vapors.

TABLE 21
POTENTIAL EMISSIONS SUMMARY
PLANT FLARE (FLARE-1)
FIN: AMINE, EPN: FLARE-1
FIN: PROCESS-1, EPN: FLARE-1
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Flare Pilot Rating: 15.0 MMBtu/hr

FLARE FEED AND EXHAUST RATES

Component	Molecular Weight	Cu Ft/lb	AMINE lb/hr	AMINE MCF/hr	Process Vents (PROCESS-1)[5] lb/hr	Process Vents (PROCESS-1)[5] MCF/hr	Total Feed MCF/hr	Total Feed lb/hr	Flare DRE %	Flare Exhaust Rates lb/hr[1]	Flare Exhaust Rates T/yr	Component Heating Value BTU/SCF	Heat Release MMBtu/hr
H2S	34	11.1351	1.401	0.016	--	--	0.016	1.40	98%	0.028	0.123	586.8	0.009
N2	28	13.5460	1.236	0.017	4.323	0.059	0.075	5.56	--	5.559	24.350	--	--
SO2										2.637	11.549		
CO2	44	8.6229	1,171.998	10.106	--	--	10.106	1,172.00	--	1,171.998	5,133.352	--	--
C1	16	23.6540	93.096	2.202	65.259	1.544	3.746	158.35	98%	3.167	13.872	909.4	3.406
C2	30	12.6200	52.385	0.661	21.674	0.274	0.935	74.06	98%	1.481	6.488	1,618.7	1.513
C3	44	8.6059	28.487	0.245	17.962	0.155	0.400	46.45	98%	0.929	4.069	2,314.9	0.925
IC4	58	6.5291	2.292	0.015	1.583	0.010	0.025	3.88	98%	0.078	0.339	3,000.4	0.076
NC4	58	6.5291	9.310	0.061	4.847	0.032	0.092	14.16	98%	0.283	1.240	3,010.8	0.278
IC5	72	5.2596	1.021	0.005	0.737	0.004	0.009	1.76	98%	0.035	0.154	3,699.0	0.034
NC5	72	5.2596	1.253	0.007	0.709	0.004	0.010	1.96	98%	0.039	0.172	3,706.9	0.038
Benzene	86	4.4035	3.565	0.016	--	--	0.016	3.57	98%	0.071	0.312	3,707.9	0.058
C6+	86	4.4035	2.757	0.012	0.785	0.003	0.016	3.54	98%	0.071	0.310	4,403.8	0.069
Total		--	1,368.80	13.36	117.88	2.08	15.45	1486.68	--	1186.38	5196.33	--	6.41
Total VOC[4]		--	--	--			--	--	--	1.51	6.60	--	--

FLARE EMISSION RATES

Pollutant	Emission Factors lb/MMBtu)[2]	Pilot Gas Emission Rates[3] lbs/hr)	Pilot Gas Emission Rates[3] T/yr)	Amine Unit Emission Rate lbs/hr)	Amine Unit Emission Rate T/yr)	PROCESS-1 Emission Rate lbs/hr)	PROCESS-1 Emission Rate T/yr)	Total Potential Emission Rates[6] lbs/hr)	Total Potential Emission Rates[6] T/yr)
NOx	0.138	2.070	9.07	--	--	--	--	2.95	12.94
VOC	0.14	2.100	9.20	0.97	4.26	0.53	2.33	3.61	15.79
CO	0.2755	4.133	18.10	--	--	--	--	5.90	25.83

Flaring Period : 8760 hrs/yr

Closed drain, NGL truck loading, and misc. vent volume:
50 Maximum daily rate (Mcfd)

Notes:
1. Flare Exhaust (lb/hr) = Total Volume (MCF/hr) x 1000 / (Cu Ft/#) x (100-Flare DRE (%))
2. Flare CO and NOx emission factors from TCEQ Air Permit Techincal Guidance for Chemical Sources: Flares and Vapor Oxidizers, October 2000 RG-109 (Draft), Table 4, high Btu, "other" flare type.
3. Pilot gas potential emissions based on AP-42 emission factors, maximum pilot gas rate of 15 MMBtu/hr, 1,020 Btu/scf fuel heating value, and continuous operations of 8,760 hours of operation per year.
4. Total VOC includes components C3, IC4, NC4, IC5, NC5, & C6+
5. Includes volumes generated from the closed drain vent system, vapors related to pressurized NGL truck loading, and miscellaneous small vents. See Table 41 for characteristics of the gas stream.
6. NOx and CO emissions account for emissions generated from pilot gas and controlling waste gas streams. VOC is a sum of all streams.

TABLE 22
POTENTIAL EMISSIONS SUMMARY
PLANT FLARE (FLARE-2)
FIN: AMINE-2, EPN: FLARE-2
FIN: DEHY, EPN: FLARE-2
FIN: PROCESS-2, EPN: FLARE-2
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Flare Pilot Rating: 15.0 *MMBtu/hr*

FLARE FEED AND EXHAUST RATES

			Feed Rates and Compositions								Flare DRE	Flare Exhaust Rates		Component Heating Value	Heat Release
	Molecular		AMINE-2		DEHY		Process Vents (PROCESS-2)[5]		Total Feed						
Component	Weight	Cu Ft/lb	lb/hr	MCF/hr	lb/hr	MCF/hr	lb/hr	MCF/hr	MCF/hr	lb/hr	%	lb/hr[1]	T/yr	BTU/SCF	MMBtu/hr
H2S	34	11.1351	4.656	0.052		--	--	--	0.052	4.66	98%	0.093	0.408	586.8	0.030
N2	28	13.5460	1.283	0.017		--	4.323	0.059	0.076	5.61	--	5.607	24.557	--	--
SO2												8.763	38.384		
CO2	44	8.6229	2,786.588	24.028		--	--	--	24.028	2,786.59	--	2,786.588	12,205.256	--	--
C1	16	23.6540	88.448	2.092	60.498	1.431	65.259	1.544	5.067	214.20	98%	4.284	18.764	909.4	4.608
C2	30	12.6200	47.751	0.603	8.677	0.109	21.674	0.274	0.986	78.10	98%	1.562	6.842	1,618.7	1.595
C3	44	8.6059	25.191	0.217	31.801	0.274	17.962	0.155	0.645	74.95	98%	1.499	6.566	2,314.9	1.493
IC4	58	6.5291	1.998	0.013	5.413	0.035	1.583	0.010	0.059	8.99	98%	0.180	0.788	3,000.4	0.176
NC4	58	6.5291	8.012	0.052	7.030	0.046	4.847	0.032	0.130	19.89	98%	0.398	1.742	3,010.8	0.391
IC5	72	5.2596	0.913	0.005	1.244	0.007	0.737	0.004	0.015	2.89	98%	0.058	0.253	3,699.0	0.056
NC5	72	5.2596	1.108	0.006	2.084	0.011	0.709	0.004	0.021	3.90	98%	0.078	0.342	3,706.9	0.076
Benzene	86	4.4035	3.257	0.014	--	--	--	--	0.014	3.26	98%	0.065	0.285	3,707.9	0.053
C6+	86	4.4035	2.327	0.010	45.240	0.199	0.785	0.003	0.213	48.35	98%	0.967	4.236	4,403.8	0.938
Total		--	2,971.53	27.11		2.11	117.88	2.08	31.31	3251.40	--	2810.14	12308.42	--	9.42
Total VOC[4]		--	--	--		--		--	--	--	--	3.24	14.21	--	--

FLARE EMISSION RATES

Pollutant	Emission Factors (lb/MMBtu)[2]	Pilot Gas Emission Rates[3]		Amine Unit Emission Rate		DEHY Emission Rate		PROCESS-1 Emission Rate		Total Potential Emission Rates[6]	
		lbs/hr)	T/yr)	lbs/hr)	T/yr)	lbs/hr)	T/yr)	lbs/hr)	T/yr)	lbs/hr	T/yr)
NOx	0.138	2.070	9.07	--	--	--	--	--	--	3.37	14.76
VOC	0.14	2.100	9.20	0.86	3.75	1.86	8.13	0.53	2.33	5.34	23.41
CO	0.2755	4.133	18.10	--	--	--	--	--	--	6.73	29.46

Flaring Period : 8760 hrs/yr

Closed drain, NGL truck loading, and misc. vent volume:
50 Maximum daily rate (Mcfd)

Notes:
1. Flare Exhaust (lb/hr) = Total Volume (MCF/hr) x 1000 / (Cu Ft/#) x (100-Flare DRE (%))
2. Flare CO and NOx emission factors from TCEQ Air Permit Techincal Guidance for Chemical Sources: Flares and Vapor Oxidizers, October 2000 RG-109 (Draft), Table 4, high Btu, "other" flare type.
3. Pilot gas potential emissions based on AP-42 emission factors, maximum pilot gas rate of 15 MMBtu/hr, 1,020 Btu/scf fuel heating value, and continuous operations of 8,760 hours of operation per year.
4. Total VOC includes components C3, IC4, NC4, IC5, NC5, & C6+
5. Includes volumes generated from the closed drain vent system, vapors related to pressurized NGL truck loading, and miscellaneous small vents. See Table 41 for characteristics of the gas stream.
6. NOx and CO emissions account for emissions generated from pilot gas and controlling waste gas streams. VOC is a sum of all streams.

TABLE 23
POTENTIAL EMISSIONS FROM
AMINE REBOILER HOT OIL HEATER (H-1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMBTU) [1]	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2]	
					lb/hr)	T/yr)
NO_x	34.2	1020	0.10	--	3.42	14.98
VOC	34.2	1020	0.025	--	0.86	3.74
CO	34.2	1020	0.037	--	1.27	5.54
SO_2	34.2	1020	--	0.60	0.02	0.09
PM_{10}	34.2	1020	0.005	--	0.16	0.72
Benzene	34.2	1020	--	0.0021	0.0001	0.0003

Notes:
1. Emission factors obtained from manufacturer spec sheet for NOX, CO, VOC, PM and AP-42 Table 1.4-1 through 1.4-3 for commercial boilers for SO2 and benzene.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 34.2 MMBtu/hr, 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 24
POTENTIAL EMISSIONS FROM
MOLE SEIVE REGENERATION GAS HEATER (H-2)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2]	
				lb/hr)	T/yr)
NO_x	9.6	1020	100.0	0.94	4.12
VOC	9.6	1020	5.5	0.05	0.23
CO	9.6	1020	84.0	0.79	3.46
SO_2	9.6	1020	0.6	0.006	0.02
PM_{10}	9.6	1020	7.6	0.07	0.31
Benzene	9.6	1020	0.0021	0.00002	0.0001

Notes:
1. Emission factors obtained from AP-42 Table 1.4-1 through 1.4-3 for commercial boilers.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 9.6 MMBtu/hr. 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 26
POTENTIAL EMISSIONS FROM
CRYO TRIM REBOILER HOT OIL HEATER (H-4)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2]	
				lb/hr)	T/yr)
NO_x	6.9	1020	100.0	0.68	2.98
VOC	6.9	1020	5.5	0.04	0.16
CO	6.9	1020	84.0	0.57	2.50
SO_2	6.9	1020	0.6	0.00	0.02
PM_{10}	6.9	1020	7.6	0.05	0.23
Benzene	6.9	1020	0.0021	0.00001	0.0001

Notes:
1. Emission factors obtained from AP-42 Table 1.4-1 through 1.4-3 for commercial boilers.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 9.3 MMBtu/hr. 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 27
POTENTIAL EMISSIONS FROM
COMBO HOT OIL HEATER 1 (H-5)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMBTU) [1]	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2]	
					lb/hr)	T/yr)
NO_x	51.0	1020	0.060	--	3.06	13.40
VOC	51.0	1020	0.025	--	1.28	5.58
CO	51.0	1020	0.037	--	1.89	8.27
SO_2	51.0	1020	--	0.60	0.03	0.13
PM_{10}	51.0	1020	0.005	--	0.24	1.07
Benzene	51.0	1020	--	0.0021	0.0001	0.0005

Notes:
1. Emission factors obtained from manufacturer spec sheet for NOX, CO, VOC, PM and AP-42 Table 1.4-1 through 1.4-3 for commercial boilers for SO2 and benzene.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 51 MMBtu/hr. 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 28
POTENTIAL EMISSIONS FROM
COMBO HOT OIL HEATER 2 (H-6)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMBTU) [1]	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2]	
					lb/hr)	T/yr)
NO_x	51.0	1020	0.060	--	3.06	13.40
VOC	51.0	1020	0.025	--	1.28	5.58
CO	51.0	1020	0.037	--	1.89	8.27
SO_2	51.0	1020	--	0.60	0.03	0.13
PM_{10}	51.0	1020	0.005	--	0.24	1.07
Benzene	51.0	1020	--	0.0021	0.0001	0.0005

Notes:

1. Emission factors obtained from manufacturer spec sheet for NOX, CO, VOC, PM and AP-42 Table 1.4-1 through 1.4-3 for commercial boilers for SO2 and benzene.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 51 MMBtu/hr. 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 29
POTENTIAL EMISSIONS FROM
MOLE SIEVE REGENERATION GAS HEATER 2 (H-7)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Pollutant	Max Firing Rate MMBtu/hr)	Gas Heating Value MMBtu/scf)	Emission Factor lb/MMSCF) [1]	Potential Emission Rates [2] lb/hr)	T/yr)
NO_x	6.23	1020	100.0	0.61	2.68
VOC	6.23	1020	5.5	0.03	0.15
CO	6.23	1020	84.0	0.51	2.25
SO_2	6.23	1020	0.6	0.004	0.02
PM_{10}	6.23	1020	7.6	0.05	0.20
Benzene	6.23	1020	0.0021	0.00001	0.0001

Notes:
1. Emission factors obtained from AP-42 Table 1.4-1 through 1.4-3 for commercial boilers.
2. Potential emissions based on AP-42 emission factors, maximum firing rate of 6.23 MMBtu/hr. 1,020 Btu/scf fuel heating value, and 8,760 hours per year of operation.

TABLE 30
POTENTIAL EMISSIONS FROM
STORAGE TANK (TK-1 - TK-17)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

				Potential VOC Emissions [1]							
Source	FIN	Annual Throughput [1] gallons/year)	Tank Capacity gallons)	Annual Breathing Losses[2] lbs)	Annual Working Losses[2] lbs)	Floating Roof Losses[3] T/yr)	Combustor Capture Efficiency [4] %)	Benzene Emissions[5] lb/hr)	Benzene Emissions[5] T/yr)	VOC Emissions[5] lb/hr)	VOC Emissions[5] T/yr)
Slop Oil Storage Tank (750-bbl)	**TK-1**	5,748,750	31,500	2,468.46	15,598.52	---	98%	0.0002	0.001	0.04	0.18
Slop Oil Storage Tank (750-bbl)	**TK-2**	5,748,750	31,500	2,468.46	15,598.52	---	98%	0.0002	0.001	0.04	0.18
Condensate Storage Tank (10,000-bbl)	**TK-3**	34,492,500	420,000	---	---	1.30	--	0.001	0.005	0.30	1.30
Condensate Storage Tank (10,000-bbl)	**TK-4**	34,492,500	420,000	---	---	1.30	--	0.001	0.005	0.30	1.30
Slop Oil Storage Tank (210-bbl)	**TK-5**	7,665,000	8,820	921.49	12,348.77	---	98%	0.0001	0.0005	0.03	0.13
Open Drain Storage Tank (80-bbl)	**TK-6**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-7**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-8**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-9**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-10**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-11**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-12**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-13**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-14**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-15**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-16**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Open Drain Storage Tank (80-bbl)	**TK-17**	40,320	3,360	366.14	330.47	---	--	0.0003	0.001	0.08	0.35
Gasoline Storage Tank (500-gal)	**TK-18**	12,000	500	150.68	98.36	---	--	0.0001	0.0005	0.03	0.12
Diesel Storage Tank (500-gal)	**TK-19**	24,000	500	0.16	0.46	---	--	0.0000003	0.000001	0.0001	0.0003
							TOTAL	**0.01**	**0.03**	**1.69**	**7.39**

Notes:
1. Based on maximum annual condensate throughput value of 1,916,250-bbl/yr.
2. Annual breathing and working losses were calculated using TANKS4.0.9d software. Note that all tanks have negligible flash losses.
3. Annual VOC losses from Internal Floating Roof Tanks were estimated using the TANKS4.09d software (See Table 31).
4. Emissions from the condensate tanks (TK-1, TK-2 & TK-5) will be routed to the combustor which has a control efficiency of 98%.
5. Emission Calculation Examples:

Total Annual VOC Emissions (T/yr) = [(Breathing Losses (lbs) + Working Losses (lbs)) / 2000] x [1 - Combustor Capture Eff. (%)]
Total Annual VOC Emissions (T/yr) = (Breathing Losses (lbs) + Working Losses (lbs)) / 2000
Total Annual benzene Emissions (T/yr) = Controlled VOC Emissions (T/yr) x %benzene

TABLE 31

POTENTIAL EMISSIONS SUMMARY – CONDENSATE STORAGE TANKS
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Identification - Internal Floating Roof Tanks		
	Tank ID	Tank 3 & 4- Condensate
	Description	10,000 BBL Tank
	Throughput (BPD)[a]	2,250.0
Tank Dimensions		
	Diameter (ft)	40.0
	Volume (gal)	420,000
	Turnovers	82.13
	Self Supp. Roof?(y/n)	N
	No. of Columns:	1.00
	Eff. Col. Diam. (ft)	1.00
	Net Throughput (gal/yr)	34,492,500
Paint Characteristics		
	Internal Shell Condition	Light Rust
	Shell Color/Shade	White
	Shell Condition	Good
	Roof Color/Shade	White
	Roof Condition	Good
	Meteorological Data	Midland, TX
Rim-Seal System		
	Primary Seal	Liquid Mounted
	Secondary Seal	Rim-Mounted
Deck Characteristics		
	Deck Fitting Category	Typical
	Deck Type	Welded
Tank Contents		
	Mixture/Component	Gasoline RVP9
Tank VOC Emissions		
	VOC Rim Seal Losses (T/yr)[b]	0.05
	VOC Withdrawl Losses (T/yr)[b]	0.08
	VOC Deck Fitting Losses (T/yr)[b]	1.17
	VOC Deck Seam Losses (T/yr)[b]	0.00
	Total VOC Losses (T/yr)[c]	1.30
	Total VOC Losses (lb/hr)[d]	0.30

[a] Maximum expected condensate throughput.
[b] VOC losses calculated using Tanks 4.0.9.d program.
[c] Total VOC Losses (T/yr) = Rim seal Losses (T/yr) + withdrawl Losses (T/yr) + deck fitting Losses (T/yr) + deck seam Losses (T/yr)
[d] Total VOC Losses (lb/hr) = Total VOC Losses (T/yr) x 2000 lb/T x 1 yr/8760 hr

TABLE 32
POTENTIAL EMISSIONS FROM
TRUCK LOADING (L-1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Material Name	FIN	Saturation Factor[1] S)	True Vapor Pressure[2] P)		Molecular Weight of Vapors[2] (M)	Temp of Loaded Liquid[2] F)	Max Temp of Loaded Liquid (F)	Emission Factor[1] (lb VOC/10^3 gal)		Annual Throughput[3] (gals)	Estimated Hourly Throughput[3] gal)	Weight Percent of VOC in HC Vapors %)	Total Uncontrolled VOC Emissions		Control Efficiency[7] %)	Total Uncontrolled VOC Emissions		Total VOC Emissions to COMB		%Benzene[11]	Total Benzene Emissions		$\%H_2S$[11]	Total H_2S Emissions	
			Avg	Max	lb/lb-mole)			Avg	Max				lb/hr)[4]	T/yr)[5]		lb/hr)[8]	T/yr)[9]	lb/hr)[10]	T/yr)		lb/hr)[12]	T/yr)[13]		lb/hr)[12]	T/yr)[13]
Condensate	L-1	0.6	5.14	6.99	67.00	63.3	95	4.918	6.31	50,000,000	8,000	100.00%	50.47	122.95	70.0%	15.14	36.88	35.33	86.06	0.37%	0.19	0.46	0.000%	0.000	0.00000
Water[6]	L-1	0.6	5.14	6.99	67.00	63.3	95	4.918	6.31	7,906,920	8,000	100.00%	0.50	0.19	70.0%	0.50	0.19	0.35	0.14	0.37%	0.002	0.001	0.000%	0.000	0.00000
											TOTAL	**2.00**	**50.97**	**123.14**	**TOTAL**	**15.65**	**37.08**	**35.68**	**86.20**		**0.191**	**0.461**		**0.000**	**0.00000**

Notes:

1. Per AP-42, 5^{th} Edition (6/08), Section 5.2, Equation 1

   Emission Factor (lb VOC/10^3gal) = $\frac{S \times P \times M \times 12.46}{F + 460}$

   Saturation Factor = 0.6 for submerged loading: dedicated normal service
2. True vapor pressure, weight of vapors and temp of loaded liquid obtained from TANKS 4.0.9d run using Gasoline RVP-9.
3. Throughput is the amount of condensate loaded out from the storage tank. It is estimated that one truck can load 8,000 gallons in one hour.
4. Uncontrolled Hourly VOC Emissions = Estimated Hourly Throughput (gal/hr) x Max Emission Factor (lb VOC/10^3gal) / 1000
5. Uncontrolled Annual VOC Emissions = Annual Throughput (gal x Avg Emission Factor (lb VOC/10^3gal) / 1000 / 2000 (lb/T)
6. Produced Water emissions calculated using condensate, assuming 1% emitted.
7. Site uses vapor recovery lines to control 70% of the truck loading losses.
8. Controlled Hourly VOC Emissions = Uncontrolled Hourly VOC Emissions (lb/hr) x (100% - 70% control efficiency)
9. Controlled Annual VOC Emissions = Uncontrolled Annual VOC Emissions (T/yr) x (100% - 70% control efficiency)
10. Maximum VOC Emissions to COMB = Uncontrolled Hourly VOC Emissions (lb/hr) x 70% control efficiency. This value is entered on the COMB calc page, see Table 33.
11. $\%H_2S$ and benzene based on gas analysis, see Table 41.
12. Benzene and H_2S Emissions (lb/hr) = Controlled VOC Emissions (lb/hr) x $\%H_2S$
13. Benzene and H_2S Emissions (T/yr) = Controlled VOC Emissions (T/yr) x $\%H_2S$

TABLE 33
ESTIMATED EMISSIONS FROM COMBUSTOR (COMB-1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Input Parameters for Emission Calculations

Designed Firing Rate	5.00	MMBtu/hr
Average Heating Value of Gas Burned	1,020.0	Btu/Cubic Feet
Operating Hours per Year	8,760	Hrs/Yr

Calculated Inputs

Estimated Natural Gas Usage [1]	0.005	MM Cubic Feet/Hr
VOC From Storage Tanks [3]	6.11	lb/hr
VOC From Truck Loading [3]	35.68	lb/hr
VOC From Pressurized Truck Loading [4]	68.49	lb/hr

POLLUTANT	EMISSION FACTOR		NATURAL GAS FEED RATE PER HOUR	HOURLY EMISSIONS	ANNUAL OPERATING HOURS		WEIGHT CONVERSION	ANNUAL EMISSIONS
CO [2]	84.0 lb CO / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.41 lb CO / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	1.80 tons CO / yr
NO_x [2]	100.0 lb NOx / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.49 lb NOx / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	2.15 tons NOx / yr
PM_{10} [2]	7.6 lb PM_{10} / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.04 lb PM_{10} / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	0.16 tons PM_{10} / yr
SO_2 [2]	0.6 lb SO_2 / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.003 lb SO_2 / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	0.013 tons SO_2 / yr
Benzene [2]	0.0021 lb Benzene / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.00001 lb Benzene / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	0.00005 tons Benzene / yr
VOC [2]	5.5 lb VOC / MM cu.ft. Natural Gas Burned	x	0.005 MM Cubic Feet / Hr	0.03 lb VOC / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	0.12 tons VOC / yr
VOC [3]	41.79 lb VOC / hr	x	98% Destruction Efficiency	0.84 lb VOC / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	3.66 tons VOC / yr
VOC [4]	68.49 lb VOC / hr	x	98% Destruction Efficiency	1.37 lb VOC / Hr	8,760 Hours / yr	x	1 ton / 2,000 lbs	6.00 tons VOC / yr
				Total = 2.23 lb VOC / Hr				**Total = 9.78 tons VOC / yr**

Notes:
1. Natural gas usage per hour = MMBtu/hr / Btu/scf
Estimated Heat Input = 5 MMBtu/hr / 1020 Btu/scf = 0.0049 MMscf/hr
2. Criteria Pollutant Emission Factors obtained from AP-42 Nat Gas Combustion, Table 1.4-1, (7/98) < 100 MMBtu/hr heat input; & Table 1.4-2, (7/98).

CO Emission Factor =	84	lb/MM Cubic Feet
NOx Emission Factor =	100	lb/MM Cubic Feet
PM_{10} Emission Factor =	7.6	lb/MM Cubic Feet
SO2 Emission Factor =	0.6	lb/MM Cubic Feet
Benzene Emission Factor =	0.0021	lb/MM Cubic Feet
VOC Emission Factor =	5.5	lb/MM Cubic Feet

3. Captured VOC emissions from storage tanks and truck loading. Assume 98% destruction efficiency of vapors sent to Combustor.
4. Up to 600,000 BBL/yr of pressurized condensate may be loaded into pressurized tank trucks. During this process, the pressure drop between the storage tank and the tank truck is modelled to emit 1 lb VOC/BBL.

TABLE 34
POTENTIAL EMISSIONS SUMMARY
NON-MONITORED PROCESS PIPING FUGITIVES (FUG1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Component Type	Type of Service [1]	Number of Components [1]	Oil and Gas Production Emission Factors lb/hr-component) [2]	Percent VOC [3]	Percent H_2S [3]	Percent Benzene [3]	Potential VOC Emission Rates [4]		Potential H_2S Emission Rates [4]		Potential Benzene Emission Rates [4]	
							lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)
Valves	Gas/Vapor	390	0.00992	1.78%	0.0001%	0.0008%	0.07	0.30	0.00000	0.00002	0.00000	0.00000
Flanges	Gas/Vapor	800	0.00086	1.78%	0.0001%	0.0008%	0.01	0.05	0.00000	0.00000	0.00000	0.00000
Compressor Seals	Gas/Vapor	60	0.0194	1.78%	0.0001%	0.0008%	0.02	0.09	0.00000	0.00001	0.00000	0.00000
Relief Valves	Gas/Vapor	36	0.0194	1.78%	0.0001%	0.0008%	0.01	0.05	0.00000	0.00000	0.00000	0.00000
Valves	Light Liquid	100	0.0055	100.00%	0.0001%	0.0008%	0.55	2.41	0.00000	0.00000	0.00000	0.00002
Flanges	Light Liquid	400	0.0002	100.00%	0.0001%	0.0008%	0.080	0.35	0.00000	0.00000	0.00000	0.00000
Pump Seals	Light Liquid	4	0.0287	100.00%	0.0001%	0.0008%	0.11	0.50	0.00000	0.00000	0.00000	0.00000
Relief Valves	Light Liquid	10	0.0165	100.00%	0.0001%	0.0008%	0.17	0.72	0.00000	0.00000	0.00000	0.00001
Totals:	**---**	**1,800**	**---**	**---**			**1.02**	**4.49**	**0.01**	**0.01**	**0.01**	**0.01**

Notes:
1. Number of each component and type of service estimated based on a similar station.
2. Emission factors based on EPA's natural gas processing factors for process piping fugitive emissions.
3. Percent VOC and H_2S for Gas/Vapor service based on a facility gas analysis (refer to Table 41).
4. Emission rates based on 8,760 hours of operation per year.

TABLE 35

POTENTIAL EMISSIONS SUMMARY
NSPS OOOOa MONITORED PROCESS PIPING FUGITIVES (FUG2)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Component Type	Type of Service [1]	Number of Components [1]	Oil and Gas Production Emission Factors lb/hr-component) [2]	Control Effectiveness [3]	Percent VOC [4]	Percent H_2S [4]	Percent Benzene [4]	Potential VOC Emission Rates [5]		Potential H_2S Emission Rates [5]		Potential Benzene Emission Rates [5]	
								lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)
Valves	Gas/Vapor	784	0.00992	96%	24.66%	0.0002%	0.003%	0.08	0.34	0.000001	0.000002	0.000002	0.00001
Connectors	Gas/Vapor	4826	0.00086	93%	24.66%	0.0002%	0.003%	0.07	0.31	0.0000005	0.000002	0.000002	0.00001
Flanges	Gas/Vapor	653	0.00086	93%	24.66%	0.0002%	0.003%	0.01	0.04	0.0000001	0.0000003	0.0000003	0.000001
Compressor Seals	Gas/Vapor	39	0.0194	75%	24.66%	0.0002%	0.003%	0.05	0.20	0.0000003	0.000001	0.000001	0.00001
Relief Valves	Gas/Vapor	15	0.0194	96%	24.66%	0.0002%	0.003%	0.00	0.01	0.00000002	0.0000001	0.0000001	0.0000004
Valves	Light Liquid	646	0.0055	88%	100.00%	0.0002%	0.003%	0.43	1.87	0.000001	0.000003	0.00001	0.00005
Connectors	Light Liquid	2682	0.0002	93%	100.00%	0.0002%	0.003%	0.04	0.16	0.0000001	0.0000003	0.000001	0.000005
Flanges	Light Liquid	438	0.0002	93%	100.00%	0.0002%	0.003%	0.01	0.03	0.00000001	0.00000004	0.0000002	0.000001
Pump Seals	Light Liquid	9	0.0287	75%	100.00%	0.0002%	0.003%	0.06	0.28	0.0000001	0.0000005	0.000002	0.00001
Relief Valves	Light Liquid	0	0.0165	88%	100.00%	0.0002%	0.003%	0.00	0.00	0.00	0.00	0.00	0.00
Totals:	---	**10,091**	---	---	---			**0.74**	**3.24**	**0.01**	**0.01**	**0.01**	**0.01**

Notes:

1. Number of each component and type of service estimated based on LDAR monitoring for a similar site.
2. Emission factors based on EPA's natural gas processing factors for process piping fugitive emissions.
3. Control effectiveness based on fugitive emission monitoring required by NSPS Subpart OOOO in accordance with "EPA's Leak Detection and Repair: A Best Practices Guide" and "Protocol for Equipment Leak Emission Estimates".
4. Percent VOC and H_2S for Gas/Vapor service based on a facility gas analysis (refer to Table 41).
5. Emission rates based on 8,760 hours per year of operation.

TABLE 36
POTENTIAL EMISSIONS FROM
BLOWDOWNS (VENT-1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

BLOWDOWN RATES							
Blowdown Rates and Gas Composition							
Volume of Gas (MCF/Hr)	1.5						
Volume of Gas (MCF/Yr)	78						
	Mole %	MCF/Hr	Cu Ft/ #	lbs/hr	MCF/Yr	Cu Ft/ #	lbs/yr
N2	2.4812%	0.037	13.5460	2.75	1.935	13.5460	142.87
CO2	0.5390%	0.008	8.6229	0.94	0.420	8.6229	48.76
H2S	0.0001%	0.00000	11.1351	0.000	0.0001	11.1351	0.01
C1	72.8815%	1.093	23.6540	46.22	56.848	23.6540	2403.30
C2	13.5534%	0.203	12.6200	16.11	10.572	12.6200	837.69
C3	7.7243%	0.116	8.6059	13.46	6.025	8.6059	700.10
IC4	0.5547%	0.008	6.5291	1.27	0.433	6.5291	66.26
NC4	1.6121%	0.024	6.5291	3.70	1.257	6.5291	192.59
IC5	0.2340%	0.004	5.2596	0.67	0.183	5.2596	34.71
NC5	0.2375%	0.004	5.2596	0.68	0.185	5.2596	35.22
C6+	0.1813%	0.003	4.4035	0.62	0.141	4.4035	32.12
Benzene	0.0008%	0.000	4.4035	0.00	0.001	5.4035	0.11
Total	100.00%	1.500		86.42	78.000		4493.74
Number of Compressors	16		Total VOC (lb/hr)	20.41	Total VOC (lb/yr) per compressor		1061.11
						Total VOC (T/yr)	8.49

Notes:
1. It is estimated that up to 1500 cubic feet of gas could be vented to atmosphere during a blowdown event and one event could occur per hour.
2. It is estimated that up to 78 MCF of gas could be released per year from blowdowns from each compressor.

TABLE 37
POTENTIAL EMISSIONS FROM
MSS ACTIVITIES (MSS-1)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Summary of MSS Activities

Activity	VOC[1]		PM		Other HAPs		H_2S	
	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)	lb/hr)	T/yr)
Engine, compressor, turbine and other combustion facilities maintenance			-	-	-	-		
Repair, adjustment, calibration, lubrication and cleaning of site process equipment			-	-	-	-		
Replacement of piping components, pneumatic controllers, boiler refractories, wet and dry seals, meters, instruments, analyzers, screens and filters	0.06	0.25	-	-	-	-	0.0000001	0.0000004
Turbine or engine component swaps			-	-	-	-		
Piping used to bypass a facility during maintenance			-	-	-	-		
Pigging and purging of piping	0.71	1.30	-	-	-	-	0.000001	0.000002
Abrasive blasting, surface preparation and surface coating of facilities and structures used at the site	8.38	1.68	0.68	0.001	0.17	0.0335	-	-
Total =	**9.15**	**3.23**	**0.68**	**0.001**	**0.17**	**0.0335**	**0.00000**	**0.000002**

MSS - Pigging Operations

Description	Pigging
Number of Events per Year	3650
Number of Events per hour	1
Volume per Event, scf	50
Stream Specific Gravity	0.7542
Air MW, lb/mole	28.96
Fuel Stream Density, lb/scf	0.058
VOC Percentage in Gas Stream, wt%	24.76%
VOC Hourly Emission Rate (lb/hr):	0.71
VOC Annual Emission Rate (T/yr):	1.30

MSS - Sandblasting

Description	Sandblasting	
Application Rate[1]	2,000	lb/hr
Operating Hours	4	hr/yr
PM10 Emission Factor[1]	0.00034	lb/lb usage
PM2.5 Emission Factor[1]	0.00005	lb/lb usage
PM10 Emissions	**0.68**	**lb/hr**
PM10 Emissions	**0.001**	**T/yr**
PM2.5 Emissions	**0.10**	**lb/hr**
PM2.5 Emissions	**<0.01**	**T/yr**

MSS - Solvent Cleaning

Description	Solvent Cleaning	
Annual Usage	500	gal/yr
Maximum Hourly Usage	1	gal/hr
Density	6.7	lb/gal
VOC Wt%	100%	-
Naphthalene Wt%	2%	-
HAP Emissions	**0.17**	**lb/hr**
HAP Emissions	**0.0335**	**T/yr**
VOC Emissions	**8.38**	**lb/hr**
VOC Emissions	**1.68**	**T/yr**

Notes:

1. Defaults from TCEQ emissions spreadsheet.

TABLE 38
POTENTIAL EMISSIONS FROM
ENGINE STARTER VENTS (VENT-3)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Site Data:

Starting Gas Specific Gravity:	0.8340	Starting Gas VOC Content(%):	24.66%
Starting Gas Temperature:	80 F	Starting Gas H_2S Content(%):	0.0002%
Starting Gas Pressure:	150 psig		
Propane plus weight percent:	24.66%		

Maximum Emissions = 1 start/hr * (2875 scfm) * (10 sec/start) * (min/60 sec) * (mole/379 scf) * (28.96 lb/mole)*(0.2466) = 0.23 lb/hr

Average Emissions = (2875 scfm) * (10 sec/start) * (min/60 sec) * (mole/379 scf) * (0.8340) * (28.96 lb/mole) * (52 starts/yr) * (ton/2000lbs)*(0.2466) = 0.235 tons/yr

Facility ID Number FIN)	Facility Name	Emission Point Number (EPN)	Emission Point Name	Vent Diameter in.)	Starter Mfr. & Model No.	Average Gas Consumption scfm)	Number of Engine Starts per Year/Engine	Average Crank Time to Start sec)	Maximum Emissions lb/hr)	Average Emissions tons/yr)	Vent Velocity ft/sec)
VENT-3	Compressor Starter Vents	VENT-3	Starter Vent	2.0	TBD	2875	52	10	9.03	0.23	
						Sitewide Total VOC (assumes max 1 engine started per hour)			**9.03**	--	
						Sitewide Total VOC (for 16 units)			--	**3.76**	
						Sitewide Total H_2S (assumes max 1 engine started per hour)			**0.00001**		
						Sitewide Total H_2S (for 16 units)				**0.00001**	

Notes 1. Maximum hourly emissions are based on one attempted start in one hour.
2. Starting gas volumes based on maximum starter HP.
3. Vent velocity will vary from zero to near sonic velocity for a very short duration

TABLE 39
POTENTIAL EMISSIONS FROM
VENTING (VENT-2)
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

VENTING RATES Venting Rates and Gas Composition							
Volume of Gas (MCF/Hr)		10.0					
Volume of Gas (MCF/Yr)		500					
	Mole %	MCF/Hr	Cu Ft/ #	lbs/hr	MCF/Yr	Cu Ft/ #	lbs/yr
N2	2.4812%	0.248	13.5460	18.32	12.406	13.5460	915.85
CO2	0.5390%	0.054	8.6229	6.25	2.695	8.6229	312.57
H2S	0.0001%	0.00001	11.1351	0.001	0.0005	11.1351	0.04
C1	72.8815%	7.288	23.6540	308.11	364.408	23.6540	15405.75
C2	13.5534%	1.355	12.6200	107.40	67.767	12.6200	5369.81
C3	7.7243%	0.772	8.6059	89.76	38.622	8.6059	4487.80
IC4	0.5547%	0.055	6.5291	8.50	2.773	6.5291	424.77
NC4	1.6121%	0.161	6.5291	24.69	8.060	6.5291	1234.52
IC5	0.2340%	0.023	5.2596	4.45	1.170	5.2596	222.49
NC5	0.2375%	0.024	5.2596	4.52	1.188	5.2596	225.79
C6+	0.1813%	0.018	4.4035	4.12	0.907	4.4035	205.91
Benzene	0.0008%	0.000	4.4035	0.02	0.004	5.4035	0.72
Total	100.00%	10.000		576.12	500.000		28806.02
			Total VOC (lb/hr)	136.04			6802.00
						Total VOC (T/yr)	3.40

Notes:
1. It is estimated that up to 0.5 MM cubic feet of gas could be vented to atmosphere annual during operations.

TABLE 40
ESTIMATED BENZENE EMISSIONS
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

Emissions Source	Method Used For Calculations	FIN/EPN	VOC lb/hr)	VOC T/yr)	Benzene lb/hr)	Benzene T/yr)
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1680	0.73	3.20	0.005	0.02
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1690	0.73	3.20	0.005	0.02
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1710	0.73	3.20	0.005	0.02
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1720	0.73	3.20	0.005	0.02
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1730	0.73	3.20	0.005	0.02
1,380 Hp Caterpillar 3516B	AP-42 Emission Factors	C-1740	0.73	3.20	0.005	0.02
2,500 Hp Caterpillar G3608A4	AP-42 Emission Factors	C-1750	1.79	7.84	0.01	0.03
2,500 Hp Caterpillar G3608A4	AP-42 Emission Factors	C-1760	1.79	7.84	0.01	0.03
2,500 Hp Caterpillar G3608A4	AP-42 Emission Factors	C-1770	1.79	7.84	0.01	0.03
2,500 Hp Caterpillar G3608A4	AP-42 Emission Factors	C-1780	1.79	7.84	0.01	0.03
1,380 Hp Waukesha 5794GSI	AP-42 Emission Factors	C-171N	1.00	4.39	0.02	0.07
1,380 Hp Waukesha 5794GSI	AP-42 Emission Factors	C-172N	1.00	4.39	0.02	0.07
1,380 Hp Waukesha 5794GSI	AP-42 Emission Factors	C-173N	1.00	4.39	0.02	0.07
1,380 Hp Waukesha 5794GSI	AP-42 Emission Factors	C-174N	1.00	4.39	0.02	0.07
1,775 Hp Caterpillar 3606	AP-42 Emission Factors	C-181	1.23	5.39	0.005	0.02
1,775 Hp Caterpillar 3606	AP-42 Emission Factors	C-182	1.23	5.39	0.005	0.02
1,775 Hp Caterpillar 3606	AP-42 Emission Factors	C-183	0.00	0.00	0.000	0.000
Amine Reboiler Hot Oil Heater (34.2 MMBTU/hr)	AP-42 Emission Factors	H-1	0.86	3.74	0.000	0.000
Mole Sieve Regeneration Gas Heater 1 (9.6 MMBTU/hr)	AP-42 Emission Factors	H-2	0.05	0.23	0.000	0.000
Cryo Trim Reboiler Hot Oil Heater 1 (6.93 MMBTU/hr)	AP-42 Emission Factors	H-4	0.04	0.16	0.000	0.000
Combo Hot Oil Heater 1 (51 MMBTU/hr)	AP-42 Emission Factors	H-5	1.28	5.58	0.000	0.000
Combo Hot Oil Heater 2 (51 MMBTU/hr)	AP-42 Emission Factors	H-6	1.28	5.58	0.000	0.000
Mole Sieve Regeneration Gas Heater 2 (6.23 MMBTU/hr)	AP-42 Emission Factors	H-7	0.03	0.15	0.000	0.000
Amine Unit Vent	Process simulation	AMINE	0.99	4.35	0.07	0.32
Amine Unit 2 Vent	Process simulation	AMINE-2	0.87	3.82	0.07	0.29
Plant 1 Flare	Mass balance	FLARE-1	3.61	15.79	0.07	0.31
Glycol Dehydration Unit (DEHY1)	GlyCalc	DEHY1	3.52	15.41	0.17	0.76
Plant 2 Flare	Mass balance	FLARE-2	5.34	23.41	0.07	0.29
Tank Vent Combustor	GlyCalc	COMB-1	2.23	9.78	0.000	0.000
Slop Oil Storage Tank (750-bbl)	Gas Analysis	TK-1	0.04	0.18	0.0002	0.001
Slop Oil Storage Tank (750-bbl)	Gas Analysis	TK-2	0.04	0.18	0.0002	0.001
Condensate Storage Tank (10,000-bbl)	Gas Analysis	TK-3	0.30	1.30	0.001	0.005
Condensate Storage Tank (10,000-bbl)	Gas Analysis	TK-4	0.30	1.30	0.001	0.005
Slop Oil Storage Tank (210-bbl)	Gas Analysis	TK-5	0.03	0.13	0.000	0.000
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-6	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-7	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-8	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-9	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-10	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-11	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-12	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-13	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-14	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-15	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-16	0.08	0.35	0.000	0.001
Open Drain Storage Tank (80-bbl)	Gas Analysis	TK-17	0.08	0.35	0.000	0.001
Gasoline Storage Tank (500-gal)	Gas Analysis	TK-18	0.03	0.12	--	--
Diesel Storage Tank (500-gal)	Gas Analysis	TK-19	0.00	0.00	--	--
Truck Loading	Gas Analysis	L-1	15.65	37.08	0.19	0.46
Non-Monitored Site Fugitives	Gas Analysis	FUG-1	1.02	4.49	0.01	0.01
Monitored Site Fugitives	Gas Analysis	FUG-2	0.74	3.24	0.01	0.01
Blowdown Vent	Gas Analysis	VENT-1	20.41	8.49	0.62	0.76
Other Venting	Gas Analysis	VENT-2	136.04	3.40	0.02	0.000
Engine Starter Vent	Gas Analysis	VENT-3	9.03	3.76	0.001	0.005
MSS Emissions	Gas Analysis	MSS-1	9.15	3.23	0.003	0.26
Total:					1.44	4.08

TABLE 41
SITE DATA
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

	Stream 1		Stream 2		Stream 3		Stream 4	
	Inlet Gas		Fuel/Residue		Flare Vent		Condensate	
Component	mole %	wgt. % *					mole %	wgt % *
H2S	0.0001%	0.0002%	0.000%	0.00%	0.000%	0.00%	0.00%	0.0%
Nitrogen	2.481%	-	3.344%	-	2.811%	-	0.01%	-
Carbon Dioxide	0.539%	-	0.000%	-	0.000%	-	0.00%	-
Oxygen	0.000%	-	0.000%	-	0.000%	-	0.00%	-
Methane	72.882%	55.86%	84.813%	78.80%	74.094%	57.47%	0.50%	0.14%
Ethane	13.553%	19.47%	11.150%	19.42%	13.129%	19.09%	7.42%	3.93%
Propane	7.724%	16.27%	0.685%	1.75%	7.420%	15.82%	33.98%	26.40%
I-Butane	0.555%	1.54%	0.003%	0.01%	0.496%	1.39%	5.99%	6.14%
N-Butane	1.612%	4.48%	0.003%	0.01%	1.519%	4.27%	24.42%	25.02%
I-Pentane	0.234%	0.81%	0.000%	0.00%	0.186%	0.65%	6.74%	8.57%
N-Pentane	0.238%	0.82%	0.000%	0.00%	0.179%	0.62%	7.95%	10.11%
Hexanes Plus	0.181%	0.75%	0.002%	0.01%	0.166%	0.69%	12.72%	19.32%
Benzene	0.001%	0.003%	0.000%	0.00%	0.000%	0.00%	0.27%	0.37%
Totals	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Totals (C3+)		24.66%		1.78%		23.45%		95.55%

Weight percent of hydrocarbon fraction only

Inlet analysis is from the inlet used in the Promax run.

Residue, flare vent, and condensate is from the Facility.

APPENDIX B

SUPPORTING DOCMENTATION

TABLE OF CONTENTS

Document

G3608

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
E002317

CATERPILLAR®

ENGINE SPEED rpm :	1000	RATING STRATEGY:	STANDARD
COMPRESSION RATIO:	7.6	RATING LEVEL:	CONTINUOUS
AFTERCOOLER TYPE:	SCAC	FUEL SYSTEM:	GAV
AFTERCOOLER - STAGE 2 INLET °F :	130		WITH AIR FUEL RATIO CONTROL
AFTERCOOLER - STAGE 1 INLET °F :	174	**SITE CONDITIONS:**	
JACKET WATER OUTLET °F :	190	FUEL:	Gas Analysis
ASPIRATION:	TA	FUEL PRESSURE RANGE psig): See note 1	58.0-70.3
COOLING SYSTEM:	JW+1AC, OC+2AC	FUEL METHANE NUMBER:	95.0
CONTROL SYSTEM:	ADEM4	FUEL LHV Btu/scf :	896
EXHAUST MANIFOLD:	DRY	ALTITUDE(ft):	2650
COMBUSTION:	LOW EMISSION	MAXIMUM INLET AIR TEMPERATURE °F :	105
NOx EMISSION LEVEL g/bhp-hr NOx :	0.5	STANDARD RATED POWER:	2500 bhp@1000rpm
SET POINT TIMING:	18		

				MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER	WITHOUT FAN	2)	bhp	2500	2500	1875	1250
INLET AIR TEMPERATURE			°F	105	105	105	105
ENGINE DATA							
FUEL CONSUMPTION LHV		3)	Btu/bhp-hr	6755	6755	7001	7506
FUEL CONSUMPTION HHV		3)	Btu/bhp-hr	7496	7496	7769	8329
AIR FLOW @inlet air temp, 14.7 psia	WET	4)(5)	ft3/min	6429	6429	4866	3325
AIR FLOW	WET	4)(5)	lb/hr	27092	27092	20507	14013
FUEL FLOW 60ºF, 14.7 psia			scfm	314	314	244	175
INLET MANIFOLD PRESSURE		6)	in Hg(abs)	98.5	98.5	74.9	52.6
EXHAUST TEMPERATURE - ENGINE OUTLET		7)	°F	853	853	900	956
EXHAUST GAS FLOW @engine outlet temp, 14.5 psia	WET	8)(5)	ft3/min	15969	15969	12540	8939
EXHAUST GAS MASS FLOW	WET	8)(5)	lb/hr	27914	27914	21146	14469
EMISSIONS DATA - ENGINE OUT							
NOx (as NO2		9)(10)	g/bhp-hr	0.50	0.50	0.50	0.50
CO		9)(10)	g/bhp-hr	2.20	2.20	2.20	2.20
THC mol. wt. of 15.84		9)(10)	g/bhp-hr	4.10	4.10	4.31	4.32
NMHC (mol. wt. of 15.84		9)(10)	g/bhp-hr	0.38	0.38	0.40	0.40
NMNEHC VOCs mol. wt. of 15.84		9)(10)(11)	g/bhp-hr	0.26	0.26	0.27	0.27
HCHO (Formaldehyde		9)(10)	g/bhp-hr	0.23	0.23	0.23	0.24
CO2		9)(10)	g/bhp-hr	428	428	440	472
EXHAUST OXYGEN		9)(12)	% DRY	11.3	11.3	11.0	10.5
HEAT REJECTION							
HEAT REJ. TO JACKET WATER JW		13)	Btu/min	26453	26453	22749	19074
HEAT REJ. TO ATMOSPHERE		13)	Btu/min	10862	10862	10789	10432
HEAT REJ. TO LUBE OIL OC		13)	Btu/min	12665	12665	11812	10632
HEAT REJ. TO A/C - STAGE 1 1AC		13)(14)	Btu/min	23737	23737	11369	2540
HEAT REJ. TO A/C - STAGE 2 2AC		13)(14)	Btu/min	8286	8286	5118	2526

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT JW+1AC	14)(15)	Btu/min	59424
TOTAL STAGE 2 AFTERCOOLER CIRCUIT OC+2AC	14)(15)	Btu/min	26288
A cooling system safety factor of 10% has been added to the cooling system sizing criteria.			

CONDITIONS AND DEFINITIONS

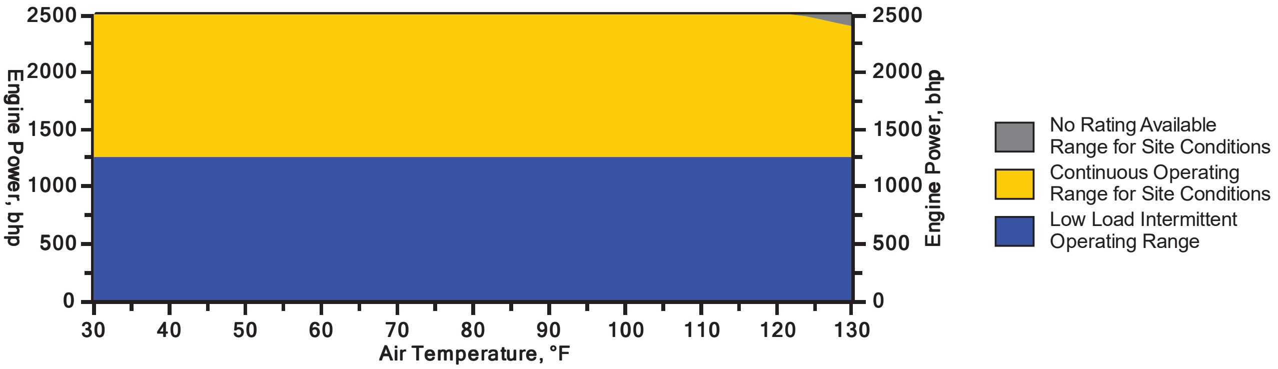
Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

PREPARED BY: Mike Robinson, Enerflex
Data generated by Gas Engine Rating Pro Version 6.03.00
Ref. Data Set EM0655-06-001, Printed 16Dec2016

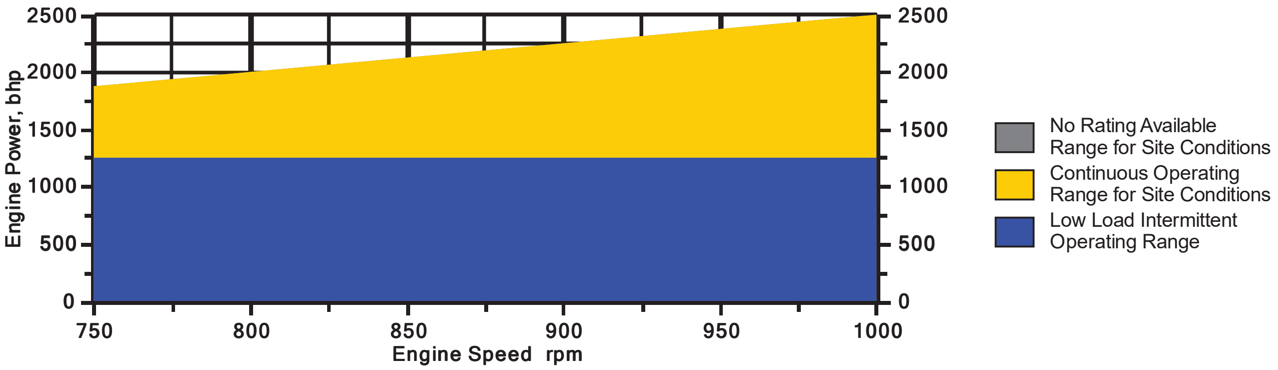
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 2650 ft and 1000 rpm



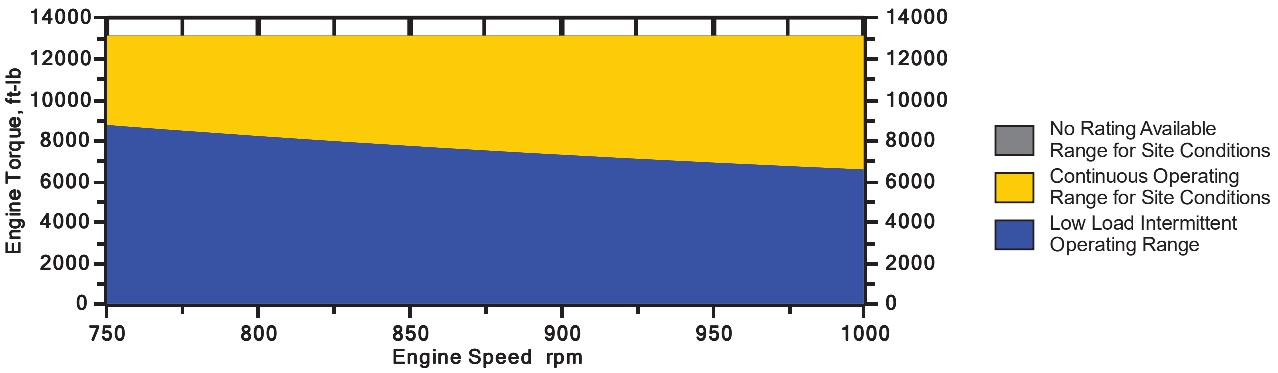
Engine Power vs. Engine Speed

Data represents speed sweep at 2650 ft and 105 ºF



Engine Torque vs. Engine Speed

Data represents speed sweep at 2650 ft and 105 ºF



Note: At site conditions of 2650 ft and 105°F inlet air temp., constant torque can be maintained down to 750 rpm. The minimum speed for loading at these conditions is 750 rpm.

PREPARED BY: Mike Robinson, Enerflex
Data generated by Gas Engine Rating Pro Version 6.03.00
Ref. Data Set EM0655-06-001, Printed 16Dec2016

NOTES

1. Fuel pressure range specified is to the engine gas shutoff valve GSOV . Additional fuel train components should be considered in pressure and flow calculations.

2. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

3. Fuel consumption tolerance is ± 2.5% of full load data.

4. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

5. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

6. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

7. Exhaust temperature is a nominal value with a tolerance of + 63°F, - 54°F.

8. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

9. Emissions data is at engine exhaust flange prior to any after treatment.

10. Values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate the maximum values expected under steady state conditions. Fuel methane number cannot vary more than ± 3. THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.

11. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

12. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

13. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

14. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

15. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied factory tolerances and an additional cooling system factor of 10%.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0000	0.0000
Methane	CH4	95.2800	95.2800
Ethane	C2H6	1.6100	1.6100
Propane	C3H8	0.0500	0.0500
Isobutane	iso-C4H1O	0.0000	0.0000
Norbutane	nor-C4H1O	0.0000	0.0000
Isopentane	iso-C5H12	0.0000	0.0000
Norpentane	nor-C5H12	0.0000	0.0000
Hexane	C6H14	0.0000	0.0000
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	3.0600	3.0600
Carbon Dioxide	CO2	0.0000	0.0000
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL Volume %		100.0000	100.0000

Fuel Makeup:	Gas Analysis
Unit of Measure:	English

Calculated Fuel Properties

Caterpillar Methane Number:	95.0
Lower Heating Value (Btu/scf :	896
Higher Heating Value (Btu/scf :	994
WOBBE Index (Btu/scf :	1181
THC: Free Inert Ratio:	31.68
Total % Inerts (% N2, CO2, He :	3.06%
RPC (% (To 905 Btu/scf Fuel :	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol :	9.36
Stoich A/F Ratio (Mass/Mass :	16.28
Specific Gravity (Relative to Air :	0.575
Fuel Specific Heat Ratio (K :	1.315

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA engines, and turbocharged (TA or LE engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

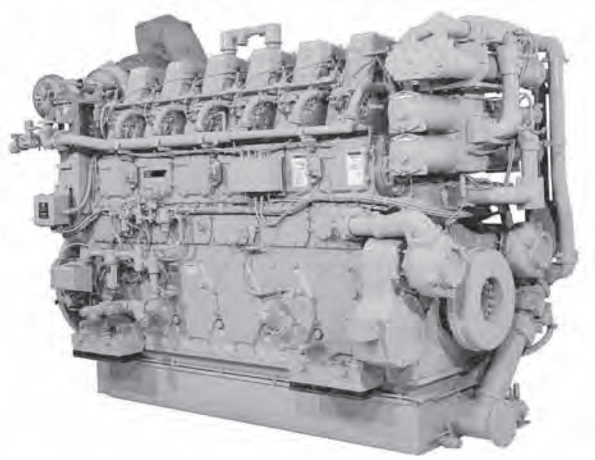
Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

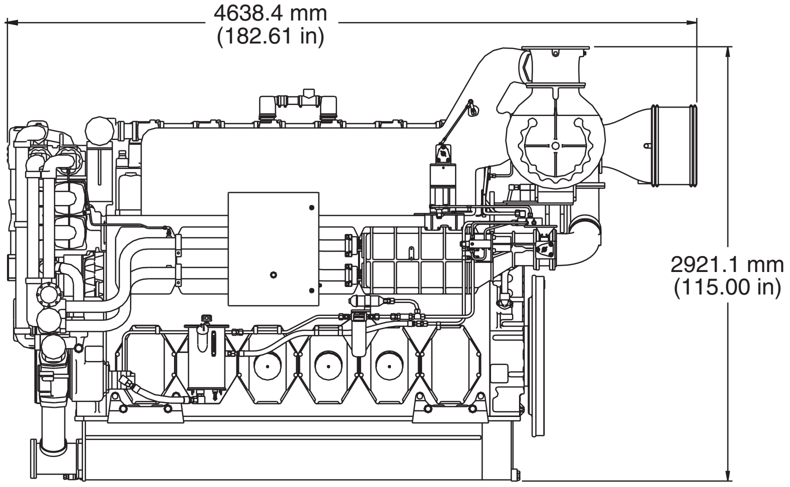
Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

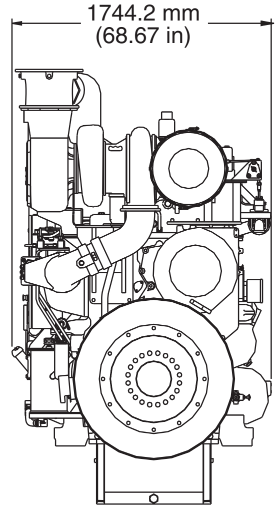
To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.



	DM5137-03	DM5433-05
Engine Power		
@ 100% Load	1368 (1835)	1324 (1775)
@ 75% Load	1026 (1376)	993 (1331)
Engine Speed	**1000**	**1000**
Max Altitude @ Rated Torque and 38°C (100°F)	1219.2 (4000)	609.6 (2000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	20	23
SCAC Temperature	43 (110)	54 (130)
Emissions*		
NOx	.94 (0.7)	.94 (0.7)
CO	3.4 (2.5)	3.4 (2.5)
CO_2	589 (439)	590 (440)
VOC**	0.8 (0.6)	0.81 (0.6)
Fuel Consumption***		
@ 100% Load	9.34 (6600)	9.37 (6620)
@ 75% Load	9.73 (6876)	9.77 (6903)
Heat Balance		
Heat Rejection to Jacket Water		
@ 100% Load	321 (18,281)	314 (17,894)
@ 75% Load	278 (15,801)	270 (15,400)
Heat Rejection to Aftercooler		
@ 100% Load	269 (15,297)	235 (13,350)
@ 75% Load	149 (8466)	128 (7300)
Heat Rejection to Exhaust LHV to 25°C (77° F)		
@ 100% Load	1334 (75,883)	1320 (75,085)
@ 75% Load	1061 (60,310)	1047 (59,560)
Exhaust System		
Exhaust Gas Flow Rate		
@ 100% Load	346.48 (12,236)	339.92 (12,004)
@ 75% Load	273.97 (9675)	269.49 (9517)
Exhaust Stack Temperature		
@ 100% Load	454 (850)	464 (867)
@ 75% Load	471 (880)	477 (891)
Intake System		
Air Inlet Flow Rate		
@ 100% Load	133.29 (4707)	129.01 (4556)
@ 75% Load	102.96 (3636)	100.50 (3549)
Gas Pressure	295-324 (42.8-47)	295-324 (42.8-47)

GAS PETROLEUM ENGINE





DIMENSIONS		
Length	mm (in.)	4638.4 (182.61)
Width	mm (in.)	1744.2 (68.67)
Height	mm (in.)	2921.1 (115.00)
Shipping Weight	kg (lb)	15,676 (34,560)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

RATING DEFINITIONS AND CONDITIONS

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.

Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in. Hg) and 15° C (59° F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in. Hg) and 15.6° C (60.1° F). Air flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and 25° C (77° F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and stack temperature.

Performance Numbers: DM5137-03, DM5432-05, DM5433-05, DM8605-02
LEHW0039-02 (8-10)

GE Power & Water
Distributed Power

Waukesha* gas engines VHP* Series Four* L5794/L7044GSI-EPA

1380/1680 BHP (1029/1253 kWb)

a product of
ecomagination

multi-fuel mobile power generation

With over 100 years of engine design, development and manufacturing experience, GE's Waukesha gas engines are redefining oil field power generation in drill rig applications with a non-road EPA mobile certified solution that provides diesel-like performance, fuel flexibility to run on natural gas/field gas and low emissions output for excellent engine performance.

Operation – runs and provides power like a diesel without the cost of diesel fuel
Flexibility – reliable, proven fuel flexibility across a wide BTU range
Emissions – non-road mobile certified by the US EPA
Mobility – Simple to package with a pony skid or tailboard skid for plug and play operation
Power – maintains consistent power output across changing field conditions

standard engine features

1. Flywheel machined for generator coupling
2. Side inlet jacket water pump header
3. Jacket water outlet includes Dresser coupling
4. Auxiliary water thermostatic valve
5. Main bearing temperature sensors
6. Exhaust temperature sensors
7. Front stub shaft
8. Standard air/gas starter, optional electric starters
9. Three-way catalytic converter, includes housing, elements, flexibile bellows; integrated catalyst silencer option
10. I/O box with display and MIL functionality
11. Single point fuel Inlet
12. 5 spin-on oil filters
13. Closed breather system

technical data

L5794GSI EPA

Cylinders	V12
Piston displacement	5788 cu. in. (95 L)
Compression ratio	8.25:1
Bore & stroke	8.5" x 8.5" (216 x 216 mm)
Jacket water system capacity	107 gal. (405 L)
Lube oil capacity	190 gal. (719 L)
Starting system	90 - 150 psi air/gas; optional 24V electric

L7044GSI EPA

Cylinders	V12
Piston displacement	7040 cu. in. (115 L)
Compression ratio	8:1
Bore & stroke	9.375" x 8.5" (238 x 216)
Jacket water system capacity	100 gal. (379 L)
Lube oil capacity	190 gal. (719 L)
Starting system	90 - 150 psi air/gas; optional 24V electric

engine power ratings at site conditions

L5794GSI using 91 WKI fuel, BHP

Ambient temperature °F	Elevation ft.							
	1000	2000	3000	4000	5000	6000	7000	8000
77	1380	1380	1380	1380	1380	1380	1380	1376
86	1380	1380	1380	1380	1380	1380	1380	1376
100	1380	1380	1380	1380	1380	1380	1380	1376
104	1374	1374	1374	1374	1374	1374	1374	1374
120	1352	1352	1352	1352	1352	1352	1352	1352

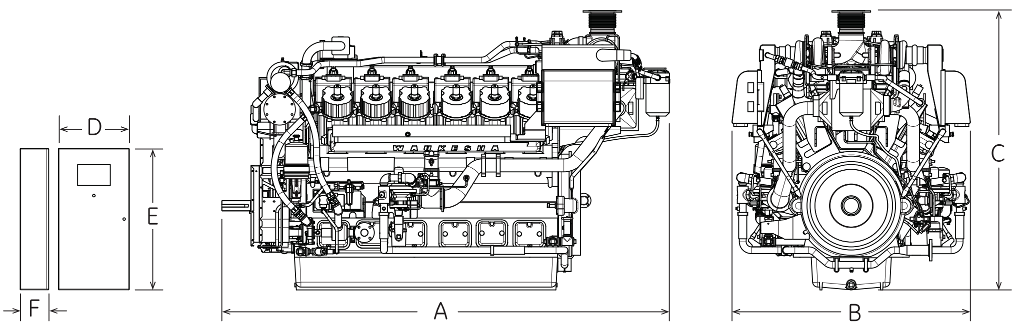
L7044GSI using 91 WKI fuel, BHP

Ambient temperature °F	Elevation ft.							
	1000	2000	3000	4000	5000	6000	7000	8000
77	1680	1680	1680	1680	1680	1680	1680	1675
86	1680	1680	1680	1680	1680	1680	1680	1627
100	1680	1680	1680	1680	1680	1680	1680	1515
104	1673	1673	1673	1673	1673	1673	1663	1476
120	1646	1646	1646	1646	1620	1593	1481	1289

Fuel Standard: All natural gas engine ratings are based on 900 BTU/ft^3 (35.38 MJ/m^3) SLHV, 91 WKI minimum, commercial quality natural gas. Refer to S-7884-7 (latest version) for full gaseous fuel specifications.

dimensions/weight

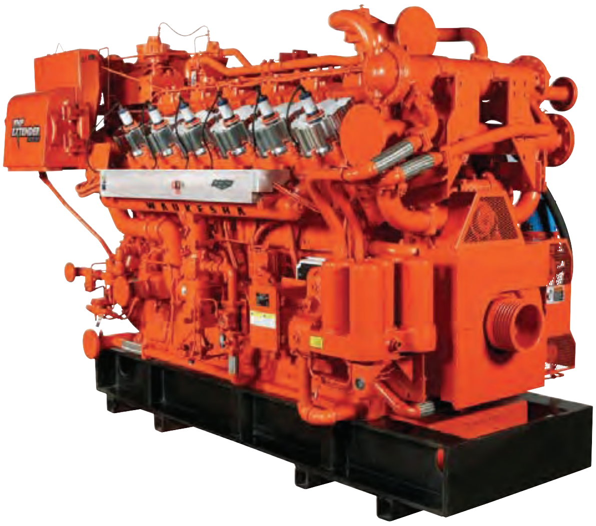
model	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	weight lb (kg)
L5794GSI EPA	147 (3734)	85 (2159)	97.83 (2485)	24 (610)	48 (1219)	10.80 (274)	21,000 (9,525)
L7044GSI EPA	147 (3734)	85 (2159)	97.83 (2485)	24 (610)	48 (1219)	10.80 (274)	21,000 (9,525)



*I/O Panel shipped loose.
**Engine shipped on shipping skid

mobileFLEX
Multi-Fuel Mobile Power Generation

GE Energy
Gas Engines



Waukesha* gas engine VHP* Series Four*

L5794GSI

920 - 1380 BHP (686 - 1029 kWb)

GE's Waukesha Series Four rich-burn engines are the engines of choice for the harshest and most demanding gas compression, power generation and mechanical drive applications. The Series Four engines can reliably produce more power on the hottest field gases, a the highest altitudes, and in the most remote locations, all while delivering the lowest available emissions when paired with a 3-way catalyst (NSCR).

technical data

Cylinders	V12
Piston displacement	5788 cu. in. (95 L)
Compression ratio	8.25:1
Bore & stroke	8.5" x 8.5" (216 x 216 mm)
Jacket water system capacity	107 gal. (405 L)
Lube oil capacity	190 gal. (719 L)
Starting system	125 - 150 psi air/gas 24V electric

Dimensions l x w x h inch (mm)

147 (3734) x 85 (2159) x 97.83 (2485)

Weights lb (kg)

21,000 (9,525)

imagination at work

*Trademark of General Electric Company

performance data

Intercooler Water Temperature 130°F (54°C)		1200 RPM	1000 RPM
	Power bhp (kWb)	1380 (1029)	1150 (858)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7665 (10846)	7496 (10602)
	Fuel Consumption Btu/hr x 1000 (kW)	10578 (3100)	8621 (2527)
Emissions	NOx g/bhp-hr (mg/Nm³ @ 5% O_2)	13.50 (5011)	14.90 (5508)
	CO g/bhp-hr (mg/Nm³ @ 5% O_2)	10.50 (3770)	10.10 (3734)
	NMHC g/bhp-hr (mg/Nm³ @ 5% 0_2)	0.28 (105)	0.30 (110)
	THC g/bhp-hr (mg/Nm³ @ 5% O_2)	1.80 (682)	2.00 (733)
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	3037 (890)	2512 (736)
	Heat to Lube Oil Btu/hr x 1000 (kW)	470 (138)	372 (109)
	Heat to Intercooler Btu/hr x 1000 (kW)	132 (39)	74 (22)
	Heat to Radiation Btu/hr x 1000 (kW)	674 (198)	605 (177)
	Total Exhaust Heat Btu/hr x 1000 (kW)	2959 (867)	2298 (674)
Intake/ Exhaust System	Induction Air Flow scfm (Nm³/hr)	2001 (3014)	1638 (2467)
	Exhaust Flow lb/hr (kg/hr)	8984 (4075)	7355 (3336)
	Exhaust Temperature °F (°C)	1136 (613)	1077 (581)

All data according to full load and subject to technical development and modification.

Consult your local GE Energy's representative for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

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GE Energy
1101 West Saint Paul Ave.
Waukesha, WI 53188-4999
P: 262.547.3311
F: 262.549.2759

Visit us online at:
www.waukeshaengine.com

7058 1211 GEA-18928

MOBILE ANALYTICAL LABORATORIES, INC.

P.O. BOX 69210
ODESSA, TEXAS 79769
PHONE (432)337-4744

45295

GAS ANALYSIS REPORT

COMPANY . .	NAVITAS MIDSTREAM PARTNERS	STATION	
LEASE/PLANT	PLANT VENT	PRESS. PSIG	.815
OPERATOR .	NEWBERRY	TEMP. DEG. F	.58
CYLINDER .	881	SAMPLED / RECEIVED	.01/17/18
H2S PPM . .	0.0	SAMPLED BY	.RR

FRACTIONAL ANALYSIS

COMPONENT	MOL %	GPM C2+	GPM C5+
NITROGEN	2.811	0.000	0.000
CARBON DIOXIDE . .	0.000	0.000	0.000
METHANE	74.094	0.000	0.000
ETHANE	13.129	3.504	0.000
PROPANE	7.420	2.040	0.000
ISO-BUTANE	0.496	0.162	0.000
N-BUTANE	1.519	0.478	0.000
ISO-PENTANE	0.186	0.068	0.068
N-PENTANE	0.179	0.065	0.065
HEXANES PLUS . . .	0.166	0.072	0.072
H2S	0.000	0.000	0.000
TOTALS	100.000	6.389	0.205

CALC. SP.GRAVITY 0.744

BTU/CU. FT. (14.650 PSIA, 60 DEG. F)

CALC. GROSS WET	1235
CALC. GROSS DRY	1257

DISTRIBUTION:
MR. CHRIS BUMGARNER

NOTES:

REPORT DATE: 01/24/18

MOBILE ANALYTICAL LABORATORIES, INC.

P.O. BOX 69210
ODESSA, TEXAS 79769
PHONE (432)337-4744

45294

GAS ANALYSIS REPORT

COMPANY . .	NAVITAS MIDSTREAM PARTNERS	STATION	
LEASE/PLANT	RESIDUE GAS	PRESS. PSIG	.878
OPERATOR .	NEWBERRY	TEMP. DEG. F	.57
CYLINDER .	1096	SAMPLED / RECEIVED	.01/17/18
H2S PPM . .	0.0	SAMPLED BY	.RR

FRACTIONAL ANALYSIS

COMPONENT	MOL %	GPM C2+	GPM C5+
NITROGEN	3.344	0.000	0.000
CARBON DIOXIDE . .	0.000	0.000	0.000
METHANE	84.813	0.000	0.000
ETHANE	11.150	2.972	0.000
PROPANE	0.685	0.188	0.000
ISO-BUTANE	0.003	0.001	0.000
N-BUTANE	0.003	0.001	0.000
ISO-PENTANE	0.000	0.000	0.000
N-PENTANE	0.000	0.000	0.000
HEXANES PLUS . . .	0.002	0.001	0.001
H2S	0.000	0.000	0.000
TOTALS	100.000	3.163	0.001

CALC. SP.GRAVITY 0.630

BTU/CU. FT. (14.650 PSIA, 60 DEG. F)
CALC. GROSS WET 1052
CALC. GROSS DRY 1071

DISTRIBUTION:
MR. CHRIS BUMGARNER

NOTES:

REPORT DATE: 01/24/18

Certificate of Analysis

Number: 5030-19060407-001A

Midland Laboratory
2200 East I-20
Midland, TX 79706
Phone 432-689-7252

CHRIS PUTZEL
NAVITAS MIDSTREAM
14108 E CR 230
MIDLAND, TX 79706

June 26, 2019

Station Name:	STABILIZED CONDENSATE	Sampled By:	DEREK VAN WINKLE
Station Location:	NEWBERRY PLANT	Sample Of:	NGL Spot
Cylinder No:	5030-32799	Sample Date:	06/20/2019 17:00
Analyzed:	06/26/2019 16:54:37 by MB	Sample Conditions:	1225 psig, @ 162 °F
		Method:	GPA 2186

Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.011	0.005	0.004
Carbon Dioxide	0.000	0.000	0.000
Methane	0.496	0.139	0.266
Ethane	7.422	3.886	6.260
Propane	33.977	26.092	29.526
Iso-Butane	5.992	6.065	6.185
n-Butane	24.422	24.719	24.285
Iso-Pentane	6.739	8.467	7.773
n-Pentane	7.951	9.990	9.091
Hexanes Plus	12.990	20.637	16.610
	100.000	100.000	100.000

Calculated Physical Properties	**Total**	**C6+**
Specific Gravity at 60°F	0.5739	0.7130
API Gravity at 60°F	115.0443	66.9544
Molecular Weight	57.423	91.225
Pounds per Gallon (in Vacuum)	4.785	5.944
Pounds per Gallon (in Air)	4.780	5.938
Specific Gravity as a vapor	1.983	3.150
Cu. Ft. Vapor per Gallon @ 14.696 psia	31.622	24.728
BTU / Cu. Ft. @ 14.696 psia DRY	3211	4926
BTU / GAL.	101540	121813
BTU / LB.	21220	20486
CO_2, Ethane LV Ratio	0.00	
Methane, Ethane LV Ratio	4.25	
Vapor Pressure @ 100F	168.37	4.16

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

Midland Laboratory
2200 East I-20
Midland, TX 79706
Phone 432-689-7252

Certificate of Analysis

Number: 5030-19060407-001A

June 26, 2019

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NAVITAS MIDSTREAM
14108 E CR 230
MIDLAND, TX 79706

Station Name:	STABILIZED CONDENSATE	Sampled By:	DEREK VAN WINKLE
Station Location:	NEWBERRY PLANT	Sample Of:	NGL Spot
Cylinder No:	5030-32799	Sample Date:	06/20/2019 17:00
Analyzed:	06/26/2019 16:54:37 by MB	Sample Conditions:	1225 psig, @ 162 °F
		Method:	GPA 2186

Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.011	0.005	0.004
Carbon Dioxide	0.000	0.000	0.000
Methane	0.496	0.139	0.266
Ethane	7.422	3.886	6.260
Propane	33.977	26.092	29.526
Iso-Butane	5.992	6.065	6.185
n-Butane	24.422	24.719	24.285
Iso-Pentane	6.739	8.467	7.773
n-Pentane	7.951	9.990	9.091
Hexanes	5.816	8.606	7.397
Heptanes Plus	7.174	12.031	9.213
	100.000	100.000	100.000

Calculated Physical Properties	**Total**	**C7+**
Specific Gravity at 60°F	0.5739	0.7492
API Gravity at 60°F	115.0443	57.3722
Molecular Weight	57.423	96.315
Pounds per Gallon (in Vacuum)	4.785	6.246
Pounds per Gallon (in Air)	4.780	6.239
Specific Gravity as a vapor	1.983	3.325
Cu. Ft. Vapor per Gallon @ 14.696 psia	31.622	24.610
BTU / Cu. Ft. @ 14.696 psia DRY	3211	5129
BTU / GAL.	101540	126213
BTU / LB.	21220	20207

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

Midland Laboratory
2200 East I-20
Midland, TX 79706
Phone 432-689-7252

Certificate of Analysis

Number: 5030-19060407-001A

CHRIS PUTZEL
NAVITAS MIDSTREAM
14108 E CR 230
MIDLAND, TX 79706

June 26, 2019

Station Name:	STABILIZED CONDENSATE	Sampled By:	DEREK VAN WINKLE
Station Location:	NEWBERRY PLANT	Sample Of:	NGL Spot
Cylinder No:	5030-32799	Sample Date:	06/20/2019 17:00
Analyzed:	06/26/2019 16:54:37 by MB	Sample Conditions:	1225 psig, @ 162 °F
		Method:	GPA 2186

Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.011	0.005	0.004
Methane	0.496	0.139	0.266
Carbon Dioxide	NIL	NIL	NIL
Ethane	7.422	3.886	6.260
Propane	33.977	26.092	29.526
Iso-Butane	5.992	6.065	6.185
n-Butane	24.422	24.719	24.285
Iso-Pentane	6.739	8.467	7.773
n-Pentane	7.951	9.990	9.091
i-Hexanes	3.652	5.358	4.587
n-Hexane	2.164	3.248	2.810
Benzene	0.272	0.370	0.240
Cyclohexane	0.790	1.158	0.848
i-Heptanes	3.309	5.318	4.146
n-Heptane	0.589	1.029	0.858
Toluene	0.190	0.305	0.200
i-Octanes	1.470	2.708	2.063
n-Octane	0.156	0.310	0.252
Ethylbenzene	0.028	0.053	0.035
Xylenes	0.051	0.095	0.063
i-Nonanes	0.198	0.414	0.309
n-Nonane	0.032	0.072	0.057
i-Decanes	0.076	0.163	0.114
n-Decane	0.009	0.023	0.018
Undecanes Plus	0.004	0.013	0.010
	100.000	100.000	100.000

Calculated Physical Properties	**Total**	**C11+**
Specific Gravity at 60°F	0.5739	0.7471
API Gravity at 60°F	115.0443	57.8894
Molecular Weight	57.423	160.617
Pounds per Gallon (in Vacuum)	4.785	6.229
Pounds per Gallon (in Air)	4.780	6.222
Specific Gravity as a vapor	1.983	5.531
Cu. Ft. Vapor per Gallon @ 14.696 psia	31.622	14.717
BTU / Cu. Ft. @ 14.696 psia DRY	3211	8697
BTU / GAL.	101540	128322
BTU / LB.	21220	20600

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

SPL, Inc.

Analysis Request Chain of Custody Record

SPL	SPL Work Order No.:	Acct. Mate Code:	Dept. Code	Page 1 / Pages 1

Report To: (Company Name):	Navitas		
Address:	14108 E CR 230		
City/State/Zip:	Midland	TX	79706
Contact:	Chris Putzel	cputzel@navitas-midstream.com	
Phone:	432-631-6112	Fax:	
Invoice To: (Company Name):	Navitas		
Address:	14108 E CR 230		
City/State/Zip:	Midland	TX	79706
Contact:	Chris Putzel	cputzel@navitas-midstream.com	
Phone:	432-631-6112		
Client PO# or Ref. No.:	N/A		
Contract/Proposal #: (i.e. SPLQ####)			

Project/Station Name: | Project/Station Number: | Project/Station Location:

Special Instructions:

Requested TAT*: 10 business days

Indicate Billing Type: (Place "X", where appropriate) — Net 30 day Acct. | Check # — Credit Card | <<<Contact SPL, Inc for CC payment arrangements.

* Surcharges May Apply (See quote for details)

† Terms: Cylinders will be rented for $10/cyl. All cylinders checked out are to be returned within 21 days, whether they contain sample or not. Cylinders not returned after 30 days will be considered lost and will be billed at current replacement cost.

Requested Analysis (Place an "X" next to Sample ID below)

Sample ID (used to log/track sample)	Sample Date	Sample Time	Sample Type (Gas/Liq./Solid)	Duplicate	Composite	Spot	Cylinder #	Date Out	Date In	BC-C10LQ									Sample Pressure (PSIG / PSIA)	Sample Temp	Comments
T1 Slug Catcher	06/20/19	4:00	NGL			X	1030-08532	06/20/19	06/20/19										1000	110	
Super Sized Slug Catcher	06/20/19	4:30	NGL			X	1030-06527	06/20/19	06/20/19										850	78	
Stabilizer	06/20/19	5:00	NGL			X	5030-32799	06/20/19	06/20/19	X									1225	162	

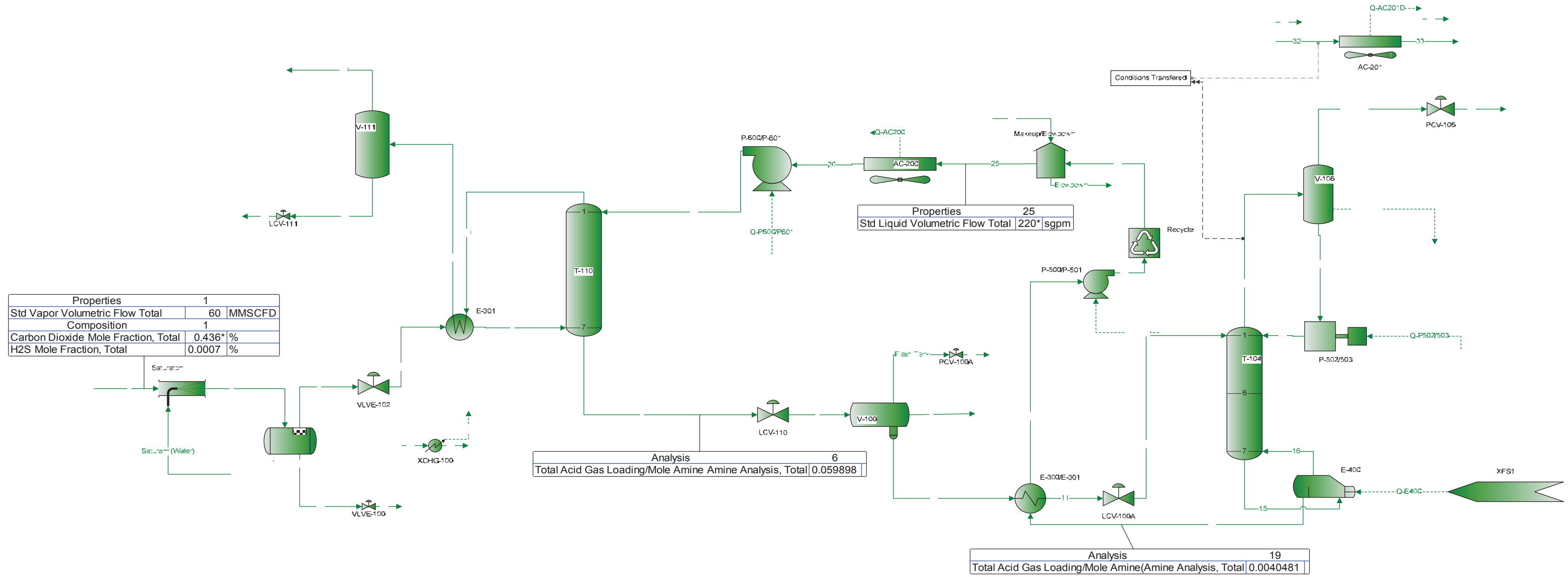
Cylinder Tracking Info†

Sampled By-Print Name:	Derek Van Winkle		Received By-Company:		
Signature:	Derek Van Winkle				
Relinquished By-Print Name:	Derek Van Winkle	Date: 06/20/19	Time: 7:00	Received By-Print Name: Kelly [signature]	Date: Time:
Signature:	Derek Van Winkle			Signature:	
Relinquished By-Print Name:		Date:	Time:	Received By-Print Name:	Date: Time:
Signature:				Signature:	
Relinquished By-Print Name:		Date:	Time:	Received By-Print Name:	Date: Time:
Signature:				Signature:	

Choose SPL Facility>>>	Ship to Address:	300 Faudree Rd., Midland TX 79765	Phone:	432-689-7252

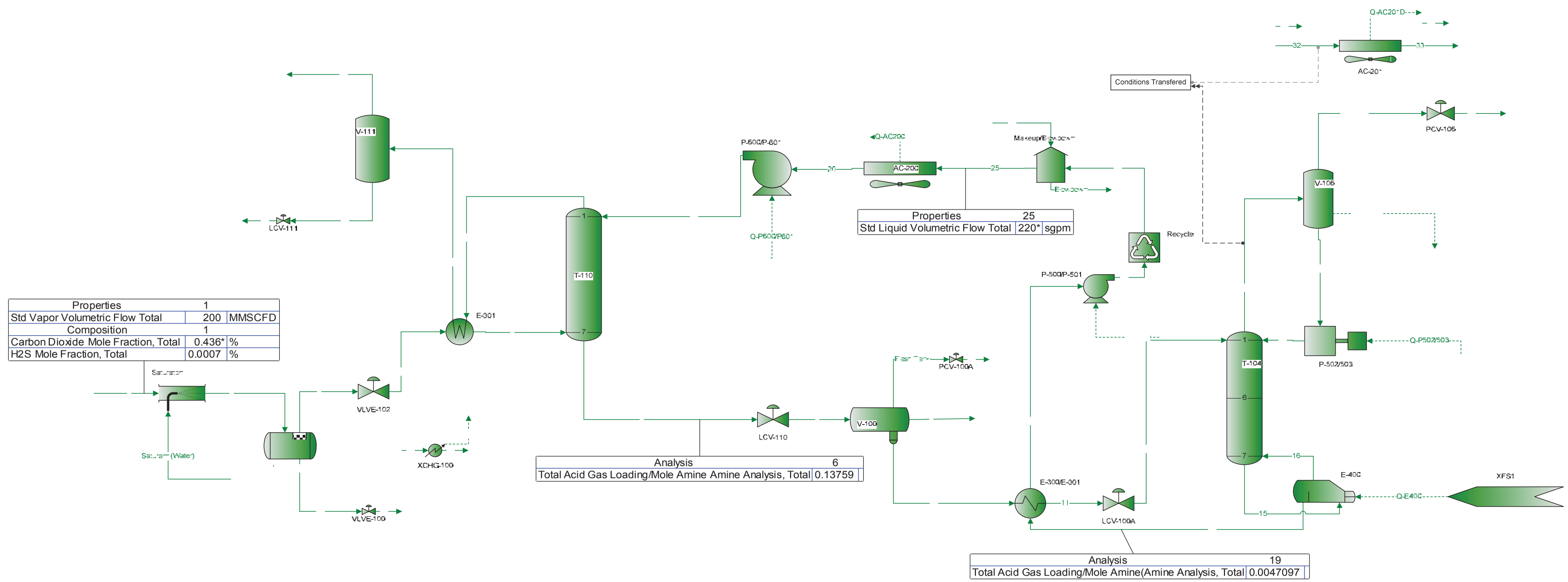
Note - As a convenience to our clients, this form is available in an electronic format. Please contact one of our offices above for the form to be e-mailed to you.

NAVITAS MIDSTREAM
60 MMSCFD, 0.436 MOL% CO2,
7 PPM H2S, 220 GPM AMINE UNIT



Names	Units	1	4	5	7	Flash Tank	10	12	15	Still Vent	19	25	27	28	29	30	31	Q-E400
Temperature	°F	69*	68	1.1e+02*	1.2e+02	1.2e+02	1.2e+02	2.1e+02	2.5e+02	1.2e+02	2.5e+02	1.7e+02	1.2e+02	1.2e+02	86	86	86	
Pressure	psig	9.5e+02*	9.4e+02	9.4e+02	70	70	70	45	11	6	11	54	1.2e+03*	9.4e+02	9.3e+02	9.3e+02	9.3e+02	
Mole Fraction Vapor	%	94	1e+02	1e+02	0.21	1e+02	0	0.012	0	1e+02	0	0	0	1e+02	1e+02	1e+02	0	
Std Vapor Volumetric Flow	MMSCFD	60*	56	56	33	0.07	33	33	41	0.28	33	33	33	56	56	56	0.068	
Std Liquid Volumetric Flow	sgpm	8.3e+02	7.6e+02	7.6e+02	2.2e+02	0.96	2.2e+02	2.2e+02	2.5e+02	3.2	2.2e+02	2.2e+02	2.2e+02	7.5e+02	7.5e+02	7.5e+02	0.27	
Carbon Dioxide Mole Fraction	%	0.44*	0.44	0.44	0.8	0.039	0.8	0.8	0.074	88	0.054	0.054	0.054	0.0029	0.0029	0.0029	0.022	
H2S Mole Fraction	ppm	7*	6.8	6.8	13	3.5	13	13	2.2	1.4e+03	1.9	1.9	1.9	0.009	0.009	0.0089	0.063	
Methane(Mole Fraction	%	71*	73	73	0.16	69	0.016	0.016	0	1.9	0	0	0	74	74	74	0.092	
Ethane Mole Fraction	%	14*	13	13	0.049	19	0.0096	0.0096	0	1.1	0	0	0	13	13	13	0.014	
Propane Mole Fraction	%	8.3	7.4	7.4	0.018	7.1	0.0032	0.0032	0	0.37	0	0	0	7.4	7.4	7.4	0.0046	
Isobutane Mole Fraction	%	0.83*	0.65	0.65	0.0011	0.44	0.00017	0.00017	0	0.02	0	0	0	0.65	0.65	0.65	0.00019	
n-Butane Mole Fraction	%	2.6	1.9	1.9	0.0045	1.7	0.00095	0.00095	0	0.11	0	0	0	1.9	1.9	1.9	0.00073	
Isopentane(Mole Fraction	%	0.49*	0.28	0.28	0.0004	0.16	6.3e-05	6.3e-05	0	0.0075	0	0	0	0.28	0.28	0.28	5e-05	
n-Pentane Mole Fraction)	%	0.55*	0.29	0.29	0.00049	0.19	9.2e-05	9.2e-05	0	0.011	0	0	0	0.29	0.29	0.29	5.9e-05	
n-Hexane Mole Fraction	%	0.098*	0.031	0.031	4.2e-05	0.016	8.5e-06	8.5e-06	0	0.001	0	0	0	0.031	0.031	0.031	3.1e-06	
Benzene(Mole Fraction	%	0.018404*	0.0062292	0.0062292	0.0012758	0.019444	0.0012375	0.0012375	0	0.14575	0	0	0	0.0054972	0.0054972	0.0055037	0.00019525	
Toluene Mole Fraction	%	0.0067015*	0.0012375	0.0012375	0.00029245	0.0030217	0.00028669	0.00028669	0	0.033766	0	0	0	0.0010689	0.0010689	0.0010702	2.3774e-05	
Ethylbenzene Mole Fraction	%	0.00030007*	2.9461e-05	2.9461e-05	6.2084e-06	5.9044e-05	6.0969e-06	6.0969e-06	0	0.00071808	0	0	0	2.5895e-05	2.5895e-05	2.5926e-05	3.5382e-07	
o-Xylene Mole Fraction	%	0.0015003*	0.00012731	0.00012731	4.0143e-05	0.00025451	3.9691e-05	3.9691e-05	0	0.0046747	0	0	0	0.00010398	0.00010398	0.0001041	2.3311e-06	
Energy Rate	Btu/h	-2.4e+08	-2.2e+08	-2.1e+08	-4.8e+08	-2.7e+05	-4.8e+08	-4.7e+08	-5.7e+08	-4.9e+06	-4.6e+08	-4.7e+08	-4.8e+08	-2.1e+08	-2.1e+08	-2.1e+08	-9.1e+05	1.5e+07

NAVITAS MIDSTREAM
200 MMSCFD, 0.436 MOL% CO2,
7 PPM H2S, 220 GPM AMINE UNIT



Properties	1	
Std Vapor Volumetric Flow Total	200	MMSCFD
Composition	1	
Carbon Dioxide Mole Fraction, Total	0.436*	%
H2S Mole Fraction, Total	0.0007	%

Properties	25	
Std Liquid Volumetric Flow Total	220*	sgpm

Analysis	6
Total Acid Gas Loading/Mole Amine Amine Analysis, Total	0.13759

Analysis	19
Total Acid Gas Loading/Mole Amine(Amine Analysis, Total	0.0047097

Names	Units	1	4	5	7	Flash Tank	10	12	15	Still Vent	19	25	27	28	29	30	31	Q-E400
Temperature	°F	69*	68	1.1e+02*	1.1e+02	1.1e+02	1.1e+02	2.1e+02	2.5e+02	1.2e+02	2.5e+02	1.6e+02	1.2e+02	1.2e+02	79	79	79	
Pressure	psig	9.5e+02*	9.4e+02	9.4e+02	70	70	70	45	11	6	11	54	1.2e+03*	9.4e+02	9.3e+02	9.3e+02	9.3e+02	
Mole Fraction Vapor	%	94	1e+02	1e+02	0.2	1e+02	0	0.016	0	1e+02	0	0	0	1e+02	1e+02	1e+02	0	
Std Vapor Volumetric Flow	MMSCFD	2e+02*	1.9e+02	1.9e+02	33	0.065	33	33	41	0.65	33	33	33	1.9e+02	1.9e+02	1.9e+02	0.19	
Std Liquid Volumetric Flow	sgpm	2.8e+03	2.5e+03	2.5e+03	2.3e+02	0.89	2.3e+02	2.3e+02	2.5e+02	7.3	2.2e+02	2.2e+02	2.2e+02	2.5e+03	2.5e+03	2.5e+03	0.76	
Carbon Dioxide Mole Fraction	%	0.44*	0.44	0.44	1.8	0.21	1.8	1.8	0.09	90	0.064	0.063	0.063	0.13	0.13	0.13	0.068	
H2S Mole Fraction	ppm	7*	6.8	6.8	40	17	40	40	2.6	1.9e+03	2.2	2.1	2.1	0.029	0.029	0.029	0.014	
Methane(Mole Fraction	%	71*	73	73	0.15	71	0.015	0.015	0	0.78	0	0	0	74	74	74	0.097	
Ethane Mole Fraction	%	14*	13	13	0.044	18	0.0086	0.0086	0	0.44	0	0	0	13	13	13	0.015	
Propane Mole Fraction	%	8.3	7.4	7.4	0.016	6.7	0.0027	0.0027	0	0.14	0	0	0	7.4	7.4	7.4	0.0049	
Isobutane Mole Fraction	%	0.83*	0.65	0.65	0.00096	0.42	0.00014	0.00014	0	0.0073	0	0	0	0.65	0.65	0.65	0.0002	
n-Butane Mole Fraction	%	2.6	1.9	1.9	0.0038	1.6	0.00079	0.00079	0	0.041	0	0	0	1.9	1.9	1.9	0.00074	
Isopentane(Mole Fraction	%	0.49*	0.28	0.28	0.00035	0.15	5.7e-05	5.7e-05	0	0.0029	0	0	0	0.28	0.28	0.28	5.2e-05	
n-Pentane Mole Fraction)	%	0.55*	0.29	0.29	0.00043	0.18	8.2e-05	8.2e-05	0	0.0042	0	0	0	0.29	0.29	0.29	6.1e-05	
n-Hexane Mole Fraction	%	0.098*	0.031	0.031	3.4e-05	0.014	6.6e-06	6.6e-06	0	0.00034	0	0	0	0.031	0.031	0.031	3.3e-06	
Benzene(Mole Fraction	%	0.018404*	0.0062292	0.0062292	0.0011356	0.018127	0.0011023	0.0011023	0	0.0563	0	0	0	0.0060404	0.0060404	0.0060464	0.00023	
Toluene Mole Fraction	%	0.0067015*	0.0012375	0.0012375	0.00024978	0.0027667	0.00024486	0.00024486	0	0.012506	0	0	0	0.0011957	0.0011957	0.0011969	2.9007e-05	
Ethylbenzene Mole Fraction	%	0.00030007*	2.9461e-05	2.9461e-05	5.3736e-06	5.3516e-05	5.2793e-06	5.2793e-06	0	0.00026964	0	0	0	2.8567e-05	2.8567e-05	2.8596e-05	4.1635e-07	
o-Xylene Mole Fraction	%	0.0015003*	0.00012731	0.00012731	3.5689e-05	0.00023028	3.5308e-05	3.5308e-05	0	0.0018034	0	0	0	0.00012122	0.00012122	0.00012134	2.9635e-06	
Energy Rate	Btu/h	-8e+08	-7.3e+08	-7.2e+08	-4.9e+08	-2.5e+05	-4.9e+08	-4.8e+08	-5.6e+08	-1.2e+07	-4.6e+08	-4.7e+08	-4.8e+08	-7e+08	-7.2e+08	-7.1e+08	-2.6e+06	1.5e+07

Process Streams	Blowdown	Flash Tank	Saturant (Water)	Still Vent
Composition — Status:	Solved	Solved	Solved	Solved
Phase: Total — From Block:	Makeup/Blowdown	V-100	--	V-106
To Block:	--	PCV-100A	Saturator	PCV-106
Mole Fraction	%	%	%	%
Nitrogen	0	0.633763	0*	0.00178666
Carbon Dioxide	0.0636680	0.212800	0*	90.0350
H2S	0.000215149	0.00169703	0*	0.194119
Methane	0	70.5828	0*	0.783083
Ethane	0	18.1748	0*	0.441105
Propane	0	6.72209	0*	0.140297
Isobutane	0	0.416052	0*	0.00727868
n-Butane	0	1.55532	0*	0.0405157
Isopentane	0	0.150749	0*	0.00292686
n-Pentane	0	0.176644	0*	0.00416934
C6Alkanes(monobranched)	0	0.0886652	0*	0.0103745
Heptane	0	0.00780068	0*	0.000112657
Octane	0	0.000801141	0*	1.24501E-05
Nonane	0	1.80054E-05	0*	1.28927E-07
Decane	0	1.09748E-07	0*	0
Undecane	0	4.74889E-07	0*	0
Benzene	0	0.0181273	0*	0.0562998
Toluene	0	0.00276670	0*	0.0125059
Ethylbenzene	0	5.35155E-05	0*	0.000269639
o-Xylene	0	0.000230281	0*	0.00180336
n-Hexane	0	0.0141203	0*	0.000335228
Water	86.3725	1.24064	100*	8.26797
CHEMTHERM 550	0	0	0*	0
MDEA	10.5688	7.89052E-05	0*	3.62071E-08
DEA	2.99481	1.13560E-06	0*	6.30389E-11
Molar Flow	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Nitrogen	0	0.0454704	0*	0.00128182
Carbon Dioxide	0	0.0152677	0*	64.5948
H2S	0	0.000121756	0*	0.139269
Methane	0	5.06409	0*	0.561816
Ethane	0	1.30398	0*	0.316467
Propane	0	0.482288	0*	0.100655
Isobutane	0	0.0298504	0*	0.00522202
n-Butane	0	0.111589	0*	0.0290676
Isopentane	0	0.0108158	0*	0.00209985
n-Pentane	0	0.0126736	0*	0.00299126
C6Alkanes(monobranched)	0	0.00636144	0*	0.00744306
Heptane	0	0.000559673	0*	8.08250E-05
Octane	0	5.74793E-05	0*	8.93222E-06
Nonane	0	1.29183E-06	0*	9.24977E-08
Decane	0	7.87404E-09	0*	0
Undecane	0	3.40718E-08	0*	0
Benzene	0	0.00130058	0*	0.0403918
Toluene	0	0.000198502	0*	0.00897224
Ethylbenzene	0	3.83957E-06	0*	0.000193450
o-Xylene	0	1.65219E-05	0*	0.00129380
n-Hexane	0	0.00101308	0*	0.000240507
Water	0	0.0890123	9.62825*	5.93178
CHEMTHERM 550	0	0	0*	0
MDEA	0	5.66120E-06	0*	2.59765E-08
DEA	0	8.14760E-08	0*	4.52267E-11
Mass Fraction	%	%	%	%
Nitrogen	0	0.816491	0*	0.00120313
Carbon Dioxide	0.0894322	0.430701	0*	95.2495
H2S	0.000234033	0.00265986	0*	0.159032
Methane	0	52.0750	0*	0.301984
Ethane	0	25.1332	0*	0.318835
Propane	0	13.6320	0*	0.148713
Isobutane	0	1.11211	0*	0.0101695
n-Butane	0	4.15739	0*	0.0566069
Isopentane	0	0.500200	0*	0.00507615
n-Pentane	0	0.586121	0*	0.00723104
C6Alkanes(monobranched)	0	0.351395	0*	0.0214908
Heptane	0	0.0359474	0*	0.000271357
Octane	0	0.00420865	0*	3.41863E-05
Nonane	0	0.000106203	0*	3.97488E-07
Decane	0	7.18130E-07	0*	0
Undecane	0	3.41376E-06	0*	0
Benzene	0	0.0651193	0*	0.105713
Toluene	0	0.0117236	0*	0.0276987
Ethylbenzene	0	0.000261288	0*	0.000688128
o-Xylene	0	0.00112434	0*	0.00460222
n-Hexane	0	0.0559610	0*	0.000694430
Water	49.6641	1.02789	100*	3.58051
CHEMTHERM 550	0	0	0*	0
MDEA	40.1967	0.000432418	0*	1.03714E-07
DEA	10.0495	5.49081E-06	0*	1.59317E-10

Mass Flow	lb/h	lb/h	lb/h	lb/h
Nitrogen	0	**1.27378**	0*	**0.0359081**
Carbon Dioxide	0	**0.671923**	0*	**2842.79**
H2S	0	**0.00414956**	0*	**4.74642**
Methane	0	**81.2404**	0*	**9.01291**
Ethane	0	**39.2095**	0*	**9.51585**
Propane	0	**21.2668**	0*	**4.43844**
Isobutane	0	**1.73497**	0*	**0.303515**
n-Butane	0	**6.48581**	0*	**1.68947**
Isopentane	0	**0.780346**	0*	**0.151501**
n-Pentane	0	**0.914387**	0*	**0.215815**
C6Alkanes(monobranched)	0	**0.548200**	0*	**0.641409**
Heptane	0	**0.0560804**	0*	**0.00809882**
Octane	0	**0.00656577**	0*	**0.00102031**
Nonane	0	**0.000165684**	0*	**1.18633E-05**
Decane	0	**1.12033E-06**	0*	**0**
Undecane	0	**5.32570E-06**	0*	**0**
Benzene	0	**0.101590**	0*	**3.15508**
Toluene	0	**0.0182896**	0*	**0.826688**
Ethylbenzene	0	**0.000407627**	0*	**0.0205376**
o-Xylene	0	**0.00175405**	0*	**0.137356**
n-Hexane	0	**0.0873029**	0*	**0.0207257**
Water	0	**1.60358**	173.456*	**106.863**
CHEMTHERM 550	0	**0**	0*	**0**
MDEA	0	**0.000674601**	0*	**3.09541E-06**
DEA	0	**8.56603E-06**	0*	**4.75493E-09**

Process Streams		Blowdown	**Flash Tank**	Saturant (Water)	**Still Vent**
Properties	Status:	Solved	**Solved**	Solved	**Solved**
Phase: Total	From Block:	Makeup/Blowdown	**V-100**	--	**V-106**
	To Block:	--	**PCV-100A**	Saturator	**PCV-106**
Property	Units				
Temperature	°F		**107.736**	540.289	**120.000**
Pressure	psig	54	**70**	950	**6**
Mole Fraction Vapor	%		**100**	77.5133	**100**
Mole Fraction Light Liquid	%		**0**	22.4867	**0**
Mole Fraction Heavy Liquid	%		**0**	0	**0**
Molecular Weight	lb/lbmol	31.3310	**21.7441**	18.0153	**41.6002**
Mass Density	lb/ft^3		**0.307583**	2.59811	**0.139219**
Molar Flow	lbmol/h	0	**7.17468**	9.62825	**71.7441**
Mass Flow	lb/h	0	**156.007**	173.456	**2984.57**
Vapor Volumetric Flow	ft^3/h		**507.203**	66.7622	**21437.9**
Liquid Volumetric Flow	gpm		**63.2357**	8.32359	**2672.78**
Std Vapor Volumetric Flow	MMSCFD	0	**0.0653442**	0.0876904	**0.653417**
Std Liquid Volumetric Flow	sgpm	0	**0.889570**	0.346750	**7.33042**
Compressibility			**0.983296**	0.623344	**0.994117**
Specific Gravity			**0.750764**		**1.43634**
API Gravity					
Enthalpy	Btu/h	0	**-251059**	-1.00397E+06	**-1.15551E+07**
Mass Enthalpy	Btu/lb	-4176.36	**-1609.28**	-5788.07	**-3871.60**
Mass Cp	Btu/(lb*°F)		**0.493779**	0.781337	**0.220341**
Ideal Gas CpCv Ratio			**1.23248**	1.30356	**1.27949**
Dynamic Viscosity	cP		**0.0111144**		**0.0160284**
Kinematic Viscosity	cSt		**2.25581**		**7.18738**
Thermal Conductivity	Btu/(h*ft*°F)		**0.0182970**		**0.0107749**
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft^3	462.817	**1168.95**	0	**23.4872**
Net Liquid Heating Value	Btu/lb	4906.55	**20318.9**	-1059.76	**103.600**
Gross Ideal Gas Heating Value	Btu/ft^3	549.076	**1287.86**	50.3101	**29.7743**
Gross Liquid Heating Value	Btu/lb	5951.33	**22394.2**	0	**160.951**

GRI-GLYCalc VERSION 4.0 - EMISSIONS SUMMARY

Case Name: Newberry Dehy
File Name: X:\Projects\Navitas\TEXAS\Midland\Air Permitting and Compliance\Newberry Gas Plant\0117NRSP\Newberry.ddf
Date: March 06, 2017

CONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	2.8513	68.430	12.4885
Ethane	8.5866	206.079	37.6094
Propane	19.3886	465.327	84.9221
Isobutane	3.6644	87.946	16.0502
n-Butane	15.5718	373.724	68.2046
Isopentane	2.7428	65.828	12.0137
n-Pentane	3.8708	92.900	16.9543
n-Hexane	0.7272	17.452	3.1849
Other Hexanes	1.1744	28.186	5.1439
Heptanes	1.2240	29.377	5.3613
Benzene	5.5474	133.137	24.2974
Toluene	1.0140	24.335	4.4412
Ethylbenzene	0.0192	0.460	0.0840
Xylenes	0.0912	2.190	0.3997
C8+ Heavies	0.1296	3.109	0.5674
Total Emissions	66.6033	1598.480	291.7226
Total Hydrocarbon Emissions	66.6033	1598.480	291.7226
Total VOC Emissions	55.1655	1323.971	241.6247
Total HAP Emissions	7.3989	177.574	32.4072
Total BTEX Emissions	6.6718	160.122	29.2223

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	2.8544	68.506	12.5024
Ethane	8.6232	206.957	37.7697
Propane	19.7276	473.463	86.4069
Isobutane	3.7858	90.858	16.5817
n-Butane	16.2742	390.580	71.2808
Isopentane	3.0076	72.182	13.1732
n-Pentane	4.3365	104.077	18.9940
n-Hexane	0.9386	22.527	4.1112
Other Hexanes	1.4473	34.735	6.3392
Heptanes	2.1940	52.655	9.6096
Benzene	7.8328	187.987	34.3076
Toluene	2.3194	55.666	10.1590
Ethylbenzene	0.0762	1.830	0.3339
Xylenes	0.4380	10.513	1.9185
C8+ Heavies	29.4425	706.621	128.9583
Total Emissions	103.2982	2479.157	452.4461
Total Hydrocarbon Emissions	103.2982	2479.157	452.4461
Total VOC Emissions	91.8205	2203.693	402.1740
Total HAP Emissions	11.6051	278.522	50.8303
Total BTEX Emissions	10.6665	255.995	46.7191

FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	2.6716	64.118	11.7015
Ethane	2.1647	51.952	9.4813
Propane	2.0385	48.924	8.9287
Isobutane	0.2445	5.869	1.0711
n-Butane	0.7763	18.632	3.4004
Isopentane	0.1203	2.886	0.5267
n-Pentane	0.1347	3.232	0.5899
n-Hexane	0.0152	0.366	0.0668
Other Hexanes	0.0319	0.765	0.1395
Heptanes	0.0164	0.394	0.0719
Benzene	0.0037	0.090	0.0163
Toluene	0.0007	0.016	0.0029
Ethylbenzene	<0.0001	<0.001	0.0001
Xylenes	<0.0001	0.001	0.0002
C8+ Heavies	0.0217	0.522	0.0952
Total Emissions	8.2403	197.767	36.0924
Total Hydrocarbon Emissions	8.2403	197.767	36.0924
Total VOC Emissions	3.4040	81.697	14.9097
Total HAP Emissions	0.0197	0.473	0.0863
Total BTEX Emissions	0.0045	0.107	0.0195

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr
Methane	53.4314	1282.353	234.0294
Ethane	43.2934	1039.042	189.6252
Propane	40.7704	978.489	178.5743
Isobutane	4.8908	117.380	21.4219
n-Butane	15.5268	372.642	68.0072
Isopentane	2.4051	57.722	10.5342
n-Pentane	2.6936	64.646	11.7979
n-Hexane	0.3049	7.317	1.3354
Other Hexanes	0.6371	15.292	2.7907
Heptanes	0.3282	7.876	1.4374
Benzene	0.0746	1.790	0.3267
Toluene	0.0134	0.322	0.0588
Ethylbenzene	0.0002	0.006	0.0011
Xylenes	0.0009	0.022	0.0040
C8+ Heavies	0.4348	10.434	1.9043
Total Emissions	164.8056	3955.334	721.8484
Total Hydrocarbon Emissions	164.8056	3955.334	721.8484
Total VOC Emissions	68.0808	1633.939	298.1939
Total HAP Emissions	0.3941	9.457	1.7260
Total BTEX Emissions	0.0892	2.140	0.3905

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Newberry Dehy
File Name: X:\Projects\Navitas\TEXAS\Midland\Air Permitting and Compliance\Newberry Gas Plant\0117NRSP\Newberry.ddf
Date: March 06, 2017

DESCRIPTION:

Description: 200 MMSCFD after the Amine unit
41 GPM

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 120.00 deg. F
Pressure: 960.00 psig
Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	0.1300
Nitrogen	2.0300
Methane	73.6924
Ethane	13.4443
Propane	7.3865
Isobutane	0.6528
n-Butane	1.8824
Isopentane	0.2826
n-Pentane	0.2939
n-Hexane	0.0308
Other Hexanes	0.0650
Heptanes	0.0333
Benzene	0.0060
Toluene	0.0012
Ethylbenzene	0.0000
Xylenes	0.0001
C8+ Heavies	0.0800

DRY GAS:

Flow Rate: 200.0 MMSCF/day
Water Content: 7.0 lbs. H2O/MMSCF

LEAN GLYCOL:

Glycol Type: TEG
Water Content: 1.5 wt% H2O
Flow Rate: 41.0 gpm

PUMP:

Glycol Pump Type: Electric/Pneumatic

FLASH TANK:

```
                    Flash Control: Combustion device
         Flash Control Efficiency:  95.00 %
                Temperature:     100.0 deg. F
                   Pressure:      50.0 psig
```

REGENERATOR OVERHEADS CONTROL DEVICE:

```
            Control Device: Condenser
               Temperature:     120.0 deg. F
                  Pressure:      14.0 psia

            Control Device: Combustion Device
     Destruction Efficiency:       0.0 %
             Excess Oxygen:       0.0 %
   Ambient Air Temperature:      95.0 deg. F
```

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	Newberry - TK-1 & TK-2	
City:		
State:	Texas	
Company:	Navitas Midstream	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	Two (2) 750-bbl Slop Oil Tanks	
Tank Dimensions		
Shell Height (ft):		24.00
Diameter (ft):		16.00
Liquid Height (ft) :		23.00
Avg. Liquid Height (ft):		16.00
Volume (gallons):		31,500.00
Turnovers:		182.50
Net Throughput(gal/yr):		5,748,750.00
Is Tank Heated (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) Cone Roof)		0.06
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig)		0.03

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry - TK-1 TK-2 - Vertical Fixed Roof Tank

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp deg F)	Vapor Pressure psia Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline RVP 9	All	65.56	58.52	72.59	63.30	5.1380	4.4786	5.8730	67.0000			92.00	Option 4: RVP 9, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry - TK-1   TK-2 - Vertical Fixed Roof Tank

Annual Emission Calcaulations	
Standing Losses (lb):	2,468.4593
Vapor Space Volume (cu ft :	1,642.0058
Vapor Density (lb/cu ft):	0.0611
Vapor Space Expansion Factor:	0.2174
Vented Vapor Saturation Factor:	0.3102
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft :	1,642.0058
Tank Diameter (ft):	16.0000
Vapor Space Outage ft):	8.1667
Tank Shell Height (ft :	24.0000
Average Liquid Height (ft):	16.0000
Roof Outage (ft):	0.1667
Roof Outage (Cone Roof	
Roof Outage (ft):	0.1667
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	8.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0611
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	5.1380
Daily Avg. Liquid Surface Temp. deg. R):	525.2252
Daily Average Ambient Temp. deg. F):	63.2750
Ideal Gas Constant R	
(psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	522.9650
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof :	0.1700
Daily Total Solar Insulation	
Factor (Btu/sqft day):	1,689.4892
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2174
Daily Vapor Temperature Range (deg. R):	28.1300
Daily Vapor Pressure Range (psia :	1.3943
Breather Vent Press. Setting Range psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	5.1380
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	4.4786
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	5.8730
Daily Avg. Liquid Surface Temp. deg R):	525.2252
Daily Min. Liquid Surface Temp. (deg R):	518.1927
Daily Max. Liquid Surface Temp. (deg R):	532.2577
Daily Ambient Temp. Range (deg. R):	27.9000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3102
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	5.1380
Vapor Space Outage (ft):	8.1667
Working Losses (lb):	15,598.5224
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid	

Surface Temperature (psia):	5.1380
Annual Net Throughput (gal/yr.):	5,748,750.0000
Annual Turnovers:	182.5000
Turnover Factor:	0.3311
Maximum Liquid Volume (gal):	31,500.0000
Maximum Liquid Height (ft):	23.0000
Tank Diameter (ft):	16.0000
Working Loss Product Factor:	1.0000
Total Losses (lb :	18,066.9818

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry - TK-1   TK-2 - Vertical Fixed Roof Tank

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	15,598.52	2,468.46	18,066.98

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Newberry Tank 3-4
City:	Newberry
State:	Texas
Company:	Navitas Midstream Midland Basin, LLC
Type of Tank:	Internal Floating Roof Tank
Description:	Two (2) 10,000 BBL IFR Tanks @ 2,250 BPD per tank

Tank Dimensions

Diameter (ft):	40.00
Volume (gallons):	420,000.00
Turnovers:	82.13
Self Supp. Roof? (y/n :	N
No. of Columns:	1.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Liquid-mounted
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Typical
Deck Type:	Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Ungasketed	1
Roof Leg or Hanger Well/Adjustable	12
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry Tank 3-4 - Internal Floating Roof Tank
Newberry, Texas

		Daily Liquid Surf. Temperature (deg F			Liquid Bulk Temp	Vapor Pressure (psia			Vapor Mol.	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure
Mixture/Component	Month	Avg.	Min.	Max.	deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Gasoline (RVP 9	All	65.56	58.52	72.59	63.30	5.1380	N/A	N/A	67.0000			92.00	Option 4: RVP=9, ASTM Slope 3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry Tank 3-4 - Internal Floating Roof Tank
Newberry, Texas

Annual Emission Calcaulations	
Rim Seal Losses (lb :	97.8267
Seal Factor A (lb-mole/ft-yr :	0.3000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.6000
Value of Vapor Pressure Function:	0.1217
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Tank Diameter (ft):	40.0000
Vapor Molecular Weight (lb/lb-mole):	67.0000
Product Factor:	1.0000
Withdrawal Losses (lb :	166.6979
Number of Columns:	1.0000
Effective Column Diameter ft :	1.0000
Annual Net Throughput (gal/yr.):	34,492,500.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal :	5.6000
Tank Diameter (ft):	40.0000
Deck Fitting Losses (lb):	2,331.5356
Value of Vapor Pressure Function:	0.1217
Vapor Molecular Weight (lb/lb-mole):	67.0000
Product Factor:	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	286.0000
Deck Seam Losses (lb):	0.0000
Deck Seam Length (ft):	0.0000
Deck Seam Loss per Unit Length Factor lb-mole/ft-yr :	0.0000
Deck Seam Length Factor ft/sqft):	0.0000
Tank Diameter (ft):	40.0000
Vapor Molecular Weight (lb/lb-mole):	67.0000
Product Factor:	1.0000
Total Losses (lb :	2,596.0602

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/ yr mph^n))	m	Losses(lb
Access Hatch (24-in. Diam. /Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	293.4800
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	114.1311
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask.	1	47.00	0.00	0.00	383.1545
Ladder Well (36-in. Diam. /Sliding Cover, Ungasketed	1	76.00	0.00	0.00	619.5689
Roof Leg or Hanger Well/Adjustable	12	7.90	0.00	0.00	772.8307
Sample Pipe or Well (24-in. Diam. /Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	97.8267
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	50.5438

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry Tank 3-4 - Internal Floating Roof Tank
Newberry, Texas

	Losses(lbs				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Gasoline (RVP 9)	97.83	166.70	2,331.54	0.00	2,596.06

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Newberry - TK-5
City:	Newberry
State:	Texas
Company:	Navitas Midstream Midland Basin, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	One (1) 210 BBL Slop Oil Tank @ 500 BPD

Tank Dimensions

Shell Height (ft):		15.00
Diameter (ft):		10.00
Liquid Height (ft) :		13.00
Avg. Liquid Height (ft):		8.00
Volume (gallons):		7,637.77
Turnovers:		1,003.57
Net Throughput(gal/yr):		7,665,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) Cone Roof)		0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry - TK-5 - Vertical Fixed Roof Tank
Newberry, Texas

		Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp	Vapor Pressure psia			Vapor Mol.	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure
Mixture/Component	Month	Avg.	Min.	Max.	deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Gasoline RVP 9	All	65.56	58.52	72.59	63.30	5.1380	4.4786	5.8730	67.0000			92.00	Option 4: RVP 9, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry - TK-5 - Vertical Fixed Roof Tank
Newberry, Texas

Annual Emission Calcaulations	
Standing Losses (lb):	921.4926
Vapor Space Volume (cu ft :	557.9599
Vapor Density (lb/cu ft):	0.0611
Vapor Space Expansion Factor:	0.2174
Vented Vapor Saturation Factor:	0.3408
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft :	557.9599
Tank Diameter (ft):	10.0000
Vapor Space Outage ft):	7.1042
Tank Shell Height (ft :	15.0000
Average Liquid Height (ft):	8.0000
Roof Outage (ft):	0.1042
Roof Outage (Cone Roof	
Roof Outage (ft):	0.1042
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	5.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0611
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Daily Avg. Liquid Surface Temp. deg. R):	525.2252
Daily Average Ambient Temp. deg. F):	63.2750
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	522.9650
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof :	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,689.4892
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2174
Daily Vapor Temperature Range (deg. R):	28.1300
Daily Vapor Pressure Range (psia :	1.3943
Breather Vent Press. Setting Range psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.4786
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.8730
Daily Avg. Liquid Surface Temp. deg R):	525.2252
Daily Min. Liquid Surface Temp. (deg R):	518.1927
Daily Max. Liquid Surface Temp. (deg R):	532.2577
Daily Ambient Temp. Range (deg. R):	27.9000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3408
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.1380
Vapor Space Outage (ft):	7.1042

Working Losses (lb):	12,348.7679
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Annual Net Throughput (gal/yr.):	7,665,000.0000
Annual Turnovers:	1,003.5655
Turnover Factor:	0.1966
Maximum Liquid Volume gal :	7,637.7674
Maximum Liquid Height (ft):	13.0000
Tank Diameter (ft):	10.0000
Working Loss Product Factor:	1.0000
Total Losses (lb :	13,270.2606

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry - TK-5 - Vertical Fixed Roof Tank
Newberry, Texas

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	12,348.77	921.49	13,270.26

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Newberry TK-6 to TK-17
City:	Newberry
State:	Texas
Company:	Navitas Midstream Midland Basin, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	Open Drain Storage Tanks (80-bbl) @ 2.63 BPD each

Tank Dimensions

Shell Height (ft):		9.00
Diameter (ft):		8.50
Liquid Height (ft) :		8.00
Avg. Liquid Height (ft):		7.00
Volume (gallons):		3,395.87
Turnovers:		11.87
Net Throughput(gal/yr):		40,320.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) Cone Roof)		0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry TK-6 to TK-11 - Vertical Fixed Roof Tank
Newberry, Texas

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure psia			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline RVP 9	All	65.56	58.52	72.59	63.30	5.1380	4.4786	5.8730	67.0000			92.00	Option 4: RVP 9, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry TK-6 to TK-11 - Vertical Fixed Roof Tank
Newberry, Texas

Annual Emission Calcaulations	
Standing Losses (lb):	366.1437
Vapor Space Volume (cu ft :	118.5143
Vapor Density (lb/cu ft):	0.0611
Vapor Space Expansion Factor:	0.2174
Vented Vapor Saturation Factor:	0.6375
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft :	118.5143
Tank Diameter (ft):	8.5000
Vapor Space Outage ft):	2.0885
Tank Shell Height ft :	9.0000
Average Liquid Height (ft):	7.0000
Roof Outage (ft):	0.0885
Roof Outage (Cone Roof	
Roof Outage (ft):	0.0885
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	4.2500
Vapor Density	
Vapor Density (lb/cu ft):	0.0611
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Daily Avg. Liquid Surface Temp. deg. R):	525.2252
Daily Average Ambient Temp. deg. F):	63.2750
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	522.9650
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof :	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,689.4892
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2174
Daily Vapor Temperature Range (deg. R):	28.1300
Daily Vapor Pressure Range (psia :	1.3943
Breather Vent Press. Setting Range psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.4786
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.8730
Daily Avg. Liquid Surface Temp. deg R):	525.2252
Daily Min. Liquid Surface Temp. (deg R):	518.1927
Daily Max. Liquid Surface Temp. (deg R):	532.2577
Daily Ambient Temp. Range (deg. R):	27.9000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.6375
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.1380
Vapor Space Outage (ft):	2.0885

Working Losses lb):	330.4735
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Annual Net Throughput (gal/yr.):	40,320.0000
Annual Turnovers:	11.8732
Turnover Factor:	1.0000
Maximum Liquid Volume gal :	3,395.8700
Maximum Liquid Height (ft):	8.0000
Tank Diameter (ft):	8.5000
Working Loss Product Factor:	1.0000
Total Losses (lb :	696.6172

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry TK-6 to TK-11 - Vertical Fixed Roof Tank
Newberry, Texas

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	330.47	366.14	696.62

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Newberry - Gasoline - TK-18
City:	Midland Co.
State:	Texas
Company:	Navitas Midstream Midland Basin, LLC
Type of Tank:	Horizontal Tank
Description:	One (1) 500-bbl gasoline storage tank @ 12,000 gal/yr

Tank Dimensions

Shell Length (ft):		6.00
Diameter (ft):		4.00
Volume (gallons):		500.00
Turnovers:		24.00
Net Throughput(gal/yr):		12,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry - Gasoline - TK-18 - Horizontal Tank
Midland Co., Texas

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure psia			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline RVP 9	All	65.56	58.52	72.59	63.30	5.1380	4.4786	5.8730	67.0000			92.00	Option 4: RVP 9, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry - Gasoline - TK-18 - Horizontal Tank
Midland Co., Texas

Annual Emission Calcaulations	
Standing Losses (lb):	150.6846
Vapor Space Volume (cu ft :	48.0243
Vapor Density (lb/cu ft):	0.0611
Vapor Space Expansion Factor:	0.2174
Vented Vapor Saturation Factor:	0.6474
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft :	48.0243
Tank Diameter (ft):	4.0000
Effective Diameter (ft):	5.5293
Vapor Space Outage ft):	2.0000
Tank Shell Length (ft :	6.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0611
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Daily Avg. Liquid Surface Temp. deg. R):	525.2252
Daily Average Ambient Temp. deg. F):	63.2750
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	522.9650
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,689.4892
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2174
Daily Vapor Temperature Range (deg. R):	28.1300
Daily Vapor Pressure Range (psia :	1.3943
Breather Vent Press. Setting Range psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.4786
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.8730
Daily Avg. Liquid Surface Temp. deg R):	525.2252
Daily Min. Liquid Surface Temp. (deg R):	518.1927
Daily Max. Liquid Surface Temp. (deg R):	532.2577
Daily Ambient Temp. Range (deg. R):	27.9000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.6474
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.1380
Vapor Space Outage (ft):	2.0000
Working Losses lb):	98.3552
Vapor Molecular Weight (lb/lb-mole):	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.1380
Annual Net Throughput gal/yr. :	12,000.0000
Annual Turnovers:	24.0000
Turnover Factor:	1.0000

Tank Diameter (ft):	4.0000
Working Loss Product Factor:	1.0000
Total Losses (lb :	249.0398

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry - Gasoline - TK-18 - Horizontal Tank
Midland Co., Texas

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	98.36	150.68	249.04

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Newberry - Diesel Tank - TK-19
City:	Midland Co.
State:	Texas
Company:	Navitas Midstream Midland Basin, LLC
Type of Tank:	Horizontal Tank
Description:	One (1) 500 gal Diesel Tank @ 24,000 gal/yr

Tank Dimensions

Shell Length ft):	6.00
Diameter (ft):	4.00
Volume (gallons):	500.00
Turnovers:	48.00
Net Throughput(gal/yr):	24,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Midland-Odessa, Texas (Avg Atmospheric Pressure 13.28 psia

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Newberry - Diesel Tank - TK-19 - Horizontal Tank
Midland Co., Texas

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure psia			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Distillate fuel oil no. 2	All	65.56	58.52	72.59	63.30	0.0079	0.0062	0.0098	130.0000			188.00	Option 1: VP60 .0065 VP70 = .009

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Newberry - Diesel Tank - TK-19 - Horizontal Tank
Midland Co., Texas

Annual Emission Calcaulations	
Standing Losses lb):	0.1571
Vapor Space Volume (cu ft :	48.0243
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.0493
Vented Vapor Saturation Factor:	0.9992
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft :	48.0243
Tank Diameter (ft):	4.0000
Effective Diameter (ft):	5.5293
Vapor Space Outage ft):	2.0000
Tank Shell Length (ft :	6.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0079
Daily Avg. Liquid Surface Temp. deg. R):	525.2252
Daily Average Ambient Temp. deg. F):	63.2750
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	522.9650
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,689.4892
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0493
Daily Vapor Temperature Range (deg. R):	28.1300
Daily Vapor Pressure Range (psia :	0.0036
Breather Vent Press. Setting Range psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0079
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0062
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0098
Daily Avg. Liquid Surface Temp. deg R):	525.2252
Daily Min. Liquid Surface Temp. (deg R):	518.1927
Daily Max. Liquid Surface Temp. (deg R):	532.2577
Daily Ambient Temp. Range (deg. R):	27.9000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9992
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0079
Vapor Space Outage (ft):	2.0000
Working Losses lb):	0.4639
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0079
Annual Net Throughput gal/yr. :	24,000.0000
Annual Turnovers:	48.0000
Turnover Factor:	0.7917

Tank Diameter (ft):	4.0000
Working Loss Product Factor:	1.0000
Total Losses (lb :	0.6211

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Newberry - Diesel Tank - TK-19 - Horizontal Tank
Midland Co., Texas

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.46	0.16	0.62

APPENDIX C

IMPACTS EVALUATION

TABLE 40
SCREEN MODELING INPUTS AND RESULTS
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

	CATERPILLAR 3516B (C-1680 - C-1740)		CATERPILLAR G3606 (C-181 - C-183)		CATERPILLAR G3608A4 (C-1750 - C-1780)		WAUKESHA 5794GSI (C-171N - C-174N)	
Inputs								
NO_x Emission Rate	1.52 lb/hr NOx	0.191 g/sec	1.95 lb/hr NOx	0.246 g/sec	2.75 lb/hr NOx	0.347 g/sec	1.52 lb/hr NOx	0.191 g/sec
NO_2/NO_x Conversion Factor	0.2		0.2		0.2		0.2	
NO_2 Emission Rate	0.304 lb/hr NO_2	0.0383 g/sec	0.391 lb/hr NO_2	0.049 g/sec	0.55 lb/hr NO_2	0.069 g/sec	0.30 lb/hr NO_2	0.038 g/sec
Stack Height	30 ft	9.1440 m	30 ft	9.1440 m	30 ft	9.1440 m	30 ft	9.1440 m
Stack Inside Diameter	1 ft	0.3048 m	1 ft	0.3048 m	1.33 ft	0.4054 m	1 ft	0.3048 m
Stack Exit Flow Rate								
Stack Exit Velocity	193.13 ft/sec	58.87 m/sec	257.75 ft/sec	78.56 m/sec	289.00 ft/sec	88.09 m/sec	193.13 ft/sec	58.87 m/sec
Stack Gas Exit Temp	992 °F	806.48 °K	847 °F	725.9278 °K	838 °F	720.9278 °K	1,136 °F	886.4833 °K
Ambient Air Temp	--	293 °K	--	293 °K	--	293 °K	--	293 °K
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural
Downwash	None	None	None	None	None	None	None	None
Screen Modeling Results (hourly)								
Maximum Modeled Concentration		1.38 $\mu g/m^3$		1.47 $\mu g/m^3$		1.13 $\mu g/m^3$		1.30 $\mu g/m^3$
Number of Like Kind Units		6		2		4		4
Maximum Modeled Concentration for each model		8.25 $\mu g/m^3$		2.94 $\mu g/m^3$		4.51 $\mu g/m^3$		5.20 $\mu g/m^3$
Annual Results								
Conversion Factor (hourly to annual)		0.08		0.08		0.08		0.08
Maximum Annual Concentration		0.11 $\mu g/m^3$		0.12 $\mu g/m^3$		0.09 $\mu g/m^3$		0.10 $\mu g/m^3$

	H-1		H-2		H-4		FLARE-1	
Inputs								
NO_x Emission Rate	3.42 lb/hr NOx	0.431 g/sec	0.94 lb/hr NOx	0.119 g/sec	0.68 lb/hr NOx	0.086 g/sec	2.95 lb/hr NOx	0.372 g/sec
NO_2/NO_x Conversion Factor	0.8		0.8		0.8		0.8	
NO_2 Emission Rate	2.74 lb/hr NO_2	0.345 g/sec	0.75 lb/hr NO_2	0.095 g/sec	0.54 lb/hr NO_2	0.068 g/sec	2.36 lb/hr NO_2	0.298 g/sec
Stack Height	30 ft	9.1440 m	25 ft	7.6200 m	15 ft	4.5720 m	75 ft	22.86 m
Stack Inside Diameter	3 ft	0.9144 m	3 ft	0.9144 m	3 ft	0.9144 m		
Stack Exit Flow Rate								
Stack Exit Velocity	30.18 ft/sec	9.20 m/sec	23.58 ft/sec	7.19 m/sec	23.58 ft/sec	7.19 m/sec	15.00 MMBTU/hr	
Stack Gas Exit Temp	600 °F	588.71 °K	750 °F	672.04 °K	750 °F	672.04 °K		
Ambient Air Temp	--	293 °K	--	293 °K	--	293 °K		
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural
Downwash	None	None	None	None	None	None	None	None
Screen Modeling Results (hourly)								
Maximum Modeled Concentration		13.13 $\mu g/m^3$		5.03 $\mu g/m^3$		7.19 $\mu g/m^3$		1.44 $\mu g/m^3$
Number of Like Kind Units		1		1		1		1
Maximum Modeled Concentration for each model		13.13 $\mu g/m^3$		5.03 $\mu g/m^3$		7.19 $\mu g/m^3$		1.44 $\mu g/m^3$
Annual Results								
Conversion Factor (hourly to annual)		0.08		0.08		0.08		0.08
Maximum Annual Concentration		1.05 $\mu g/m^3$		0.40 $\mu g/m^3$		0.58 $\mu g/m^3$		0.12 $\mu g/m^3$

	H-5 & H-6		H-7		FLARE-2		COMB-1		Total
Inputs									
NO_x Emission Rate	3.06 lb/hr NOx	0.386 g/sec	0.61 lb/hr NOx	0.077 g/sec	3.37 lb/hr NOx	0.425 g/sec	0.49 lb/hr NOx	0.062 g/sec	
NO_2/NO_x Conversion Factor	0.8		0.8		0.8		0.8		
NO_2 Emission Rate	2.45 lb/hr NO_2	0.308 g/sec	0.49 lb/hr NO_2	0.062 g/sec	2.70 lb/hr NO_2	0.340 g/sec	0.39 lb/hr NO_2	0.049 g/sec	
Stack Height	35 ft	10.67 m	25 ft	7.6200 m	75 ft	22.86 m	25 ft	7.6200 m	
Stack Inside Diameter	3 ft	0.91 m	3 ft	0.9144 m			3 ft	0.9144 m	
Stack Exit Flow Rate									
Stack Exit Velocity	35.37 ft/sec	10.78 m/sec	23.58 ft/sec	7.19 m/sec	15.00 MMBtu/hr		23.58 ft/sec	7.19 m/sec	
Stack Gas Exit Temp	900 °F	755.3722 °K	750 °F	672.04 °K			600 °F	588.71 °K	
Ambient Air Temp	--	293 °K	--	293 °K			--	293 °K	
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m	
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	
Downwash	None	None	None	None	None	None	None	None	
Screen Modeling Results (hourly)									
Maximum Modeled Concentration		13.79 $\mu g/m^3$		3.26 $\mu g/m^3$		1.57 $\mu g/m^3$		2.85 $\mu g/m^3$	
Number of Like Kind Units		2		1		1		1	
Maximum Modeled Concentration for each model		27.58 $\mu g/m^3$		3.26 $\mu g/m^3$		1.57 $\mu g/m^3$		2.85 $\mu g/m^3$	
Hourly Results for All Stacks Combined									
Total Modeled Concentration									83.0 $\mu g/m^3$
Background Concentration									70.0 $\mu g/m^3$
Total Concentration									153.0 $\mu g/m^3$
Is Total Concentration less than 188 $\mu g/m^3$?									**YES**
Annual Results									
Conversion Factor (hourly to annual)		0.08		0.08		0.08		0.08	
Maximum Annual Concentration		1.10 $\mu g/m^3$		0.26 $\mu g/m^3$		0.13 $\mu g/m^3$		0.23 $\mu g/m^3$	
Results for All Stacks Combined									
Total Modeled Concentration									4.3 $\mu g/m^3$
Background Concentration									20.0 $\mu g/m^3$
Total Concentration									24.3 $\mu g/m^3$
Is Total Concentration less than 100 $\mu g/m^3$?									**YES**

TABLE 41
SCREEN MODELING INPUTS AND RESULTS
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

	CATERPILLAR 3516B (C-1680 - C-1740)		CATERPILLAR G3606 (C-181 - C-183)		CATERPILLAR G3608A4 (C-1750 - C-1780)		WAUKESHA 5794GSI (C-171N - C-174N)	
Inputs								
SO_2 Emission Rate	0.006 lb/hr SO_2	0.001 g/sec	0.007 lb/hr SO_2	0.001 g/sec	0.01 lb/hr SO_2	0.001 g/sec	0.01 lb/hr SO_2	0.001 g/sec
Stack Height	30 ft	9.1440 m	30 ft	9.1440 m	30 ft	9.1440 m	30.00 ft	9.1440 m
Stack Inside Diameter	1 ft	0.3048 m	1 ft	0.3048 m	1.33 ft	0.4054 m	1 ft	0.3048 m
Stack Exit Flow Rate								
Stack Exit Velocity	193.13 ft/sec	58.87 m/sec	257.75 ft/sec	78.56 m/sec	289.00 ft/sec	88.09 m/sec	193.13 ft/sec	58.87 m/sec
Stack Gas Exit Temp	992 °F	806.48 °K	847 °F	725.9278 °K	838 °F	720.9278 °K	1,136 °F	886.4833 °K
Ambient Air Temp	--	293 °K	--	293 °K	--	293 °K	--	293 °K
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural
Downwash	None	None	None	None	None	None	None	None
Screen Modeling Results (hourly)								
Maximum Modeled Concentration		0.03 μg/m^3		0.04 μg/m^3		0.02 μg/m^3		0.04 μg/m^3
Number of Like Kind Units		6		2		4		4
Maximum Modeled Concentration for each model		0.03 μg/m^3		0.07 μg/m^3		0.06 μg/m^3		0.18 μg/m^3

	H-1		H-2		H-4		FLARE-1	
Inputs								
SO_2 Emission Rate	3.42 lb/hr SO_2	0.431 g/sec	0.94 lb/hr SO_2	0.119 g/sec	0.68 lb/hr SO_2	0.086 g/sec	2.95 lb/hr SO_2	0.372 g/sec
Stack Height	30 ft	9.1440 m	25 ft	7.6200 m	15 ft	4.5720 m	75 ft	22.86 m
Stack Inside Diameter	3 ft	0.9144 m	3 ft	0.9144 m	3 ft	0.9144 m		
Stack Exit Flow Rate								
Stack Exit Velocity	30.18 ft/sec	9.20 m/sec	23.58 ft/sec	7.19 m/sec	23.58 ft/sec	7.19 m/sec	15.00 MMBTU/hr	
Stack Gas Exit Temp	600 °F	588.706 °K	750 °F	672.0389 °K	750 °F	672.04 °K		
Ambient Air Temp	--	293 °K	--	293 °K	--	293 °K		
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural
Downwash	None	None	None	None	None	None	None	None
Screen Modeling Results (hourly)								
Maximum Modeled Concentration		4.74 μg/m^3		6.30 μg/m^3		9.02 μg/m^3		1.79 μg/m^3
Number of Like Kind Units		1		1		1		1
Maximum Modeled Concentration for each model		4.74 μg/m^3		6.30 μg/m^3		9.02 μg/m^3		1.79 μg/m^3

	H-5 & H-6		H-7		FLARE-2		COMB-1		Total
Inputs									
SO_2 Emission Rate	3.06 lb/hr SO_2	0.386 g/sec	0.61 lb/hr SO_2	0.077 g/sec	3.37 lb/hr SO_2	0.425 g/sec	0.49 lb/hr SO_2	0.062 g/sec	
Stack Height	35 ft	10.67 m	25 ft	7.6200 m	75 ft	22.86 m	25 ft	7.6200 m	
Stack Inside Diameter	3 ft	0.91 m	3 ft	0.9144 m			3 ft	0.9144 m	
Stack Exit Flow Rate									
Stack Exit Velocity	35.37 ft/sec	10.78 m/sec	23.58 ft/sec	7.19 m/sec	15.00 MMBTU/hr		23.58 ft/sec	7.19 m/sec	
Stack Gas Exit Temp	900 °F	755.37 °K	750 °F	672.04 °K			600 °F	588.71 °K	
Ambient Air Temp	--	293 °K	--	293 °K			--	293 °K	
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m	
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	
Downwash	None	None	None	None	None	None	None	None	
Screen Modeling Results (hourly)									
Maximum Modeled Concentration		4.38 μg/m^3		4.11 μg/m^3		1.96 μg/m^3		1.72 μg/m^3	
Number of Like Kind Units		2		1		1		1	
Maximum Modeled Concentration for each model		8.76 μg/m^3		4.11 μg/m^3		1.96 μg/m^3		1.72 μg/m^3	
Hourly Results for All Stacks Combined									
Total Modeled Concentration									38.7 μg/m^3
Background Concentration									50.00 μg/m^3
Total Concentration									88.7 μg/m^3
Is Total Concentration less than 196 μg/m^3 ?									**YES**
Total 1-hour Modeled Concentration									38.75 μg/m^3
Background									50.00 μg/m^3
Total Modeled Concentration with Background									88.75 μg/m^3
Conversion Factor (hourly to 3 hour)									0.90
Total 3 hour concentration									79.87 μg/m^3
Is Total Concentration less than 1300 μg/m^3 ?									**Yes**
Total 1-hour Modeled Concentration									38.75 μg/m^3
Background									50.00 μg/m^3
Total Modeled Concentration with Background									88.75 μg/m^3
Conversion Factor (hourly to 24 hour)									0.40
Total 24 hour concentration									35.50 μg/m^3
Is Total Concentration less than 365 μg/m^3 ?									**Yes**
Annual Results									
Total 1-hour Modeled Concentration									38.75 μg/m^3
Background									50.00 μg/m^3
Total Modeled Concentration with Background									88.75 μg/m^3
Conversion Factor (hourly to annual)									0.08
Total Annual concentration									7.10 μg/m^3
Is Total Concentration less than 80 μg/m^3 ?									**Yes**

TABLE 42
SCREEN MODELING INPUTS AND RESULTS
NEWBERRY GAS PLANT
NAVITAS MIDSTREAM MIDLAND BASIN, LLC
MIDLAND COUNTY, TEXAS

	FLARE-1		FLARE-2		COMB-1		MSS, TANKS, LOADING, AMINES FUGITIVES		Total
Inputs									
H2S Emission Rate	0.03 lb/hr H_2S	0.004 g/sec	0.09 lb/hr H_2S	0.012 g/sec	0.000 lb/hr H_2S	0.000 g/sec	0.145 lb/hr H_2S	0.018 g/sec	
Release Height	--	--	--	--	--	--	10 ft	3.0480 m	
Longer Side Length	--	--	--	--	--	--	300 ft	91.4400 m	
Shorter Side Length	--	--	--	--	--	--	200 ft	60.9600 m	
Stack Height	75 ft	22.86 m	75 ft	22.86 m	25 ft	7.6200 m	25 ft	7.6200 m	
Stack Inside Diameter					3 ft	0.9144 m	--	--	
Stack Exit Velocity	15.00 BTU/hr		15.00 BTU/hr		23.58 ft/sec	7.19 m/sec	--	--	
Stack Gas Exit Temp					600 °F	588.71 °K	--	--	
Ambient Air Temp					--	293 °K	--	--	
Receptor Height	0 ft	0 m	0 ft	0 m	0 ft	0 m	0 ft	0 m	
Urban/Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	Rural	
Downwash	None	None	None	None	None	None	None	None	
Screen Modeling Results (hourly)									
Maximum Modeled Concentration		0.03 μg/m³		0.04 μg/m³		0.00 μg/m³		47.57 μg/m³	
Number of Like Kind Units		1		1		1		1	
Maximum Modeled Concentration for each model		0.03 μg/m³		0.04 μg/m³		0.00 μg/m³		47.57 μg/m³	
Hourly Results for All Stacks Combined									
Total Modeled Concentration									47.6 μg/m³
Is Total Concentration less than 108 μg/m³ (0.08 ppm) ?									**YES**

08/07/19
12:07:49

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Newberry - NOx - Caterpillar 3516LB

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.383000E-01
STACK HEIGHT (M)	=	9.1440
STK INSIDE DIAM (M)	=	0.3048
STK EXIT VELOCITY (M/S)	=	58.8659
STK GAS EXIT TEMP (K)	=	806.4833
AMBIENT AIR TEMP (K)	=	293.1500
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 8.534 M**4/S**3; MOM. FLUX = 29.254 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	116.12	2.59	2.56	NO
100.	0.4565	3	10.0	10.0	3200.0	19.84	12.62	7.71	NO
200.	1.372	3	10.0	10.0	3200.0	19.84	23.82	14.36	NO
300.	1.210	4	15.0	15.0	4800.0	16.28	22.70	12.26	NO
400.	1.174	4	10.0	10.0	3200.0	19.84	29.61	15.57	NO
500.	1.086	4	8.0	8.0	2560.0	22.52	36.35	18.69	NO
600.	0.9831	4	5.0	5.0	1600.0	30.54	43.15	22.07	NO
700.	0.9293	4	5.0	5.0	1600.0	30.54	49.57	24.80	NO
800.	0.8614	4	4.5	4.5	1440.0	32.92	55.99	27.63	NO
900.	0.8014	4	4.0	4.0	1280.0	35.89	62.35	30.44	NO
1000.	0.7477	4	3.5	3.5	1120.0	39.71	68.68	33.26	NO
1100.	0.7001	4	3.5	3.5	1120.0	39.71	74.82	35.22	NO
1200.	0.6547	4	3.0	3.0	960.0	44.80	81.08	37.50	NO
1300.	0.6200	4	3.0	3.0	960.0	44.80	87.12	39.34	NO
1400.	0.5863	4	3.0	3.0	960.0	44.80	93.11	41.14	NO
1500.	0.5543	4	3.0	3.0	960.0	44.80	99.07	42.90	NO
1600.	0.5351	5	1.0	1.0	10000.0	69.89	80.05	33.88	NO
1700.	0.5551	5	1.0	1.0	10000.0	69.89	84.38	34.85	NO
1800.	0.5720	5	1.0	1.0	10000.0	69.89	88.69	35.82	NO
1900.	0.5858	5	1.0	1.0	10000.0	69.89	92.98	36.78	NO
2000.	0.5970	5	1.0	1.0	10000.0	69.89	97.26	37.72	NO
2100.	0.6025	5	1.0	1.0	10000.0	69.89	101.52	38.56	NO
2200.	0.6063	5	1.0	1.0	10000.0	69.89	105.77	39.39	NO
2300.	0.6085	5	1.0	1.0	10000.0	69.89	110.00	40.21	NO
2400.	0.6094	5	1.0	1.0	10000.0	69.89	114.22	41.02	NO

2500.	0.6090	5	1.0	1.0	10000.0	69.89	118.42	41.82	NO
2600.	0.6090	6	1.0	1.0	10000.0	59.55	82.04	28.81	NO
2700.	0.6192	6	1.0	1.0	10000.0	59.55	84.80	29.26	NO
2800.	0.6283	6	1.0	1.0	10000.0	59.55	87.56	29.71	NO
2900.	0.6362	6	1.0	1.0	10000.0	59.55	90.31	30.15	NO
3000.	0.6432	6	1.0	1.0	10000.0	59.55	93.04	30.58	NO
3500.	0.6498	6	1.0	1.0	10000.0	59.55	106.63	32.36	NO
4000.	0.6455	6	1.0	1.0	10000.0	59.55	120.04	34.03	NO
4500.	0.6345	6	1.0	1.0	10000.0	59.55	133.28	35.61	NO
5000.	0.6193	6	1.0	1.0	10000.0	59.55	146.38	37.12	NO
5500.	0.6018	6	1.0	1.0	10000.0	59.55	159.34	38.55	NO
6000.	0.5829	6	1.0	1.0	10000.0	59.55	172.18	39.92	NO
6500.	0.5636	6	1.0	1.0	10000.0	59.55	184.90	41.24	NO
7000.	0.5443	6	1.0	1.0	10000.0	59.55	197.52	42.52	NO
7500.	0.5239	6	1.0	1.0	10000.0	59.55	210.03	43.61	NO
8000.	0.5044	6	1.0	1.0	10000.0	59.55	222.45	44.67	NO
8500.	0.4860	6	1.0	1.0	10000.0	59.55	234.78	45.69	NO
9000.	0.4685	6	1.0	1.0	10000.0	59.55	247.03	46.68	NO
9500.	0.4519	6	1.0	1.0	10000.0	59.55	259.19	47.64	NO
10000.	0.4363	6	1.0	1.0	10000.0	59.55	271.29	48.57	NO
15000.	0.3187	6	1.0	1.0	10000.0	59.55	388.69	56.74	NO
20000.	0.2474	6	1.0	1.0	10000.0	59.55	501.16	61.99	NO
25000.	0.2013	6	1.0	1.0	10000.0	59.55	609.92	66.44	NO
30000.	0.1692	6	1.0	1.0	10000.0	59.55	715.73	70.33	NO
40000.	0.1283	6	1.0	1.0	10000.0	59.55	920.34	75.87	NO
50000.	0.1031	6	1.0	1.0	10000.0	59.55	1117.52	80.49	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

193.	1.375	3	10.0	10.0	3200.0	19.84	23.17	13.98	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.375	193.	0.

08/07/19
12:49:07

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 13043 ***

Newberry - NOx - Caterpillar 3606

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =     0.493000E-01
   STACK HEIGHT (M)       =       9.1440
   STK INSIDE DIAM (M)    =       0.3048
   STK EXIT VELOCITY (M/S)=      78.5614
   STK GAS EXIT TEMP (K)  =     725.9278
   AMBIENT AIR TEMP (K)   =     293.1500
   RECEPTOR HEIGHT (M)    =       0.0000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =       0.0000
   MIN HORIZ BLDG DIM (M) =       0.0000
   MAX HORIZ BLDG DIM (M) =       0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =   10.667 M**4/S**3;  MOM. FLUX =   57.888 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	135.61	3.26	3.24	NO
100.	0.3077	3	10.0	10.0	3200.0	21.79	12.65	7.75	NO
200.	1.459	3	10.0	10.0	3200.0	21.79	23.87	14.44	NO
300.	1.351	4	15.0	15.0	4800.0	17.57	22.74	12.33	NO
400.	1.285	4	10.0	10.0	3200.0	21.79	29.68	15.69	NO
500.	1.189	4	8.0	8.0	2560.0	24.95	36.43	18.85	NO
600.	1.086	4	8.0	8.0	2560.0	24.95	42.96	21.69	NO
700.	0.9813	4	5.0	5.0	1600.0	34.44	49.72	25.10	NO
800.	0.9343	4	5.0	5.0	1600.0	34.44	56.04	27.74	NO
900.	0.8719	4	5.0	5.0	1600.0	34.44	62.30	30.34	NO
1000.	0.8153	4	4.5	4.5	1440.0	37.25	68.60	33.08	NO
1100.	0.7623	4	4.0	4.0	1280.0	40.76	74.86	35.30	NO
1200.	0.7149	4	4.0	4.0	1280.0	40.76	80.94	37.20	NO
1300.	0.6747	4	3.5	3.5	1120.0	45.28	87.13	39.38	NO
1400.	0.6388	4	3.5	3.5	1120.0	45.28	93.13	41.17	NO
1500.	0.6044	4	3.5	3.5	1120.0	45.28	99.08	42.93	NO
1600.	0.5774	4	3.0	3.0	960.0	51.30	105.18	45.08	NO
1700.	0.5768	5	1.0	1.0	10000.0	74.58	84.66	35.54	NO
1800.	0.5986	5	1.0	1.0	10000.0	74.58	88.96	36.49	NO
1900.	0.6174	5	1.0	1.0	10000.0	74.58	93.24	37.43	NO
2000.	0.6334	5	1.0	1.0	10000.0	74.58	97.51	38.35	NO
2100.	0.6431	5	1.0	1.0	10000.0	74.58	101.76	39.18	NO
2200.	0.6508	5	1.0	1.0	10000.0	74.58	106.00	40.00	NO
2300.	0.6566	5	1.0	1.0	10000.0	74.58	110.22	40.81	NO
2400.	0.6609	5	1.0	1.0	10000.0	74.58	114.43	41.60	NO

2500.	0.6638	5	1.0	1.0	10000.0	74.58	118.62	42.39	NO
2600.	0.6654	5	1.0	1.0	10000.0	74.58	122.80	43.17	NO
2700.	0.6658	5	1.0	1.0	10000.0	74.58	126.97	43.93	NO
2800.	0.6652	5	1.0	1.0	10000.0	74.58	131.12	44.69	NO
2900.	0.6670	6	1.0	1.0	10000.0	63.45	90.49	30.69	NO
3000.	0.6769	6	1.0	1.0	10000.0	63.45	93.22	31.12	NO
3500.	0.6941	6	1.0	1.0	10000.0	63.45	106.79	32.87	NO
4000.	0.6986	6	1.0	1.0	10000.0	63.45	120.17	34.52	NO
4500.	0.6946	6	1.0	1.0	10000.0	63.45	133.41	36.08	NO
5000.	0.6848	6	1.0	1.0	10000.0	63.45	146.49	37.56	NO
5500.	0.6713	6	1.0	1.0	10000.0	63.45	159.45	38.98	NO
6000.	0.6554	6	1.0	1.0	10000.0	63.45	172.28	40.34	NO
6500.	0.6381	6	1.0	1.0	10000.0	63.45	184.99	41.64	NO
7000.	0.6202	6	1.0	1.0	10000.0	63.45	197.60	42.90	NO
7500.	0.6000	6	1.0	1.0	10000.0	63.45	210.11	43.99	NO
8000.	0.5805	6	1.0	1.0	10000.0	63.45	222.53	45.04	NO
8500.	0.5616	6	1.0	1.0	10000.0	63.45	234.85	46.05	NO
9000.	0.5436	6	1.0	1.0	10000.0	63.45	247.10	47.03	NO
9500.	0.5263	6	1.0	1.0	10000.0	63.45	259.26	47.98	NO
10000.	0.5097	6	1.0	1.0	10000.0	63.45	271.35	48.91	NO
15000.	0.3812	6	1.0	1.0	10000.0	63.45	388.74	57.03	NO
20000.	0.2992	6	1.0	1.0	10000.0	63.45	501.19	62.26	NO
25000.	0.2454	6	1.0	1.0	10000.0	63.45	609.95	66.69	NO
30000.	0.2074	6	1.0	1.0	10000.0	63.45	715.76	70.56	NO
40000.	0.1583	6	1.0	1.0	10000.0	63.45	920.35	76.09	NO
50000.	0.1277	6	1.0	1.0	10000.0	63.45	1117.53	80.70	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

214.	1.470	3	10.0	10.0	3200.0	21.79	25.50	15.42	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.470	214.	0.

08/07/19
12:46:58

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Spraberry - NOx - Caterpillar 3608

SIMPLE TERRAIN INPUTS:

```
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =     0.693000E-01
   STACK HEIGHT (M)         =       9.1440
   STK INSIDE DIAM (M)      =       0.4054
   STK EXIT VELOCITY (M/S)=        88.0872
   STK GAS EXIT TEMP (K)    =     720.9278
   AMBIENT AIR TEMP (K)     =     293.1500
   RECEPTOR HEIGHT (M)      =       0.0000
   URBAN/RURAL OPTION       =        RURAL
   BUILDING HEIGHT (M)      =       0.0000
   MIN HORIZ BLDG DIM (M) =         0.0000
   MAX HORIZ BLDG DIM (M) =         0.0000
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX =   21.059 M**4/S**3; MOM. FLUX = 129.638 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	219.77	4.26	4.25	NO
100.	0.2392E-01	6	1.0	1.0	10000.0	77.27	19.88	19.60	NO
200.	0.7531	3	10.0	10.0	3200.0	30.21	24.01	14.68	NO
300.	1.111	4	20.0	20.0	6400.0	19.68	22.79	12.42	NO
400.	1.076	4	20.0	20.0	6400.0	19.68	29.61	15.56	NO
500.	1.003	4	15.0	15.0	4800.0	23.19	36.37	18.73	NO
600.	0.9073	4	10.0	10.0	3200.0	30.21	43.14	22.05	NO
700.	0.8545	4	10.0	10.0	3200.0	30.21	49.55	24.78	NO
800.	0.7847	4	10.0	10.0	3200.0	30.21	55.90	27.45	NO
900.	0.7367	4	8.0	8.0	2560.0	35.47	62.34	30.41	NO
1000.	0.6840	4	8.0	8.0	2560.0	35.47	68.54	32.96	NO
1100.	0.6311	4	8.0	8.0	2560.0	35.47	74.69	34.94	NO
1200.	0.5827	4	8.0	8.0	2560.0	35.47	80.79	36.87	NO
1300.	0.5541	4	5.0	5.0	1600.0	51.27	87.35	39.86	NO
1400.	0.5320	4	5.0	5.0	1600.0	51.27	93.33	41.64	NO
1500.	0.5095	4	5.0	5.0	1600.0	51.27	99.27	43.37	NO
1600.	0.4873	4	5.0	5.0	1600.0	51.27	105.18	45.07	NO
1700.	0.4657	4	5.0	5.0	1600.0	51.27	111.06	46.74	NO
1800.	0.4449	4	5.0	5.0	1600.0	51.27	116.91	48.38	NO
1900.	0.4438	5	1.5	1.5	10000.0	80.86	93.62	38.35	NO
2000.	0.4590	5	1.5	1.5	10000.0	80.86	97.87	39.26	NO
2100.	0.4692	5	1.5	1.5	10000.0	80.86	102.10	40.07	NO
2200.	0.4818	5	1.0	1.0	10000.0	91.24	106.94	42.43	NO
2300.	0.4938	5	1.0	1.0	10000.0	91.24	111.13	43.20	NO
2400.	0.5046	5	1.0	1.0	10000.0	91.24	115.30	43.95	NO

2500.	0.5142	5	1.0	1.0	10000.0	91.24	119.46	44.69	NO
2600.	0.5228	5	1.0	1.0	10000.0	91.24	123.62	45.43	NO
2700.	0.5303	5	1.0	1.0	10000.0	91.24	127.76	46.16	NO
2800.	0.5369	5	1.0	1.0	10000.0	91.24	131.89	46.88	NO
2900.	0.5426	5	1.0	1.0	10000.0	91.24	136.00	47.59	NO
3000.	0.5474	5	1.0	1.0	10000.0	91.24	140.11	48.30	NO
3500.	0.5610	5	1.0	1.0	10000.0	91.24	160.48	51.73	NO
4000.	0.5613	5	1.0	1.0	10000.0	91.24	180.59	55.02	NO
4500.	0.5476	5	1.0	1.0	10000.0	91.24	200.46	57.79	NO
5000.	0.5551	6	1.0	1.0	10000.0	77.27	146.97	39.36	NO
5500.	0.5596	6	1.0	1.0	10000.0	77.27	159.88	40.71	NO
6000.	0.5604	6	1.0	1.0	10000.0	77.27	172.68	42.01	NO
6500.	0.5584	6	1.0	1.0	10000.0	77.27	185.37	43.27	NO
7000.	0.5542	6	1.0	1.0	10000.0	77.27	197.95	44.49	NO
7500.	0.5455	6	1.0	1.0	10000.0	77.27	210.44	45.53	NO
8000.	0.5362	6	1.0	1.0	10000.0	77.27	222.84	46.55	NO
8500.	0.5265	6	1.0	1.0	10000.0	77.27	235.15	47.53	NO
9000.	0.5165	6	1.0	1.0	10000.0	77.27	247.37	48.48	NO
9500.	0.5064	6	1.0	1.0	10000.0	77.27	259.52	49.40	NO
10000.	0.4963	6	1.0	1.0	10000.0	77.27	271.60	50.30	NO
15000.	0.4039	6	1.0	1.0	10000.0	77.27	388.91	58.23	NO
20000.	0.3301	6	1.0	1.0	10000.0	77.27	501.33	63.36	NO
25000.	0.2785	6	1.0	1.0	10000.0	77.27	610.06	67.71	NO
30000.	0.2404	6	1.0	1.0	10000.0	77.27	715.85	71.53	NO
40000.	0.1881	6	1.0	1.0	10000.0	77.27	920.43	76.99	NO
50000.	0.1545	6	1.0	1.0	10000.0	77.27	1117.59	81.55	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

329.	1.127	4	20.0	20.0	6400.0	19.68	24.87	13.41	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.127	329.	0.

08/19/19
13:49:41

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Spraberry - NOx - Waukesha 5794GSI

SIMPLE TERRAIN INPUTS:

```
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =     0.378000E-01
   STACK HEIGHT (M)       =       9.1440
   STK INSIDE DIAM (M)    =       0.3048
   STK EXIT VELOCITY (M/S)=      58.8660
   STK GAS EXIT TEMP (K)  =     886.4833
   AMBIENT AIR TEMP (K)   =     293.1500
   RECEPTOR HEIGHT (M)    =       0.0000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =       0.0000
   MIN HORIZ BLDG DIM (M) =       0.0000
   MAX HORIZ BLDG DIM (M) =       0.0000
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX =   8.973 M**4/S**3; MOM. FLUX =   26.615 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	120.23	2.51	2.48	NO
100.	0.3948	3	10.0	10.0	3200.0	20.25	12.63	7.72	NO
200.	1.303	3	10.0	10.0	3200.0	20.25	23.83	14.38	NO
300.	1.160	4	15.0	15.0	4800.0	16.55	22.71	12.28	NO
400.	1.121	4	10.0	10.0	3200.0	20.25	29.62	15.60	NO
500.	1.037	4	8.0	8.0	2560.0	23.03	36.36	18.72	NO
600.	0.9230	4	5.0	5.0	1600.0	31.36	43.19	22.14	NO
700.	0.8808	4	5.0	5.0	1600.0	31.36	49.60	24.86	NO
800.	0.8174	4	4.5	4.5	1440.0	33.83	56.02	27.70	NO
900.	0.7601	4	4.0	4.0	1280.0	36.91	62.39	30.52	NO

1000.	0.7112	4	4.0	4.0	1280.0	36.91	68.59	33.06	NO
1100.	0.6653	4	3.5	3.5	1120.0	40.88	74.86	35.31	NO
1200.	0.6242	4	3.5	3.5	1120.0	40.88	80.95	37.21	NO
1300.	0.5880	4	3.0	3.0	960.0	46.17	87.16	39.45	NO
1400.	0.5578	4	3.0	3.0	960.0	46.17	93.15	41.24	NO
1500.	0.5288	4	3.0	3.0	960.0	46.17	99.11	42.99	NO
1600.	0.5030	5	1.0	1.0	10000.0	70.92	80.12	34.03	NO
1700.	0.5227	5	1.0	1.0	10000.0	70.92	84.44	35.00	NO
1800.	0.5394	5	1.0	1.0	10000.0	70.92	88.75	35.96	NO
1900.	0.5534	5	1.0	1.0	10000.0	70.92	93.04	36.92	NO
2000.	0.5648	5	1.0	1.0	10000.0	70.92	97.31	37.86	NO
2100.	0.5708	5	1.0	1.0	10000.0	70.92	101.57	38.69	NO
2200.	0.5751	5	1.0	1.0	10000.0	70.92	105.82	39.52	NO
2300.	0.5779	5	1.0	1.0	10000.0	70.92	110.05	40.34	NO
2400.	0.5794	5	1.0	1.0	10000.0	70.92	114.26	41.14	NO
2500.	0.5797	5	1.0	1.0	10000.0	70.92	118.46	41.94	NO
2600.	0.5790	5	1.0	1.0	10000.0	70.92	122.65	42.72	NO
2700.	0.5832	6	1.0	1.0	10000.0	60.41	84.84	29.38	NO
2800.	0.5922	6	1.0	1.0	10000.0	60.41	87.60	29.82	NO
2900.	0.6003	6	1.0	1.0	10000.0	60.41	90.34	30.26	NO
3000.	0.6074	6	1.0	1.0	10000.0	60.41	93.08	30.70	NO
3500.	0.6157	6	1.0	1.0	10000.0	60.41	106.66	32.47	NO
4000.	0.6135	6	1.0	1.0	10000.0	60.41	120.07	34.14	NO
4500.	0.6045	6	1.0	1.0	10000.0	60.41	133.31	35.71	NO
5000.	0.5914	6	1.0	1.0	10000.0	60.41	146.40	37.21	NO
5500.	0.5757	6	1.0	1.0	10000.0	60.41	159.37	38.64	NO
6000.	0.5587	6	1.0	1.0	10000.0	60.41	172.20	40.01	NO
6500.	0.5410	6	1.0	1.0	10000.0	60.41	184.92	41.33	NO
7000.	0.5232	6	1.0	1.0	10000.0	60.41	197.54	42.60	NO
7500.	0.5041	6	1.0	1.0	10000.0	60.41	210.05	43.69	NO
8000.	0.4859	6	1.0	1.0	10000.0	60.41	222.47	44.75	NO
8500.	0.4686	6	1.0	1.0	10000.0	60.41	234.80	45.77	NO
9000.	0.4521	6	1.0	1.0	10000.0	60.41	247.04	46.75	NO
9500.	0.4365	6	1.0	1.0	10000.0	60.41	259.21	47.71	NO
10000.	0.4217	6	1.0	1.0	10000.0	60.41	271.30	48.64	NO
15000.	0.3096	6	1.0	1.0	10000.0	60.41	388.70	56.80	NO
20000.	0.2409	6	1.0	1.0	10000.0	60.41	501.16	62.05	NO
25000.	0.1964	6	1.0	1.0	10000.0	60.41	609.93	66.49	NO
30000.	0.1653	6	1.0	1.0	10000.0	60.41	715.74	70.38	NO
40000.	0.1255	6	1.0	1.0	10000.0	60.41	920.34	75.92	NO
50000.	0.1009	6	1.0	1.0	10000.0	60.41	1117.52	80.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

197.	1.303	3	10.0	10.0	3200.0	20.25	23.62	14.26	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED

DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.303	197.	0.

08/07/19
12:29:15

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Newberry - SO2 - Caterpillar 3516LB

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.800000E-03
STACK HEIGHT (M)	=	9.1440
STK INSIDE DIAM (M)	=	0.3048
STK EXIT VELOCITY (M/S)	=	58.8659
STK GAS EXIT TEMP (K)	=	806.4833
AMBIENT AIR TEMP (K)	=	293.1500
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX =   8.534 M**4/S**3; MOM. FLUX =   29.254 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	116.12	2.59	2.56	NO
100.	0.9536E-02	3	10.0	10.0	3200.0	19.84	12.62	7.71	NO
200.	0.2866E-01	3	10.0	10.0	3200.0	19.84	23.82	14.36	NO
300.	0.2528E-01	4	15.0	15.0	4800.0	16.28	22.70	12.26	NO
400.	0.2452E-01	4	10.0	10.0	3200.0	19.84	29.61	15.57	NO
500.	0.2268E-01	4	8.0	8.0	2560.0	22.52	36.35	18.69	NO
600.	0.2053E-01	4	5.0	5.0	1600.0	30.54	43.15	22.07	NO
700.	0.1941E-01	4	5.0	5.0	1600.0	30.54	49.57	24.80	NO
800.	0.1799E-01	4	4.5	4.5	1440.0	32.92	55.99	27.63	NO
900.	0.1674E-01	4	4.0	4.0	1280.0	35.89	62.35	30.44	NO
1000.	0.1562E-01	4	3.5	3.5	1120.0	39.71	68.68	33.26	NO
1100.	0.1462E-01	4	3.5	3.5	1120.0	39.71	74.82	35.22	NO
1200.	0.1368E-01	4	3.0	3.0	960.0	44.80	81.08	37.50	NO
1300.	0.1295E-01	4	3.0	3.0	960.0	44.80	87.12	39.34	NO
1400.	0.1225E-01	4	3.0	3.0	960.0	44.80	93.11	41.14	NO
1500.	0.1158E-01	4	3.0	3.0	960.0	44.80	99.07	42.90	NO
1600.	0.1118E-01	5	1.0	1.0	10000.0	69.89	80.05	33.88	NO
1700.	0.1160E-01	5	1.0	1.0	10000.0	69.89	84.38	34.85	NO
1800.	0.1195E-01	5	1.0	1.0	10000.0	69.89	88.69	35.82	NO
1900.	0.1224E-01	5	1.0	1.0	10000.0	69.89	92.98	36.78	NO
2000.	0.1247E-01	5	1.0	1.0	10000.0	69.89	97.26	37.72	NO
2100.	0.1259E-01	5	1.0	1.0	10000.0	69.89	101.52	38.56	NO
2200.	0.1266E-01	5	1.0	1.0	10000.0	69.89	105.77	39.39	NO
2300.	0.1271E-01	5	1.0	1.0	10000.0	69.89	110.00	40.21	NO
2400.	0.1273E-01	5	1.0	1.0	10000.0	69.89	114.22	41.02	NO

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  2500.   0.1272E-01    5     1.0     1.0 10000.0   69.89  118.42    41.82     NO
  2600.   0.1272E-01    6     1.0     1.0 10000.0   59.55   82.04    28.81     NO
  2700.   0.1293E-01    6     1.0     1.0 10000.0   59.55   84.80    29.26     NO
  2800.   0.1312E-01    6     1.0     1.0 10000.0   59.55   87.56    29.71     NO
  2900.   0.1329E-01    6     1.0     1.0 10000.0   59.55   90.31    30.15     NO
  3000.   0.1343E-01    6     1.0     1.0 10000.0   59.55   93.04    30.58     NO
  3500.   0.1357E-01    6     1.0     1.0 10000.0   59.55  106.63    32.36     NO
  4000.   0.1348E-01    6     1.0     1.0 10000.0   59.55  120.04    34.03     NO
  4500.   0.1325E-01    6     1.0     1.0 10000.0   59.55  133.28    35.61     NO
  5000.   0.1294E-01    6     1.0     1.0 10000.0   59.55  146.38    37.12     NO
  5500.   0.1257E-01    6     1.0     1.0 10000.0   59.55  159.34    38.55     NO
  6000.   0.1218E-01    6     1.0     1.0 10000.0   59.55  172.18    39.92     NO
  6500.   0.1177E-01    6     1.0     1.0 10000.0   59.55  184.90    41.24     NO
  7000.   0.1137E-01    6     1.0     1.0 10000.0   59.55  197.52    42.52     NO
  7500.   0.1094E-01    6     1.0     1.0 10000.0   59.55  210.03    43.61     NO
  8000.   0.1054E-01    6     1.0     1.0 10000.0   59.55  222.45    44.67     NO
  8500.   0.1015E-01    6     1.0     1.0 10000.0   59.55  234.78    45.69     NO
  9000.   0.9786E-02    6     1.0     1.0 10000.0   59.55  247.03    46.68     NO
  9500.   0.9440E-02    6     1.0     1.0 10000.0   59.55  259.19    47.64     NO
 10000.   0.9113E-02    6     1.0     1.0 10000.0   59.55  271.29    48.57     NO
 15000.   0.6656E-02    6     1.0     1.0 10000.0   59.55  388.69    56.74     NO
 20000.   0.5167E-02    6     1.0     1.0 10000.0   59.55  501.16    61.99     NO
 25000.   0.4205E-02    6     1.0     1.0 10000.0   59.55  609.92    66.44     NO
 30000.   0.3535E-02    6     1.0     1.0 10000.0   59.55  715.73    70.33     NO
 40000.   0.2680E-02    6     1.0     1.0 10000.0   59.55  920.34    75.87     NO
 50000.   0.2153E-02    6     1.0     1.0 10000.0   59.55 1117.52    80.49     NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   193.   0.2872E-01    3    10.0    10.0  3200.0   19.84   23.17    13.98     NO

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   ---------   -------
SIMPLE TERRAIN      0.2872E-01      193.        0.
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08/07/19
12:30:47

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 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 13043 ***

Newberry - SO2 - Caterpillar 3606

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =     0.130000E-02
   STACK HEIGHT (M)       =       9.1440
   STK INSIDE DIAM (M)    =       0.3048
   STK EXIT VELOCITY (M/S)=      88.0878
   STK GAS EXIT TEMP (K)  =     720.9278
   AMBIENT AIR TEMP (K)   =     293.1500
   RECEPTOR HEIGHT (M)    =       0.0000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =       0.0000
   MIN HORIZ BLDG DIM (M) =       0.0000
   MAX HORIZ BLDG DIM (M) =       0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =   11.904 M**4/S**3;  MOM. FLUX =   73.282 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	146.45	3.53	3.51	NO
100.	0.5540E-02	3	10.0	10.0	3200.0	22.88	12.66	7.77	NO
200.	0.3433E-01	3	10.0	10.0	3200.0	22.88	23.89	14.48	NO
300.	0.3282E-01	4	15.0	15.0	4800.0	18.30	22.76	12.37	NO
400.	0.3083E-01	4	10.0	10.0	3200.0	22.88	29.71	15.77	NO
500.	0.2881E-01	4	10.0	10.0	3200.0	22.88	36.36	18.71	NO
600.	0.2663E-01	4	8.0	8.0	2560.0	26.31	43.00	21.77	NO
700.	0.2400E-01	4	8.0	8.0	2560.0	26.31	49.43	24.53	NO
800.	0.2235E-01	4	5.0	5.0	1600.0	36.61	56.12	27.91	NO
900.	0.2117E-01	4	5.0	5.0	1600.0	36.61	62.38	30.49	NO
1000.	0.1977E-01	4	4.5	4.5	1440.0	39.66	68.68	33.26	NO
1100.	0.1851E-01	4	4.5	4.5	1440.0	39.66	74.82	35.22	NO
1200.	0.1737E-01	4	4.0	4.0	1280.0	43.47	81.04	37.40	NO
1300.	0.1639E-01	4	4.0	4.0	1280.0	43.47	87.07	39.25	NO
1400.	0.1548E-01	4	3.5	3.5	1120.0	48.38	93.23	41.40	NO
1500.	0.1474E-01	4	3.5	3.5	1120.0	48.38	99.18	43.15	NO
1600.	0.1402E-01	4	3.5	3.5	1120.0	48.38	105.09	44.86	NO
1700.	0.1362E-01	5	1.0	1.0	10000.0	77.02	84.82	35.91	NO
1800.	0.1418E-01	5	1.0	1.0	10000.0	77.02	89.11	36.85	NO
1900.	0.1468E-01	5	1.0	1.0	10000.0	77.02	93.38	37.78	NO
2000.	0.1511E-01	5	1.0	1.0	10000.0	77.02	97.64	38.70	NO
2100.	0.1538E-01	5	1.0	1.0	10000.0	77.02	101.89	39.52	NO
2200.	0.1561E-01	5	1.0	1.0	10000.0	77.02	106.12	40.33	NO
2300.	0.1579E-01	5	1.0	1.0	10000.0	77.02	110.34	41.13	NO
2400.	0.1594E-01	5	1.0	1.0	10000.0	77.02	114.54	41.92	NO

2500.	0.1604E-01	5	1.0	1.0	10000.0	77.02	118.73	42.70	NO
2600.	0.1612E-01	5	1.0	1.0	10000.0	77.02	122.91	43.47	NO
2700.	0.1616E-01	5	1.0	1.0	10000.0	77.02	127.07	44.23	NO
2800.	0.1619E-01	5	1.0	1.0	10000.0	77.02	131.22	44.98	NO
2900.	0.1618E-01	5	1.0	1.0	10000.0	77.02	135.36	45.73	NO
3000.	0.1616E-01	5	1.0	1.0	10000.0	77.02	139.49	46.46	NO
3500.	0.1661E-01	6	1.0	1.0	10000.0	65.47	106.87	33.15	NO
4000.	0.1683E-01	6	1.0	1.0	10000.0	65.47	120.25	34.78	NO
4500.	0.1682E-01	6	1.0	1.0	10000.0	65.47	133.48	36.33	NO
5000.	0.1667E-01	6	1.0	1.0	10000.0	65.47	146.56	37.80	NO
5500.	0.1641E-01	6	1.0	1.0	10000.0	65.47	159.51	39.21	NO
6000.	0.1609E-01	6	1.0	1.0	10000.0	65.47	172.33	40.56	NO
6500.	0.1572E-01	6	1.0	1.0	10000.0	65.47	185.04	41.86	NO
7000.	0.1533E-01	6	1.0	1.0	10000.0	65.47	197.65	43.12	NO
7500.	0.1487E-01	6	1.0	1.0	10000.0	65.47	210.16	44.20	NO
8000.	0.1442E-01	6	1.0	1.0	10000.0	65.47	222.57	45.24	NO
8500.	0.1398E-01	6	1.0	1.0	10000.0	65.47	234.89	46.25	NO
9000.	0.1356E-01	6	1.0	1.0	10000.0	65.47	247.13	47.23	NO
9500.	0.1316E-01	6	1.0	1.0	10000.0	65.47	259.29	48.17	NO
10000.	0.1276E-01	6	1.0	1.0	10000.0	65.47	271.38	49.10	NO
15000.	0.9665E-02	6	1.0	1.0	10000.0	65.47	388.76	57.19	NO
20000.	0.7630E-02	6	1.0	1.0	10000.0	65.47	501.21	62.41	NO
25000.	0.6282E-02	6	1.0	1.0	10000.0	65.47	609.96	66.82	NO
30000.	0.5326E-02	6	1.0	1.0	10000.0	65.47	715.77	70.69	NO
40000.	0.4079E-02	6	1.0	1.0	10000.0	65.47	920.36	76.21	NO
50000.	0.3300E-02	6	1.0	1.0	10000.0	65.47	1117.54	80.81	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

225.	0.3520E-01	3	10.0	10.0	3200.0	22.88	26.71	16.16	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.3520E-01	225.	0.

08/07/19
12:32:24

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Spraberry - SO2 - Caterpillar 3608A4

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.900000E-03
STACK HEIGHT (M)	=	9.1440
STK INSIDE DIAM (M)	=	0.4054
STK EXIT VELOCITY (M/S)	=	78.5624
STK GAS EXIT TEMP (K)	=	725.9278
AMBIENT AIR TEMP (K)	=	293.1500
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX =   18.871 M**4/S**3; MOM. FLUX = 102.408 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	203.13	3.93	3.92	NO
100.	0.4107E-03	3	10.0	10.0	3200.0	28.54	12.74	7.89	NO
200.	0.1218E-01	3	10.0	10.0	3200.0	28.54	23.98	14.63	NO
300.	0.1598E-01	4	20.0	20.0	6400.0	18.84	22.77	12.40	NO
400.	0.1526E-01	4	15.0	15.0	4800.0	22.08	29.69	15.71	NO
500.	0.1399E-01	4	15.0	15.0	4800.0	22.08	36.33	18.67	NO
600.	0.1300E-01	4	10.0	10.0	3200.0	28.54	43.08	21.92	NO
700.	0.1201E-01	4	10.0	10.0	3200.0	28.54	49.50	24.67	NO
800.	0.1116E-01	4	8.0	8.0	2560.0	33.39	56.00	27.66	NO
900.	0.1034E-01	4	8.0	8.0	2560.0	33.39	62.27	30.27	NO
1000.	0.9496E-02	4	8.0	8.0	2560.0	33.39	68.48	32.83	NO
1100.	0.8705E-02	4	5.0	5.0	1600.0	47.94	75.13	35.88	NO
1200.	0.8346E-02	4	5.0	5.0	1600.0	47.94	81.20	37.76	NO
1300.	0.7970E-02	4	5.0	5.0	1600.0	47.94	87.23	39.58	NO
1400.	0.7592E-02	4	5.0	5.0	1600.0	47.94	93.21	41.37	NO
1500.	0.7222E-02	4	5.0	5.0	1600.0	47.94	99.16	43.12	NO
1600.	0.6866E-02	4	5.0	5.0	1600.0	47.94	105.08	44.83	NO
1700.	0.6566E-02	4	4.5	4.5	1440.0	52.25	111.09	46.82	NO
1800.	0.6282E-02	4	4.5	4.5	1440.0	52.25	116.94	48.45	NO
1900.	0.6424E-02	5	1.5	1.5	10000.0	78.28	93.46	37.97	NO
2000.	0.6626E-02	5	1.0	1.0	10000.0	88.29	98.33	40.41	NO
2100.	0.6822E-02	5	1.0	1.0	10000.0	88.29	102.55	41.20	NO
2200.	0.6998E-02	5	1.0	1.0	10000.0	88.29	106.76	41.97	NO
2300.	0.7156E-02	5	1.0	1.0	10000.0	88.29	110.95	42.74	NO
2400.	0.7295E-02	5	1.0	1.0	10000.0	88.29	115.13	43.50	NO

2500.	0.7418E-02	5	1.0	1.0	10000.0	88.29	119.30	44.26	NO
2600.	0.7524E-02	5	1.0	1.0	10000.0	88.29	123.46	45.00	NO
2700.	0.7617E-02	5	1.0	1.0	10000.0	88.29	127.61	45.74	NO
2800.	0.7695E-02	5	1.0	1.0	10000.0	88.29	131.74	46.46	NO
2900.	0.7761E-02	5	1.0	1.0	10000.0	88.29	135.86	47.18	NO
3000.	0.7814E-02	5	1.0	1.0	10000.0	88.29	139.97	47.90	NO
3500.	0.7937E-02	5	1.0	1.0	10000.0	88.29	160.36	51.36	NO
4000.	0.7880E-02	5	1.0	1.0	10000.0	88.29	180.48	54.66	NO
4500.	0.7856E-02	6	1.0	1.0	10000.0	74.82	133.82	37.59	NO
5000.	0.7949E-02	6	1.0	1.0	10000.0	74.82	146.87	39.02	NO
5500.	0.7978E-02	6	1.0	1.0	10000.0	74.82	159.80	40.38	NO
6000.	0.7956E-02	6	1.0	1.0	10000.0	74.82	172.60	41.69	NO
6500.	0.7897E-02	6	1.0	1.0	10000.0	74.82	185.29	42.96	NO
7000.	0.7811E-02	6	1.0	1.0	10000.0	74.82	197.88	44.18	NO
7500.	0.7666E-02	6	1.0	1.0	10000.0	74.82	210.38	45.24	NO
8000.	0.7515E-02	6	1.0	1.0	10000.0	74.82	222.78	46.26	NO
8500.	0.7360E-02	6	1.0	1.0	10000.0	74.82	235.09	47.24	NO
9000.	0.7204E-02	6	1.0	1.0	10000.0	74.82	247.32	48.20	NO
9500.	0.7048E-02	6	1.0	1.0	10000.0	74.82	259.47	49.13	NO
10000.	0.6893E-02	6	1.0	1.0	10000.0	74.82	271.55	50.04	NO
15000.	0.5527E-02	6	1.0	1.0	10000.0	74.82	388.88	58.00	NO
20000.	0.4485E-02	6	1.0	1.0	10000.0	74.82	501.30	63.15	NO
25000.	0.3764E-02	6	1.0	1.0	10000.0	74.82	610.04	67.52	NO
30000.	0.3237E-02	6	1.0	1.0	10000.0	74.82	715.83	71.35	NO
40000.	0.2521E-02	6	1.0	1.0	10000.0	74.82	920.41	76.82	NO
50000.	0.2064E-02	6	1.0	1.0	10000.0	74.82	1117.58	81.38	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

312.	0.1602E-01	4	20.0	20.0	6400.0	18.84	23.67	12.82	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.1602E-01	312.	0.

08/07/19
14:10:17

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 13043 ***

Spraberry - SO2 - Waukesha 5794GSI

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =     0.130000E-02
   STACK HEIGHT (M)         =       9.1440
   STK INSIDE DIAM (M)      =       0.3048
   STK EXIT VELOCITY (M/S)=       58.8660
   STK GAS EXIT TEMP (K)  =      886.4833
   AMBIENT AIR TEMP (K)     =     293.1500
   RECEPTOR HEIGHT (M)      =       0.0000
   URBAN/RURAL OPTION       =        RURAL
   BUILDING HEIGHT (M)      =       0.0000
   MIN HORIZ BLDG DIM (M) =         0.0000
   MAX HORIZ BLDG DIM (M) =         0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =    8.973 M**4/S**3;  MOM. FLUX =   26.615 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	320.0	120.23	2.51	2.48	NO
100.	0.1358E-01	3	10.0	10.0	3200.0	20.25	12.63	7.72	NO
200.	0.4480E-01	3	10.0	10.0	3200.0	20.25	23.83	14.38	NO
300.	0.3989E-01	4	15.0	15.0	4800.0	16.55	22.71	12.28	NO
400.	0.3854E-01	4	10.0	10.0	3200.0	20.25	29.62	15.60	NO
500.	0.3566E-01	4	8.0	8.0	2560.0	23.03	36.36	18.72	NO
600.	0.3174E-01	4	5.0	5.0	1600.0	31.36	43.19	22.14	NO
700.	0.3029E-01	4	5.0	5.0	1600.0	31.36	49.60	24.86	NO
800.	0.2811E-01	4	4.5	4.5	1440.0	33.83	56.02	27.70	NO
900.	0.2614E-01	4	4.0	4.0	1280.0	36.91	62.39	30.52	NO
1000.	0.2446E-01	4	4.0	4.0	1280.0	36.91	68.59	33.06	NO
1100.	0.2288E-01	4	3.5	3.5	1120.0	40.88	74.86	35.31	NO
1200.	0.2147E-01	4	3.5	3.5	1120.0	40.88	80.95	37.21	NO
1300.	0.2022E-01	4	3.0	3.0	960.0	46.17	87.16	39.45	NO
1400.	0.1919E-01	4	3.0	3.0	960.0	46.17	93.15	41.24	NO
1500.	0.1819E-01	4	3.0	3.0	960.0	46.17	99.11	42.99	NO
1600.	0.1730E-01	5	1.0	1.0	10000.0	70.92	80.12	34.03	NO
1700.	0.1798E-01	5	1.0	1.0	10000.0	70.92	84.44	35.00	NO
1800.	0.1855E-01	5	1.0	1.0	10000.0	70.92	88.75	35.96	NO
1900.	0.1903E-01	5	1.0	1.0	10000.0	70.92	93.04	36.92	NO
2000.	0.1943E-01	5	1.0	1.0	10000.0	70.92	97.31	37.86	NO
2100.	0.1963E-01	5	1.0	1.0	10000.0	70.92	101.57	38.69	NO
2200.	0.1978E-01	5	1.0	1.0	10000.0	70.92	105.82	39.52	NO
2300.	0.1988E-01	5	1.0	1.0	10000.0	70.92	110.05	40.34	NO
2400.	0.1993E-01	5	1.0	1.0	10000.0	70.92	114.26	41.14	NO

2500.	0.1994E-01	5	1.0	1.0	10000.0	70.92	118.46	41.94	NO
2600.	0.1991E-01	5	1.0	1.0	10000.0	70.92	122.65	42.72	NO
2700.	0.2006E-01	6	1.0	1.0	10000.0	60.41	84.84	29.38	NO
2800.	0.2037E-01	6	1.0	1.0	10000.0	60.41	87.60	29.82	NO
2900.	0.2064E-01	6	1.0	1.0	10000.0	60.41	90.34	30.26	NO
3000.	0.2089E-01	6	1.0	1.0	10000.0	60.41	93.08	30.70	NO
3500.	0.2117E-01	6	1.0	1.0	10000.0	60.41	106.66	32.47	NO
4000.	0.2110E-01	6	1.0	1.0	10000.0	60.41	120.07	34.14	NO
4500.	0.2079E-01	6	1.0	1.0	10000.0	60.41	133.31	35.71	NO
5000.	0.2034E-01	6	1.0	1.0	10000.0	60.41	146.40	37.21	NO
5500.	0.1980E-01	6	1.0	1.0	10000.0	60.41	159.37	38.64	NO
6000.	0.1921E-01	6	1.0	1.0	10000.0	60.41	172.20	40.01	NO
6500.	0.1861E-01	6	1.0	1.0	10000.0	60.41	184.92	41.33	NO
7000.	0.1799E-01	6	1.0	1.0	10000.0	60.41	197.54	42.60	NO
7500.	0.1734E-01	6	1.0	1.0	10000.0	60.41	210.05	43.69	NO
8000.	0.1671E-01	6	1.0	1.0	10000.0	60.41	222.47	44.75	NO
8500.	0.1612E-01	6	1.0	1.0	10000.0	60.41	234.80	45.77	NO
9000.	0.1555E-01	6	1.0	1.0	10000.0	60.41	247.04	46.75	NO
9500.	0.1501E-01	6	1.0	1.0	10000.0	60.41	259.21	47.71	NO
10000.	0.1450E-01	6	1.0	1.0	10000.0	60.41	271.30	48.64	NO
15000.	0.1065E-01	6	1.0	1.0	10000.0	60.41	388.70	56.80	NO
20000.	0.8285E-02	6	1.0	1.0	10000.0	60.41	501.16	62.05	NO
25000.	0.6754E-02	6	1.0	1.0	10000.0	60.41	609.93	66.49	NO
30000.	0.5684E-02	6	1.0	1.0	10000.0	60.41	715.74	70.38	NO
40000.	0.4315E-02	6	1.0	1.0	10000.0	60.41	920.34	75.92	NO
50000.	0.3470E-02	6	1.0	1.0	10000.0	60.41	1117.52	80.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

197.	0.4482E-01	3	10.0	10.0	3200.0	20.25	23.62	14.26	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.4482E-01	197.	0.

Appendix C.1
TCEQ Final Action 9-24-2019

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 24, 2019

Ms. Michelle Mccracken
Manager - Eh&s
Navitas Midstream Midland Basin, LLC
9303 New Trails Dr Ste 400
The Woodlands, TX 77381

Standard Permit Registration Number: 141647
Navitas Midstream Midland Basin, LLC
Project Description/Unit: Newberry Gas Plant
City: Midland, Midland County
Regulated Entity Number: RN109272526
Customer Reference Number: CN604937243
Oil and Gas Standard Permit (Non-rule) Effective Date: 11/08/2012

This is in response to your standard permit registration submitted through the online ePermits process for the proposed facility located near Midland, Midland County. Based on the information submitted and review completed by the ePermits process, this is an acknowledgement that Navitas Midstream Midland Basin, LLC has certified emissions associated with Newberry Gas Plant under the standard permit listed above. For rule information see:www.tceq.texas.gov/permitting/air/nav/standard.html. Records must be maintained in accordance to the standard permit to demonstrate compliance.

As a reminder, regardless of the authorization mechanism, all facilities must be in compliance and operate in accordance with all rules and regulations of the TCEQ and the U.S. Environmental Protection Agency. Facilities not operating in accordance with these rules and regulations, in accordance with the authorization, or that misrepresented or failed to fully disclose all relevant facts in obtaining this authorization may be subject to formal enforcement action.

If you need further information or have questions, please contact the Rule Registrations Section at (512) 239-1250 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Mark T. Meyer

Mark Meyer, Manager
Rule Registrations Section
Air Permits Division
Texas Commission on Environmental Quality

Appendix C.2
TCEQ Non-Rule Standard Permit

Air Quality Standard Permit for Oil and Gas Handling and Production Facilities

Effective November 8, 2012

(a) **Applicability.** This standard permit applies to all stationary facilities, or groups of facilities, at a site which handle gases and liquids associated with the production, conditioning, processing, and pipeline transfer of fluids or gases found in geologic formations on or beneath the earth's surface including, but not limited to, crude oil, natural gas, condensate, and produced water with the following conditions.

(1) The requirements in paragraphs (a)-(k) of this standard permit are applicable in only for new projects and dependent facilities located in the Barnett Shale (Cooke, Dallas, Denton, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Somervell, Tarrant, and Wise Counties) on or after April 1, 2011. For all other new projects and dependent facilities in all other counties of the state, paragraph (l) of this standard permit is applicable.

(2) Only one Air Quality Standard Permit for Oil and Gas Handling and Production Facilities for an oil and gas site (OGS) may be registered for a combination of dependent facilities and authorizes all facilities in sweet or sour service. This standard permit may not be used if operationally dependent facilities are authorized by the permit by rule in Title 30, Texas Administrative Code (30 TAC) §106.352, Oil and Gas Handling and Production Facilities, or a permit under 30 TAC §116.111,General Application. Existing authorized facilities, or groups of facilities, at an OGS under this standard permit which are not changing certified character or quantity of emissions must only meet subsections (i) and (k) of this standard permit (protectiveness review and planned maintenance, startup, and shutdown (MSS) requirements) and otherwise retain their existing authorization. Other facilities which are not covered under this standard permit may be authorized by other authorizations at an OGS if (b)(6) and (k) of this standard permit are met.

(3) This standard permit does not relieve the owner or operator from complying with any other applicable provision of the Texas Health and Safety Code, Texas Water Code, rules of the Texas Commission on Environmental Quality (TCEQ), or any additional local, state or federal regulations. Emissions that exceed the limits in this standard permit are not authorized and are violations.

(4) Emissions from upsets, emergencies, or malfunctions are not authorized by this standard permit. This standard permit does not regulate methane, ethane, or carbon dioxide.

(b) **Definitions and Scope.**

(1) Facility is a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source. Stationary sources associated with a mine, quarry, or well test lasting less than 72 hours are not considered facilities.

(2) Receptor includes any building which is in use as a single or multi-family residence, school, day-care, hospital, business, or place of worship at the time this standard permit is registered. A residence is a structure primarily used as a permanent dwelling. A business is a structure that is occupied for at least 8 hours a day, 5 days a week, and does not include businesses who are handling or processing materials as described in subsection (a). This term does not include structures occupied or used solely by the owner or operator of the oil and gas facility, or the mineral rights owner of the property upon which the facility is located. All measurements of distance to receptors shall be taken from the emission release point at the oil and gas facility that is nearest to the point on the building that is nearest to the oil and gas facility.

(3) An OGS is defined as all facilities which meet the following:
(A) Located on contiguous or adjacent properties;
(B) Under common control of the same person (or persons under common control); and
(C) Designated under same 2-digit standard industrial classification (SIC) codes.

(4) For purposes of determining applicability of 30 TAC Chapter 122, Federal Operating Permits, the definitions of 30 TAC §122.10, General Definitions, apply.

(5) A project under this standard permit is defined as the following and must meet all requirements of this standard permit prior to construction or implementation of changes.
(A) Any new facility or new group of operationally dependent facilities at an OGS; or
(B) Physical changes to existing authorized facilities or group of facilities at an OGS which increase the potential to emit over previously registered emission limits; or
(C) Operational changes to existing authorized facilities or group of facilities at an OGS which increase the potential to emit over previously registered emission limits.

(6) For purposes of registration under this standard permit, the following facilities shall be included:
(A) All facilities or groups of facilities at an OGS which are operationally dependent on each other;

(B) Facilities must be located within a 1/4 mile of a project emission point, vent, or fugitive component, except for those components excluded in (b)(6)(C) of this standard permit;

(C) If piping or fugitive components are the only connection between facilities and the distance between facilities exceeds 1/4 mile, then the facilities are considered separate for purposes of this registration;

(D) The boundaries of the registration become fixed at the time this standard permit is registered. No individual facility may be authorized under more than one registration;

(E) Any facility or group of facilities authorized under an existing standard permit registration which is operationally dependent on a project must be revised to incorporate the project; and

(F) A registration may include facilities which are claiming 30 TAC §116.620, Installation and/or Modification of Oil and Gas Facilities as well as projects which are claiming this standard permit. Existing authorized facilities, or group of facilities, at an OGS under this standard permit which are not changing registered and certified character or quantity of emissions must only meet paragraphs (i) and (k) of this standard permit (the protectiveness review and planned maintenance, startup, and shutdown (MSS) requirements) until the registration is renewed after December 31, 2015, after which paragraphs (a) – (k) of this standard permit apply.

(7) For purposes of all previous claims of this standard permit (or any previous version of this standard permit) where no project is occurring:

(A) Existing authorized facilities, or group of facilities, which have not registered planned MSS activity emissions prior to the effective dates in (a)(1) of this standard permit must meet paragraph (i) of this standard permit (planned MSS) no later than January 5, 2012; or

(B) Existing authorized facilities, or group of facilities, which have registered planned MSS activity emissions and compliance with 30 TAC §116.620(a)(1) has been demonstrated prior to the effective dates in (a)(1) of this standard permit, must meet paragraph (i) of this standard permit (planned MSS) no later than the registration renewal submitted after December 31, 2015.

(8) For purposes of ensuring protection of public health and welfare and demonstrating compliance with applicable ambient air standards and effects screening levels, the impacts analysis as specified in paragraph (k) of this standard permit must be completed.

(A) All impacts analysis must be done on a contaminant-by-contaminant basis for any net project increases. If a claim under this standard permit is only for planned MSS under paragraph (i) of this standard permit, the analysis shall evaluate planned MSS scenarios only.

(B) Hourly and annual emissions shall be limited based on the most stringent of paragraphs (h) or (k) of this standard permit.

(c) **Authorized Facilities, Changes and Activities.**

(1) For existing OGS which are authorized by previous versions of this standard permit:
(A) A project requires registration unless otherwise specified.
(B) The following projects do not require registration, but must comply with best management practices in paragraph (e) of this standard permit, compliance demonstrations in paragraphs (i) and (j) of this standard permit and must be incorporated into the registration at the next revision or certification:
(i) Addition of any piping, fugitive components, any other new facilities that increase registered emissions less than or equal to 1.0 tpy volatile organic compounds (VOC), 5.0 tpy nitrogen oxides (NOx), 0.01 tpy benzene, and 0.05 tpy hydrogen sulfide (H2S) over a rolling 12-month period;
(ii) Changes to any existing facilities that increase registered emissions less than or equal to 1.0 tpy VOC, 5.0 tpy nitrogen oxides (NOx), 0.01 tpy benzene, and 0.05 tpy H2S over a rolling 12-month period; or
(iii) Total increases over a rolling 60-month period that are less than or equal to 5.0 tpy VOC or NO_X, 0.05 tpy benzene, or 0.1 tpy H2S; or
(iv) Addition of any new engine rated less than 100 horsepower (hp); or
(v) Replacement of any facility if the new facility does not increase the previous registered emissions.
(C) In lieu of registering proposed changes under this standard permit, incremental emissions increases associated with construction of new facilities or changes to existing facilities may be authorized by 30 TAC §106.261, Facilities (Emission Limitations) or §106.262, Facilities (Emissions and Distance Limitations), if the maximum worst-case emissions also meet the limitations established by paragraphs (b)(8) and (k) of this standard permit for all air contaminants with proposed increases.

(2) All authorizations under this standard permit shall meet the following:
(A) New, changed, or replacement facilities shall not exceed the thresholds for major source or major modification as defined in 30 TAC §116.12, Nonattainment and Prevention of Significant Deterioration Review Definitions, and in Federal Clean Air Act §112(g) or §112(j);
(B) All facilities shall comply with all applicable 40 Code of Federal Regulations (CFR), Parts 60, 61, and 63 requirements for New Source Performance Standards (NSPS), National Emission Standards for

Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT); and

(C) All facilities shall comply with all applicable requirements of 30 TAC Chapters 111, Control of Air Pollution from Visible Emissions and Particulate Matter, 112, Control of Air Pollution from Sulfur Compounds, 113, Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants, 115, Control of Air Pollution from Volatile Organic Compounds), and 117, Control of Air Pollution from Nitrogen Compounds.

(3) To be eligible for this standard permit an applicant:

(A) shall meet all applicable requirements as set forth in this standard permit;

(B) shall not misrepresent or fail to fully disclose all relevant facts in obtaining the permit; and

(C) shall not be indebted to the state for failure to make payment of penalties or taxes imposed by the statutes or rules within the commission's jurisdiction.

(4) All facilities related to the operation of any OGS, under any version of this standard permit (or co-located at a site with an OGS standard permit), previously authorized by, and continuing to meet, the conditions of a permit by rule under 30 TAC Chapter 106, Permits by Rule (or any historical version) must:

(A) Be incorporated into this standard permit in any initial registration, revision, or renewal for this standard permit. These facilities will become authorized by this standard permit and previous authorizations will be voided.

(B) Meet all emission limits established by this standard permit and review in accordance with paragraph (b)(8) of this standard permit.

(C) Meet requirements of paragraphs (e), (i), and (j) of this standard permit for Best Management Practices and Minimum Requirements, Planned MSS, and associated Records, Sampling and Monitoring of this standard permit.

(D) Only if facilities or groups of facilities are changed in such a way as to increase the potential to emit, production processing capacity, or registered emission rate, the requirements in paragraph (e) (BACT) of this standard permit are required to be met. In all other cases, these facilities are not required to meet paragraph (e) of this standard permit.

(d) Facilities and Exclusions

(1) Only the following specific facilities and groups of facilities have been evaluated for this standard permit, along with supporting infrastructure equipment and facilities, and may be included in a registration:

(A) Fugitive components, including valves, pressure relief valves, pipe flanges and connectors, pumps, compressors, stuffing boxes, instrumentation and meters, natural gas driven pneumatic pumps, and other similar devices with seals that separate process and waste material from the atmosphere and the associated piping;
(B) Separators, including all gas, oil, and water physical separation units;
(C) Treatment and processing equipment, including heater-treaters, methanol injection, glycol dehydrators, molecular or mole sieves, amine sweeteners, H_2S scavenger chemical reaction vessels for sulfur removal, and iron sponge units;
(D) Cooling towers and associated heat exchangers;
(E) Gas recovery units, including cryogenic expansion, absorption, adsorption, heat exchangers, and refrigeration units;
(F) Combustion units, including engines, turbines, boilers, reboilers, and heaters;
(G) Storage tanks for crude oil, condensate, produced water fuels, treatment chemicals, slop and sump oils and pressure tanks with liquified petroleum gases;
(H) Surface facilities associated with underground storage of gas or liquids;
(I) Truck loading equipment;
(J) Control equipment, including vapor recovery systems, glycol and amine reboiler condensers, flares, vapor combustors, and thermal oxidizers; and
(K) Temporary facilities used for planned maintenance, and temporary control devices for planned start-ups and shutdowns.

(2) **Exclusions.** The following are not authorized under this standard permit:
(A) Sour water strippers or sulfur recovery units;
(B) Carbon dioxide hot carbonate processing units;
(C) Water injection facilities (these facilities may otherwise be authorized by 30 TAC §106.351, Salt Water Disposal);
(D) Liquefied petroleum gases, crude oil, or condensate transfer or loading into or from railcars, ships, or barges. These facilities may otherwise be authorized by 30 TAC §106.261, Facilities (Emission Limitations)) and §106.262, Facilities (Emissions and Distance Limitations);
(E) Incinerators for solid waste destruction;
(F) Remediation of petroleum contaminated water and soil. These facilities may otherwise be authorized by 30 TAC §106.533, Remediation; and
(G) Cooling Towers and heat exchangers with direct contact with gaseous or liquid process streams containing VOC, H_2S, halogens or halogen compounds, cyanide compounds, inorganic acids, or acid gases.

(e) **Best Management Practices (BMP) and Best Available Control Technology (BACT) Requirements**. For any project, and any associated emission control equipment registered under this standard permit this paragraph shall be met as applicable. These requirements are not applicable to existing, unchanging facilities until any renewal submitted after December 31, 2015.

(1) All facilities which have the potential to emit air contaminants must be maintained in good working order and operated properly during facility operations. Each operator shall establish and maintain a program to replace, repair, and/or maintain facilities to keep them in good working order. The minimum requirements of this program shall include:

(A) Compliance with manufacturer's specifications and recommended programs applicable to equipment performance and effect on emissions, or alternatively, an owner or operator developed maintenance plan for such equipment that is consistent with good air pollution control practices.

(B) Cleaning and routine inspection of all equipment; and

(C) Replacement and repair of equipment on schedules which prevent equipment failures and maintain performance.

(2) Any OGS facility shall be operated at least 50 feet from any property line or receptor (whichever is closer to the facility). This distance limitation does not apply to the following:]

(A) Any fugitive components that are used for isolation and or safety purposes may be located at one-half of the width of any applicable easement;

(B) Any facility at a location for which the distance requirements were satisfied at the time this standard permit is registered (provided that the authorization was maintained) regardless of whether a receptor is subsequently built or put to use less than 50 feet from any OGS facility; or

(C) Existing facilities which are located less than 50 feet from a property line or receptor when constructed and previously authorized. If modified or replaced, the operator shall consider, to the extent that good engineering practice will permit, moving these facilities to meet the 50 foot requirement. Replacement facilities must meet all other requirements of this standard permit.

(3) Engines and turbines shall meet the emission and performance standards listed in Table 6 in paragraph (m) and the following requirements:

(A) Liquid fueled engines used for back-up power generation and periodic power needs at the OGS are authorized if the fuel has no more than 0.05% sulfur and the engine is operated less than 876 hours per rolling 12-month period.

(B) Engines and turbines used for electric generation more than 876 hours per rolling 12-month period are authorized if no reliable electric service is readily available. In all other circumstances, electric generators must meet the technical requirements of the Air Quality Standard Permit for Electric Generating Unit (EGU) (not including the EGU standard permit registration requirements) and the emissions shall be included in the registration under this standard permit;

(C) All applicable requirements of 30 TAC Chapter 117; and

(D) All applicable requirements of 40 CFR Part 60 and 40 CFR Part 63.

(E) Compression ignition engines that are rated less than 225 kW (300 hp) and emit less than or equal to the emission tier for an equivalent sized model year 2008 non-road compression ignition engine located at 40 CFR § 89.112, Table 1 are authorized.

(4) Open-topped tanks or ponds containing VOCs or H_2S are allowed up to a PTE equal to 1 tpy of VOC and 0.1 tpy of H_2S.

(5) All process equipment and storage facilities individually must meet the requirements of BACT listed in Table 10 in paragraph (m). Any combination of process equipment and storage facilities with an uncontrolled PTE of equal to or greater than 25 tpy of VOC must also meet the requirements of Table 10, row titled “Combined Control Requirements.” All of the following streams and facilities must be included for this site-wide assessment:

(A) For any gaseous vent stream with a concentration of 1% VOC must be considered for capture and control requirements;

(B) For any liquid stream with a potential to emit of equal to or greater than 1 tpy VOC for each vessel or storage facility.

(6) The following shall apply to all fugitive components associated with the project:

(A) All seals and gaskets in VOC or H2S service shall be installed, checked, and properly maintained to prevent leaking. All components shall be physically inspected quarterly for leaks.

(B) New and replaced fugitive components and instrumentation in gas or liquid service with the uncontrolled potential to emit equal to or greater than 10 tpy VOC or 1 tpy H2S are subject to a leak detection and repair (LDAR) program as specified in Table 9 in paragraph (m). Additional requirements are applicable where uncontrolled potential to emit equal to or greater than 25 tpy VOC or 5 tpy H2S as specified in Table 9. Planned MSS from fugitive components must also meet the requirements of Table 9.

(C) All components found to be leaking shall be repaired. Every reasonable effort shall be made to repair a leaking component. All leaks not repaired immediately shall be tagged or noted in a log. At manned sites, leaks shall be repaired no later than 30 days after the leak is found. At unmanned sites, leaks shall be repaired no later than 60 days after the leak is found. If the repair of a component would require a unit shutdown, which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown.

(D) Tank hatches, not designed to be completely sealed, shall remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling, gauging, loading, unloading, or planned maintenance activities.

(E) To the extent that good engineering practices will permit, new and reworked valves and piping connections shall be located in a place that is reasonably accessible for leak checking during plant operation and underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

(7) Tanks and vessels must utilize a paint color that minimizes the effects of solar heating (including, but not limited to, white or aluminum). To meet this requirement the solar absorptance should be 0.43 or less, as referenced in Table 7.1-6 in Compilation of Air Pollutant Emission Factors (AP-42). Paint shall be applied according to paint producers recommended application requirements if provided and in sufficient quantity as to be considered solar resistant. Paint shall be maintained in good condition and will not compromise tank integrity. Minimal amounts of rust may be present not to exceed 10% of the external surface area of the roof or walls of the tank and in no way may compromise tank integrity. Additionally, up to 10% of the external surface area of the roof or walls of the tank or vessel may be painted with other colors to allow for identification and/or aesthetics. For tanks and vessels purposefully darkened to create the process reaction and help condense liquids from being entrained in the vapor or are in an area whereby a local, state, federal law, ordinance, or private contract predating this standard permit's effective date establishes in writing tank and vessel colors other than white, these requirements do not apply.

(8) All emission estimation methods including but not limited to computer programs such as GRI-GLYCalc, AmineCalc, E&P Tanks, and Tanks 4.0, must be used with monitoring data generated in accordance with Table 8 in subsection (m) of this section where monitoring is required. All emission estimation methods must also be used in a way that is consistent with protocols established by the commission or promulgated in federal regulations (NSPS, NESHAPS). Where control of emissions is relied upon to meet subsection (k) of this section, control monitoring is required.

(9) Process reboilers, heaters, and furnaces that are also used for control of waste gas streams may claim 50 to 99% destruction efficiency for VOCs and H2S depending on the design and level of monitoring applied. The 90% destruction may be claimed where the waste gas is delivered to the flame zone or combustion fire box with basic monitoring as specified in

paragraph (j). Any value greater than 90% and up to 99% destruction efficiency may be claimed where enhanced monitoring and/or testing are applied as specified in paragraph (j). If the waste gas is premixed with the primary fuel gas and used as the primary fuel in the device through the primary fuel burners, 99% destruction may be claimed with basic monitoring as specified in paragraph (j). In systems where the combustion device is designed to cycle on and off to maintain the designed heating parameters, and may not fully utilize the waste gas stream, records of run time and enhanced monitoring is required to claim any run time beyond 50%.

(10) Vapor recovery Systems (VRSs) may claim up to 100% control. The control efficiency is based on whether it is a mechanical VRU (mVRU) or a liquid VRU (lVRU). The VRUs must meet the appropriate design, monitoring and record-keeping in Table 7 and Table 8 in paragraph (m).

(11) Flares used for control of emissions from production, planned MSS, emergency, or upset events may claim design destruction efficiency of 98% for VOCs and H_2S and 99% for VOCs containing no more than three carbon atoms that contain no elements other than carbon and hydrogen. All flares must be designed and operated in accordance with the following:

(A) Meet specifications for minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring found in 40 CFR §60.18;
(B) If necessary to ensure adequate combustion, sufficient gas shall be added to make the gases combustible;
(C) An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes;
(D) An automatic ignition system may be used in lieu of a continuous pilot;
(E) Flares must be lit at all times when gas streams are present;
(F) Fuel for all flares shall be sweet gas or liquid petroleum gas except where only field gas is available and it is not sweetened at the site; and
(G) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed at total of 5 minutes during any two consecutive hours. Acid gas flares which must comply with opacity limits and records in accordance with 30 TAC §111.111(a)(4), Requirements for Specified Sources, regarding gas flares, are exempt from this visible emission limitation.
(H) Flares may be designed with steam or air assist to help reduce visible emissions from the flare but must meet the appropriate requirements in 40 CFR 60.18.
(I) At no time shall minimum heating values fall below the associated minimum heating value in 60.18

(12) Thermal oxidation and vapor combustion control devices may claim design destruction efficiency from 90 to 99.9% for VOCs and H2S depending on the design and the level of monitoring and testing applied. A device designed for the variability of the waste gas streams it controls with basic monitoring to indicate oxidation or combustion is occurring when waste gas is directed to the device may claim 90% destruction efficiency. Devices with intermediate monitoring, designed for the variability of the waste gas streams they control, with a fire box or fire tube designed to maintain a temperature above 1,400 degrees Fahrenheit (F) for 0.5 seconds, residence time; or designed to meet the parameters of a flare with minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring as found in 40 CFR §60.18, but within a full or partial enclosure may claim a design destruction efficiency of 90 to 98%. Devices with enhanced monitoring and ports and platforms to allow stack testing may claim a 99% efficiency where the devices are designed for the variability of the waste gas streams they control, with a fire box or fire tube designed to maintain a temperature above 1,400 degrees F for 0.5 seconds, residence time. The devices that can claim 99% destruction efficiency may claim 99.9% destruction efficiency if stack testing is conducted and confirms the efficiency and the enhanced monitoring is adjusted to ensure the continued efficiency. Temperature and residence time requirements may be modified if stack testing is conducted to confirm efficiencies.

(f) **Registration, Revision, and Renewal Requirements**

(1) For all previous claims of this standard permit (or any previous version of this standard permit) existing authorized facilities, or group of facilities, are not required to meet the requirements of this standard permit, with the exception of planned MSS, until a renewal under the standard permit is submitted after December 31, 2015.

(2) If no other changes except for authorizing planned MSS occurs at an existing OGS under this standard permit, or any previous version of this standard permit, (b)(7) applies.

(A) Records demonstrating compliance with paragraph (i) must be kept;

(B) If the OGS must certify emissions to establish nonapplicability of prevention of significant deterioration (PSD), nonattainment new source review (NNSR), or the federal operating permit programs, this certification may be filed using Form APD-CERT. No fee is required for this certification.

(C) Planned MSS shall be incorporated at the next revision or update to a registration under this standard permit after January 5, 2012, and no later than any renewal submitted after December 31, 2015.

(3) Facilities, groups of facilities or planned MSS from facilities registered under this standard permit cannot also be authorized by a permit under 30 TAC §116.111, General Application.

(4) Prior to construction or implementation of changes for any project which meets this standard permit a notification shall be submitted through the e-Permits system. This notification shall include the following:
   (A) Identifying information (Core Data) and a general description of the project must be submitted through e-Permits (or if not available, hard-copy) using the "APD OGS New Project Notification."
   (B) A fee of $25 for small businesses as defined in 30 TAC §106.50, or $50 for all others must be submitted through the commission's e-Pay system.

(5) For any registration which meets the emission limitations of this standard permit must meet the following:

   (A) Within 90 days after start of operation or implemented changes (whichever occurs first), the facilities must be registered with a PI-1S Standard Permit Application.
   (B) This registration shall include a detailed summary of maximum emissions estimates based on: site-specific or defined representative gas and liquid analysis; equipment design specifications and operations; material type and throughput; and other actual parameters essential for accuracy for determining emissions and compliance with all applicable requirements of this standard permit.
   (C) The fee for this registration shall be $475 for small businesses, or $850 for all others.
   (D) Construction may begin any time after receipt of written notification to the executive director. Operations may continue after receipt of registration if there are no objections or 45 days after receipt by the executive director of the registration, whichever occurs first.

(6) If an OGS emissions increase, either through a change in production or addition of facilities, the site may change authorization (Level 1 or Level 2 PBR in 30 TAC §106.352 or Standard Permit) in the following circumstances:
   (A) Within 90 days from the initial notification of construction of an oil and gas facility, a registration can update the authorization mechanism by submitting an initial registration or revision to the PBR or Standard Permit.
   (B) Within 90 days of the change of production or installation of additional equipment, by submitting an initial registration or revision to the PBR or Standard Permit.

(7) All registrations, registration revisions, and renewals shall be submitted to the commission through a PI-1S Standard Permit Registration Form. Fee requirements do not apply when there are changes in representations with no increase in emissions within 6-months after a standard permit registration has been issued.

(g) Any claim under this standard permit must comply with all applicable requirements of 30 TAC §116.610; §116.611, Registration to Use a Standard Permit; §116.614, Standard Permit Fees; and §116.615, General Conditions. This standard permit supersedes: the notification requirements of 30 TAC §116.615, General Conditions; and the emission limitations of 30 TAC §116.610(a)(1), Applicability.

(h) **Emission Limitations**. Total maximum estimated registered or certified emissions shall meet the most stringent of the following. All emissions estimates must be based on representative worst-case operations and planned MSS activities.

(1) Total maximum estimated annual emissions of any air contaminant shall not exceed the applicable limits for a major stationary source or major modification for PSD and NNSR as specified in 30 TAC §116.12.

(2) Emissions must meet the limitations established in paragraph (k) of this standard permit.

(3) Maximum emissions are limited to less than the following after any operator limitations or controls:

Air contaminant	steady-state or < 30 psig periodic releases lb/hr	≥ 30 psig periodic lb/hr up to 600 hr/yr	Total tpy
Total VOC*			250
Total crude oil or condensate VOC*	145	318	
Total natural gas VOC*	750	1635	
Benzene	7	15.4	10.2
Hydrogen sulfide	10.8	9.8	47
Sulfur dioxide	93.2		250
Nitrogen oxides	121		250
Carbon monoxide	104		250
PM10 and PM2.5	28		15

* VOC is defined in 101.1(115) and does not include methane and ethane

(i) **Planned Maintenance, Start-ups and Shutdowns (MSS).** For any facility, group of facilities or site using this standard permit or previous versions of this standard permit, the following shall apply:

(1) Prior to January 5, 2012, representations and registration of planned MSS is voluntary, but if represented must meet the applicable limits of this standard permit. After January 5, 2012, all emissions from planned MSS activities and facilities must be considered for compliance with applicable limits of this standard permit unless otherwise specified in (b)(7). This standard permit may not be used at a site or for facilities authorized under 30 TAC §116.111 if planned MSS has already been authorized under that permit.

(2) As specified, releases of air contaminants during, or as result of, planned MSS must be quantified and meet the emission limits in this standard permit, as applicable. This analysis must include:
- (A) Alternate operational scenarios or redirection of vent streams;
- (B) Pigging, purging, and blowdowns;
- (C) Temporary facilities if used for degassing or purging of tanks, vessels, or other facilities;
- (D) Degassing or purging of tanks, vessels, or other facilities; and
- (E) Management of sludge from pits, ponds, sumps, and water conveyances.

(3) Other planned MSS activities authorized by this standard permit are limited to the following. These planned MSS activities require only recordkeeping of the activity.
- (A) Routine engine component maintenance including filter changes, oxygen sensor replacements, compression checks, overhauls, lubricant changes, spark plug changes, and emission control system maintenance.
- (B) Boiler refractory replacements and cleanings.
- (C) Heater and heat exchanger cleanings.
- (D) Turbine hot standard permit swaps.
- (E) Pressure relief valve testing, calibration of analytical equipment; Instrumentation/analyzer maintenance; replacement of analyzer filters and screens.

(4) Engine/compressor start-ups associated with preventative system shutdown activities have the option to be authorized as part of typical operations if:
- (A) Prior to operation, alternative operating scenarios to divert gas or liquid streams are registered and certified with all supporting documentation;
- (B) Engine/compressor shutdowns shall result in no greater than 4 lbs/hr of natural gas emissions; and
- (C) Emissions which result from subsequent compressor start-up activities are controlled to a minimum of 98% efficiency for VOC and H_2S.

(j) **Records, Sampling and Monitoring**. The following records shall be maintained at a site in written or electronic form and be readily available to the agency or local air pollution control program with jurisdiction upon request. All required records must be kept at the facility site. If the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site. Other requirements, including but not limited to, federal recordkeeping or testing requirements, can be used to demonstrate compliance if the other requirements are at least as stringent as the associated requirements in the table below. Any documentation that is already being kept for other purposes will suffice for demonstrating requirements. If a control or method is not relied upon to meet this standard permit, then the associated sampling, monitoring, and records are not applicable.

(1) Sampling and demonstrations of compliance shall include the requirements listed in Table 7 in paragraph (m) of this standard permit.

(2) Monitoring and records for demonstrations of compliance shall include the requirements listed in Table 8 in paragraph (m) of this standard permit.

(k) **Emission Limits Based on Impacts Evaluation**.

(1) All impacts evaluations must be completed on a contaminant-by-contaminant basis for only any net emissions increases resulting from a project and must meet the following as appropriate:

(A) Compliance with state or federal ambient air standards shall be demonstrated for NO_2, SO_2, and H_2S at any property-line within one mile of a project.

(B) Compliance with hourly effects screening levels (ESLs) for benzene and annual ESL for benzene, shall be demonstrated at the nearest receptor within 1 mile of a project.

(2) Distance measurements shall be determined using the following:

(A) For each facility or group of facilities, the shortest corresponding distance from any emission point, vent, or fugitive component to the nearest receptor must be used with the appropriate compliance determination method with the published ESLs as found through the TCEQ internet webpage.

(B) For each facility or group of facilities, the shortest corresponding distance from any emission point, vent, or fugitive component to the nearest property line must be used with the appropriate compliance determination method with any applicable state or federal ambient air quality standard.

(3) Impacts evaluations are not required under the following cases:

(A) If there is no receptor within 1 mile of a registration no further ESL review is required.

(B) If there is no property line within 1 mile of a registration no further ambient air quality review is required.

(C) If the project total emissions are less than any of the following rates, no additional analysis or demonstration of the specified air contaminant is required:

Air contaminant	lb/hr
Benzene	0.039
Hydrogen sulfide	0.025
Sulfur dioxide	2
Nitrogen oxides	4

(4) Evaluation of emissions shall meet the following.

(A) For all evaluations of NOX to NO2 a conversion factor of 0.20 for 4 stroke rich and lean burn engines and 0.50 for 2-stroke engines may be used.

(B) The maximum predicted concentration or rate at the property boundary or receptor, whichever is appropriate, must not exceed a state or federal ambient air standard or ESL.

(5) The impacts analysis shall be based on the following facility emissions:

(A) The following shall be met for ESL reviews:

(i) If a project's air contaminant maximum predicted concentrations are equal to or less than 10% of the appropriate ESL, no further review is required;

(ii) If a project's air contaminant maximum predicted concentrations combined with project increases for that contaminant over a rolling 60-month period after the effective date of this revised standard permit are equal to or less than 25% of the appropriate ESL, no further review is required.

(iii) In all other cases, all facility emissions at an OGS, regardless of authorization type, located within 1 mile of a project requiring registration under this standard permit shall be evaluated.

(B) The following shall be met for state and federal ambient air quality standard reviews:

(i) If a project's air contaminant maximum predicted concentrations are equal to or less than 10% the significant impact level (SIL) (also known as de minimis impact in 30 TAC 101, General Rules), no further review is required;

(ii) In all other cases, all facility emissions at an OGS, regardless of authorization type, located within 1 mile of a project requiring registration under this standard permit shall be evaluated.

(6) Evaluation must comply with one of the methods listed with no changes or exceptions:

(A) Tables.

(i) Emission impact Tables 2 – 5F in paragraph (m) of this standard permit may be used in accordance with the limits and descriptions in Table 1 in paragraph (m).

(ii) Values in Tables 2 - 5F in paragraph (m) of this standard permit may be used with linear interpolation between height and distance points. A distance of less than 50 feet or greater than 5,500 feet may not be used. Release heights may not be extrapolated beyond the limits of any table and instead the minimum or maximum height will be used. If distances and release heights are not interpolated, the next lowest height and lesser distances shall be used for determination of maximum acceptable emissions. All facilities exempted from the distance to the property line restriction in paragraph (e)(2) of this standard permit must use 50 feet as the distance to the property line for those ambient standards based on property line.

(B) **Screening Modeling.** A screening model may be used to demonstrate acceptable emissions from an OGS under this standard permit if all of the parameters in the screening modeling protocol provided by the commission are met.

(C) **Dispersion Modeling**. A refined dispersion model may be used to demonstrate acceptable emissions from an OGS under this standard permit if all of the parameters in the refined dispersion modeling protocol provided by the commission are met.

(l) **Existing, Unchanged Facilities and Projects Before Effective Date.** The requirements in 30 TAC §116.620 are applicable to existing unchanged facilities and new or changing facilities as specified in paragraph (a)(1) of this standard permit.

(m) The following Tables shall be used as required by this standard permit.

Table 1 Emission Impact Tables Limits and Descriptions;
Table 2 Generic Modeling Results for Fugitives & Process Vents;
Table 3 Generic Modeling Results for Flares and Thermal Destruction Devices
Table 4 Generic Modeling Results for Blowdowns, Purging, and Pigging
Table 5A Generic Modeling Results for Engines Less Than or Equal to 250 hp
Table 5B Generic Modeling Results for Engines Greater Than 250 hp to Less Than or Equal to 500 hp
Table 5C Generic Modeling Results for Engines Greater Than 500 hp to Less Than or Equal to 1000 hp

Table 5D Generic Modeling Results for Engines Greater Than 1000 hp to Less Than or Equal to 1500 hp
Table 5E Generic Modeling Results for Engines Greater Than 1500 hp to Less Than or Equal to 2000 hp
Table 5F Generic Modeling Results for Engines Greater Than 2000 hp
Table 6 Engine and Turbine Emission and Operational Standards
Table 7 Sampling and Demonstrations of Compliance;
Table 8 Monitoring and Records Demonstrations;
Table 9 Fugitive Component Leak Detection and Repair (LDAR) Control Program; and
Table 10 Best Available Control Technology (BACT) Requirements

Table 1 Emission Impact Tables Limits and Descriptions

Topic	Description	Details
Variables	$E_{MAX\ HOURLY}$	the maximum acceptable hourly (lb/hr) emissions for a specific air contaminant
	$E_{MAX\ ANNUAL}$	the maximum acceptable annual (tpy) emissions for a specific air contaminant
	P	ambient air standard for a specific air contaminant ($\mu g/m^3$)
	ESL	current published effects screening level for a specific air contaminant ($\mu g/m^3$)
	G	the most stringent of any applicable generic value from the Generic Modeling Results Tables at the emission point's release height and distance to property line ($\mu g/m^3/lb/hr$)
	WR_{EPNx}=	weighted ratio of emissions of a specific air contaminant for each EPN divided by the sum of total emissions for all EPNs that emit that contaminant or (E_{EPNx}/E_{total})
Single releases or co-located groups of similar releases	hourly ambient air standard	emissions are determined by: ***$E_{MAX\ HOURLY} = P/G$***
	hourly health effects review	emissions are determined by: ***$E_{MAX\ HOURLY} = ESL/G$***
	annual ambient air standard	emissions are determined by: ***$E_{MAX\ ANNUAL} = (8760/2000)\ P/(0.08*G)$***
	annual health effects review	emissions are determined by: ***$E_{MAX\ ANNUAL} = (8760/2000)\ ESL/(0.08*G)$***
Multiple release points	Limits	If weighted ratios are not used, the total quantity of emissions shall be assumed to be released from the most conservative applicable G value at the site.
	hourly ambient air standard	emissions are determined by: ***$E_{MAX\ HOURLY} = (WR_{EPN1})\ (P\ /\ G_{EPN1}) + (WR_{EPN2})\ (P\ /\ G_{EPN2}) + (WR_{EPNx})\ (P\ /\ G_{EPNx})$***
	hourly health effects review	emissions are determined by: ***$E_{MAX\ HOURLY} = (WR_{EPN1})\ (ESL\ /G_{EPN1}) + (WR_{EPN2})\ (ESL/G_{EPN2}) + (WR_{EPNx})\ (ESL\ /\ G_{EPNx})$***
	annual ambient air standard	emissions are determined by: ***$E_{MAX\ ANNUAL} = (8760/2000)\ [(WR_{EPN1})\ (P\ /\ 0.08*G_{EPN1}) + (WR_{EPN2})\ (P\ /\ 0.08*G_{EPN2}) + ...\ (WR_{EPNx})\ (P\ /\ 0.08*G_{EPNx})]$***
	annual health effects review	emissions are determined by: ***$E_{MAX\ ANNUAL} = (8760/2000)\ [(WR_{EPN1})\ (ESL\ /0.08*G_{EPN1}]) + (WR_{EPN2})\ (ESL/0.08*G_{EPN2}) + WR_{EPNx})\ (ESL\ /\ 0.08*G_{EPNx})]$***

Table 2: Fugitives and Process Vents

Distance	Fugitive 3ft height	Loading 10 ft height	Tank Vents 20 ft height	Process Vessel 10 ft Vent	Process Vessel 20 ft Vent	Process Vessel 30 ft Vent	Process Vessel 40 ft Vent	Process Vessel 50 ft Vent	Process Vessel 60 ft Vent
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	4375	1232	305	469	168	90	70	65	28
100	4375	1232	305	469	168	90	70	65	28
150	3907	1232	305	469	168	90	70	65	28
200	3089	1232	305	440	168	90	70	65	28
300	1911	1193	294	412	168	90	70	65	28
400	1269	1048	291	319	168	90	70	65	28
500	901	858	274	243	157	90	70	65	28
600	674	698	271	189	138	89	70	65	28
700	525	574	271	150	120	88	70	65	28
800	423	479	261	124	105	85	70	65	28
900	349	406	244	105	93	81	70	65	28
1000	293	348	226	91	84	77	69	65	26
1100	250	302	208	90	77	72	67	63	25
1200	217	264	191	89	70	68	64	61	24
1300	189	233	176	88	65	64	61	58	24
1400	167	208	161	87	61	60	58	55	24
1500	149	186	149	84	57	57	55	53	24
1600	134	168	137	82	54	53	52	50	23
1700	121	153	127	79	51	51	49	47	23
1800	110	139	117	76	50	48	47	45	22
1900	100	128	109	73	49	46	44	43	22
2000	92	117	102	70	49	44	42	41	21
2100	85	108	95	67	48	42	41	39	21
2200	78	101	89	64	47	40	39	38	20

Table 2: Fugitives and Process Vents *continued*

Distance	Fugitive 3ft height	Loading 10 ft height	Tank Vents 20 ft height	Process Vessel 10 ft Vent	Process Vessel 20 ft Vent	Process Vessel 30 ft Vent	Process Vessel 40 ft Vent	Process Vessel 50 ft Vent	Process Vessel 60 ft Vent
(ft)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)
2300	73	94	83	61	46	39	37	36	19
2400	68	88	78	59	45	37	36	35	19
2500	64	82	74	56	43	36	35	34	18
2600	60	77	70	54	42	34	33	32	18
2700	56	73	66	52	41	33	32	31	17
2800	53	69	63	50	40	32	31	30	17
2900	50	65	60	48	39	31	30	29	16
3000	48	62	57	46	37	30	29	28	16
3500	37	49	46	38	32	26	25	25	14
4000	30	40	38	32	28	24	23	22	12
4500	25	33	32	28	25	21	20	20	11
5000	22	28	27	24	22	19	18	18	10
5500	19	25	24	21	19	17	17	16	9

Table 3: Flares and Thermal Destruction Devices

Generic Modeling Results

Distance	20 ft height	30 ft height	40 ft height	50 ft height	60 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	58	43	26	25	23
100	58	43	26	25	23
150	58	43	26	25	23
200	58	43	26	25	23
300	58	43	26	25	23
400	58	43	26	25	23
500	58	43	26	25	23
600	56	43	26	25	23
700	52	43	26	25	23
800	47	43	26	25	23
900	45	43	26	25	23
1000	44	43	26	25	23
1100	42	41	25	24	23
1200	40	40	24	24	22
1300	38	38	23	23	21

Table 3: Flares and Thermal Destruction Devices *continued*

Generic Modeling Results

Distance	20 ft height	30 ft height	40 ft height	50 ft height	60 ft height
1400	36	36	23	21	21
1500	34	34	23	21	20
1600	32	32	22	21	20
1700	31	31	22	21	20
1800	29	29	22	20	20
1900	28	28	22	20	20
2000	26	26	21	20	19
2100	25	25	21	20	19
2200	24	24	20	20	19
2300	23	23	20	19	19
2400	22	22	20	19	18
2500	22	22	19	18	18
2600	21	21	19	18	17
2700	20	20	18	17	17
2800	19	19	18	17	16
2900	19	19	17	16	16
3000	18	18	17	16	16
3500	16	16	15	14	14

Table 3: Flares and Thermal Destruction Devices *continued*

Generic Modeling Results

Distance	20 ft height	30 ft height	40 ft height	50 ft height	60 ft height
4000	14	14	13	12	12
4500	13	13	12	11	11
5000	11	11	11	10	10
5500	11	11	10	9	9

Table 4: Blowdowns, Purging, and Pigging Generic Modeling Results

Distance	< 30 psig; 3 ft height	< 30 psig; 10 ft height	< 30 psig; 20 ft height	≥ 30 psig; 6 ft height	≥ 30 psig; 10 ft height
(ft)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)
50	4304	791	244	51	25
100	4304	791	244	51	25
150	4250	777	244	51	25
200	3621	763	244	51	25
300	2367	750	225	51	25
400	1607	737	225	51	25
500	1156	671	224	51	25
600	871	581	218	48	25
700	682	498	212	44	25
800	551	427	210	40	24
900	456	368	204	36	23
1000	384	320	194	33	21
1100	328	281	182	30	20
1200	284	248	170	28	18
1300	249	221	159	27	17
1400	220	198	147	27	16
1500	196	178	137	27	15
1600	176	162	127	27	14
1700	159	147	118	27	13
1800	145	135	110	27	13

Table 4: Blowdowns, Purging, and Pigging Generic Modeling Results *continued*

Distance	< 30 psig; 3 ft height	< 30 psig; 10 ft height	< 30 psig; 20 ft height	≥ 30 psig; 6 ft height	≥ 30 psig; 10 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
1900	132	124	103	27	13
2000	121	114	96	27	13
2100	112	106	90	27	13
2200	103	98	85	27	13
2300	96	91	80	27	13
2400	90	86	75	27	13
2500	84	81	71	27	13
2600	79	76	68	27	13
2700	74	72	64	26	13
2800	70	68	61	26	13
2900	67	64	58	26	13
3000	63	61	55	25	13
3500	50	48	45	23	13
4000	40	39	37	21	13
4500	34	33	31	19	13
5000	29	28	27	17	12
5500	25	24	23	16	11

Table 5A Engines Less Than or Equal to 250 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³) (lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	97	85	83	81	81	71	58	44	43	36	26
100	97	85	83	81	81	71	58	44	43	36	26
150	97	85	83	81	81	71	58	44	43	36	26
200	93	85	83	81	81	71	58	44	43	36	26
300	92	85	83	81	81	71	58	44	43	36	26
400	91	85	83	81	81	71	58	44	43	36	26
500	88	85	83	81	81	71	58	44	43	36	26
600	80	79	78	78	78	70	56	44	43	36	26
700	78	77	76	76	71	68	52	44	43	36	26
800	76	75	74	74	64	63	47	44	43	36	26
900	74	73	72	72	58	58	45	44	43	36	26
1000	72	71	71	71	53	53	44	43	43	36	26
1100	69	69	69	69	49	49	42	42	41	35	25
1200	66	66	66	65	45	45	40	40	40	35	24
1300	62	62	62	62	42	42	38	38	38	33	23
1400	59	59	59	59	39	39	36	36	36	32	23
1500	56	56	56	56	37	37	34	34	34	30	23

Table 5A Engines Less Than or Equal to 250 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
1600	53	53	53	53	35	35	32	32	32	29	22
1700	50	50	50	50	33	33	31	31	31	28	22
1800	48	48	48	48	31	31	29	29	29	26	22
1900	46	46	46	46	30	30	28	28	28	25	22
2000	44	44	44	44	28	28	26	26	26	24	21
2100	42	42	42	42	27	27	25	25	25	23	21
2200	40	40	40	40	26	26	24	24	24	22	20
2300	38	38	38	38	25	25	23	23	23	21	20
2400	37	37	37	37	24	24	22	22	22	20	20
2500	36	36	36	36	23	23	22	22	22	20	19
2600	34	34	34	34	22	22	21	21	21	19	19
2700	33	33	33	33	21	21	20	20	20	18	18
2800	32	32	32	32	21	21	19	19	19	18	18
2900	31	31	31	31	20	20	19	19	19	17	17
3000	30	30	30	30	19	19	18	18	18	17	17
3500	26	26	26	26	17	17	16	16	16	15	15
4000	23	23	23	23	15	15	14	14	14	13	13

Table 5A Engines Less Than or Equal to 250 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
4500	21	21	21	21	13	13	13	13	13	12	12
5000	19	19	19	19	12	12	11	11	11	11	11
5500	17	17	17	17	11	11	11	11	11	10	10

Table 5B: Engines Greater Than 250 and Less Than or Equal to 500 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	hourly (μg/m³)/(lb/hr)
50	60	59	54	43	43	34	34	24	21	20	17
100	60	59	54	43	43	34	34	24	21	20	17
150	60	59	54	43	43	34	34	24	21	20	17
200	60	59	54	43	43	34	34	24	21	20	17
300	60	59	54	43	43	34	34	24	21	20	17
400	60	59	54	43	43	34	34	24	21	20	17
500	60	59	54	43	43	34	34	24	21	20	17
600	57	57	52	41	41	34	34	24	21	20	17
700	52	52	47	38	38	31	31	24	21	20	17
800	47	47	43	34	34	28	28	24	21	20	17
900	42	42	39	31	31	26	26	23	20	20	17
1000	39	39	35	28	28	23	23	21	20	20	17
1100	37	36	32	26	26	23	23	20	20	19	17
1200	35	35	30	25	24	23	23	20	20	18	17
1300	34	34	28	24	23	23	23	20	20	18	16
1400	32	32	26	24	23	23	23	20	20	17	16
1500	31	31	24	23	23	23	23	20	20	16	16

Table 5B: Engines Greater Than 250 and Less Than or Equal to 500 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
1600	29	29	23	23	23	23	23	19	19	16	16
1700	28	28	23	23	23	23	22	19	19	16	15
1800	27	27	22	22	22	22	22	19	19	16	15
1900	25	25	22	22	22	21	21	18	18	16	15
2000	24	24	22	22	22	21	21	17	17	16	15
2100	23	23	21	21	21	20	20	17	17	16	15
2200	22	22	21	21	21	19	19	17	17	15	15
2300	21	21	20	20	20	19	19	17	16	15	14
2400	21	21	20	20	20	19	18	16	16	15	14
2500	20	20	19	19	19	18	18	16	16	14	14
2600	19	19	19	19	19	18	17	16	16	14	13
2700	18	18	18	18	18	17	17	15	15	14	13
2800	18	18	18	18	18	17	16	15	15	13	13
2900	17	17	17	17	17	16	16	15	15	13	13
3000	17	17	17	17	17	16	15	15	15	13	13
3500	15	15	15	15	15	14	14	13	13	12	11
4000	13	13	13	13	13	13	12	12	12	11	10

Table 5B: Engines Greater Than 250 and Less Than or Equal to 500 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)
4500	12	12	12	12	12	11	11	10	10	10	9
5000	11	11	11	11	11	10	10	10	10	9	9
5500	10	10	10	10	10	9	9	9	9	8	8

Table 5C: Engines Greater Than 500 and Less Than or Equal to 1,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)
50	26	25	25	25	18	18	17	13	11	11	10
100	26	25	25	25	18	18	17	13	11	11	10
150	26	25	25	25	18	18	17	13	11	11	10
200	26	25	25	25	18	18	17	13	11	11	10
300	26	25	25	25	18	18	17	13	11	11	10
400	26	25	25	25	18	18	17	13	11	11	10
500	26	25	25	25	18	18	17	13	11	11	10
600	26	25	25	25	18	18	17	13	11	11	10
700	26	25	25	25	18	18	17	13	11	11	10
800	24	24	24	24	18	18	17	13	11	11	10
900	23	23	23	23	18	18	17	13	11	11	10
1000	21	21	21	21	17	17	17	13	11	11	10
1100	20	20	20	20	17	17	16	13	11	11	10
1200	18	18	18	18	16	16	16	12	11	11	10
1300	17	17	17	17	15	15	15	12	11	10	10
1400	17	17	17	17	14	14	14	11	11	10	10

Table 5C: Engines Greater Than 500 and Less Than or Equal to 1,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)	G_{hourly} (µg/m^3)/(lb/hr)
50	26	25	25	25	18	18	17	13	11	11	10
100	26	25	25	25	18	18	17	13	11	11	10
150	26	25	25	25	18	18	17	13	11	11	10
200	26	25	25	25	18	18	17	13	11	11	10
300	26	25	25	25	18	18	17	13	11	11	10
400	26	25	25	25	18	18	17	13	11	11	10
500	26	25	25	25	18	18	17	13	11	11	10
600	26	25	25	25	18	18	17	13	11	11	10
700	26	25	25	25	18	18	17	13	11	11	10
800	24	24	24	24	18	18	17	13	11	11	10
900	23	23	23	23	18	18	17	13	11	11	10
1500	17	17	16	16	13	13	13	11	11	10	9
1600	17	17	16	16	13	13	13	11	11	10	9
1700	16	16	15	15	13	12	12	11	11	9	9
1800	16	16	15	15	13	12	12	11	11	9	9
1900	15	15	14	14	13	12	12	11	10	9	9
2000	15	15	14	14	13	12	12	11	10	9	9
2100	14	14	13	13	12	12	12	11	10	9	9
2200	14	14	13	13	12	12	12	10	10	9	9
2300	13	13	12	12	12	11	11	10	10	9	8
2400	13	13	12	12	12	11	11	10	9	9	8
2500	12	12	12	12	11	11	11	10	9	9	8
2600	12	12	11	11	11	11	11	10	9	9	8

Table 5C: Engines Greater Than 500 and Less Than or Equal to 1,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)	G_{hourly} ($\mu g/m^3$)/(lb/hr)
50	26	25	25	25	18	18	17	13	11	11	10
100	26	25	25	25	18	18	17	13	11	11	10
150	26	25	25	25	18	18	17	13	11	11	10
200	26	25	25	25	18	18	17	13	11	11	10
300	26	25	25	25	18	18	17	13	11	11	10
400	26	25	25	25	18	18	17	13	11	11	10
500	26	25	25	25	18	18	17	13	11	11	10
600	26	25	25	25	18	18	17	13	11	11	10
700	26	25	25	25	18	18	17	13	11	11	10
800	24	24	24	24	18	18	17	13	11	11	10
900	23	23	23	23	18	18	17	13	11	11	10
2700	12	12	11	11	11	10	10	10	9	8	8
2800	11	11	11	11	11	10	10	9	9	8	8
2900	11	11	10	10	10	10	10	9	9	8	8
3000	11	11	10	10	10	10	10	9	9	8	8
3500	9	9	9	9	9	9	9	8	8	7	7
4000	8	8	8	8	8	8	8	7	7	7	6
4500	7	7	7	7	7	7	7	7	6	6	6
5000	7	7	7	7	6	6	6	6	6	6	5
5500	6	6	6	6	6	6	6	6	5	5	5

Table 5D: Engines Greater Than 1,000 and Less Than or Equal to 1,500 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	17	13	12	10	10	10	10	9	8	8	7
100	17	13	12	10	10	10	10	9	8	8	7
150	17	13	12	10	10	10	10	9	8	8	7
200	17	13	12	10	10	10	10	9	8	8	7
300	17	13	12	10	10	10	10	9	8	8	7
400	17	13	11	10	10	10	10	9	8	8	7
500	17	13	11	10	10	10	10	9	8	8	7
600	17	12	11	10	10	10	10	9	8	8	7
700	17	11	11	10	10	10	10	9	8	8	7
800	17	11	11	10	10	10	10	9	8	8	7
900	17	11	11	10	10	10	10	9	8	8	7
1000	17	11	11	10	10	10	10	9	8	8	7
1100	16	11	11	10	10	10	10	9	8	8	7
1200	15	10	10	10	9	9	9	9	8	7	7
1300	15	10	10	10	9	9	9	8	8	7	7
1400	14	10	10	10	9	9	8	8	8	7	7
1500	13	10	10	10	8	8	8	8	8	7	6

Table 5D: Engines Greater Than 1,000 and Less Than or Equal to 1,500 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
1600	12	10	10	10	8	8	8	8	8	7	6
1700	12	10	10	10	8	8	8	8	8	7	6
1800	11	10	10	10	8	8	8	8	8	7	6
1900	11	10	9	9	8	8	8	7	7	7	6
2000	10	9	9	9	8	8	8	7	7	7	6
2100	10	9	9	9	8	8	8	7	7	6	6
2200	10	9	9	9	8	8	8	7	7	6	6
2300	9	9	8	8	8	8	8	7	7	6	6
2400	9	9	8	8	7	7	7	7	7	6	6
2500	9	8	8	8	7	7	7	7	6	6	5
2600	8	8	8	8	7	7	7	7	6	6	5
2700	8	8	8	8	7	7	7	7	6	6	5
2800	8	8	7	7	7	7	7	6	6	6	5
2900	8	7	7	7	7	7	7	6	6	6	5
3000	7	7	7	7	7	7	6	6	6	5	5
3500	7	6	6	6	6	6	6	6	5	5	5
4000	6	6	6	6	5	5	5	5	5	4	4
4500	5	5	5	5	5	5	5	5	4	4	4
5000	5	5	5	5	5	5	4	4	4	4	4
5500	5	4	4	4	4	4	4	4	4	4	3

Table 5E: Engines Greater Than 1,500 and Less Than or Equal to 2,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	10	9	8	8	8	7	7	7	6	5	5
100	10	9	8	8	8	7	7	7	6	5	5
150	10	9	8	8	8	7	7	7	6	5	5
200	10	9	8	8	8	7	7	7	6	5	5
300	10	9	8	8	8	7	7	7	6	5	5
400	10	9	8	8	8	7	7	7	6	5	5
500	10	9	8	8	8	7	7	7	6	5	5
600	10	9	8	8	8	7	7	7	6	5	5
700	9	8	8	8	8	7	7	7	6	5	5
800	9	8	8	8	8	7	7	7	6	5	5
900	9	8	8	8	8	7	7	7	6	5	5
1000	9	8	8	8	8	7	7	7	6	5	5
1100	9	8	8	8	8	7	7	7	6	5	5
1200	8	8	7	7	7	7	7	7	6	5	5
1300	8	8	7	7	7	7	7	6	6	5	5
1400	8	8	7	7	7	7	7	6	6	5	5
1500	8	8	7	7	7	7	7	6	5	5	5

Table 5E: Engines Greater Than 1,500 and Less Than or Equal to 2,000 hp *continued*

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
1600	8	8	7	7	7	7	7	6	5	5	5
1700	8	8	7	7	7	7	7	6	5	5	5
1800	8	8	7	7	7	7	7	6	5	5	5
1900	7	7	7	7	7	7	6	6	5	5	5
2000	7	7	7	7	7	7	6	6	5	5	5
2100	7	7	6	6	6	6	6	6	5	5	5
2200	7	7	6	6	6	6	6	6	5	5	4
2300	7	7	6	6	6	6	6	6	5	5	4
2400	7	7	6	6	6	6	6	5	5	5	4
2500	6	6	6	6	6	6	6	5	5	4	4
2600	6	6	6	6	6	6	5	5	5	4	4
2700	6	6	6	6	6	5	5	5	5	4	4
2800	6	6	6	6	5	5	5	5	4	4	4
2900	6	6	5	5	5	5	5	5	4	4	4
3000	6	5	5	5	5	5	5	5	4	4	4
3500	5	5	5	5	5	4	4	4	4	4	3
4000	4	4	4	4	4	4	4	4	4	3	3
4500	4	4	4	4	4	4	4	3	3	3	3
5000	4	4	4	3	3	3	3	3	3	3	3
5500	3	3	3	3	3	3	3	3	3	3	3

Table 5F: Engines Greater Than 2,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)	G_{hourly} (μg/m³)/(lb/hr)
50	7	6	6	6	5	5	5	5	4	4	4
100	7	6	6	6	5	5	5	5	4	4	4
150	7	6	6	6	5	5	5	5	4	4	4
200	7	6	6	6	5	5	5	5	4	4	4
300	7	6	6	6	5	5	5	5	4	4	4
400	7	6	6	6	5	5	5	5	4	4	4
500	7	6	6	6	5	5	5	5	4	4	4
600	7	6	6	6	5	5	5	5	4	4	4
700	7	6	6	6	5	5	5	5	4	4	4
800	6	6	6	6	5	5	5	5	4	4	4
900	6	6	6	6	5	5	5	5	4	4	4
1000	6	6	6	6	5	5	5	5	4	4	4
1100	6	6	6	6	5	5	5	5	4	4	4
1200	6	6	6	6	5	5	5	5	4	4	4
1300	6	6	6	6	5	5	5	5	4	4	4
1400	6	6	6	6	5	5	5	5	4	4	4
1500	6	6	6	6	5	5	5	5	4	4	4
1600	6	6	6	6	5	5	5	5	4	4	4
1700	6	6	6	6	5	5	5	5	4	4	4
1800	6	6	6	6	5	5	5	5	4	4	4
1900	6	6	6	5	5	5	5	5	4	4	4
2000	6	6	6	5	5	5	5	5	4	4	3
2100	5	5	5	5	5	5	5	5	4	4	3
2200	5	5	5	5	5	5	5	4	4	4	3
2300	5	5	5	5	5	5	4	4	4	4	3

Table 5F: Engines Greater Than 2,000 hp

Generic Modeling Results

Distance	8 ft height	10 ft height	12 ft height	14 ft height	16 ft height	18 ft height	20 ft height	25 ft height	30 ft height	35 ft height	40 ft height
(ft)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)	G_{hourly} (µg/m³)/(lb/hr)
50	7	6	6	6	5	5	5	5	4	4	4
100	7	6	6	6	5	5	5	5	4	4	4
150	7	6	6	6	5	5	5	5	4	4	4
200	7	6	6	6	5	5	5	5	4	4	4
300	7	6	6	6	5	5	5	5	4	4	4
400	7	6	6	6	5	5	5	5	4	4	4
500	7	6	6	6	5	5	5	5	4	4	4
600	7	6	6	6	5	5	5	5	4	4	4
700	7	6	6	6	5	5	5	5	4	4	4
800	6	6	6	6	5	5	5	5	4	4	4
900	6	6	6	6	5	5	5	5	4	4	4
1000	6	6	6	6	5	5	5	5	4	4	4
1100	6	6	6	6	5	5	5	5	4	4	4
1200	6	6	6	6	5	5	5	5	4	4	4
1300	6	6	6	6	5	5	5	5	4	4	4
1400	6	6	6	6	5	5	5	5	4	4	4
1500	6	6	6	6	5	5	5	5	4	4	4
2400	5	5	5	5	5	5	4	4	4	4	3
2500	5	5	5	5	4	4	4	4	4	4	3
2600	5	5	5	5	4	4	4	4	4	3	3
2700	5	5	5	5	4	4	4	4	4	3	3
2800	5	5	5	4	4	4	4	4	4	3	3
2900	4	4	4	4	4	4	4	4	4	3	3
3000	4	4	4	4	4	4	4	4	3	3	3
3500	4	4	4	4	4	4	3	3	3	3	3
4000	3	3	3	3	3	3	3	3	3	3	3
4500	3	3	3	3	3	3	3	3	3	2	2
5000	3	3	3	3	3	3	3	2	2	2	2
5500	3	3	3	3	3	2	2	2	2	2	2

Table 6 Engine and Turbine Emission and Operational Standards					
Engine Type	**Engine Size**	**Manufacture Date**	**NOx (g/bhp-hr)**	**CO (g/bhp-hr)**	**VOC (g/bhp-hr)**
Rich Burn, Non-emergency, Spark-ignited	less than 100 hp	All dates	no standard	no standard	no standard
	greater than or equal to 100 hp	Before January 1, 2011	2	3	no standard
	greater than or equal to 100 hp	After January 1, 2011	1	3	1
	After January 1, 2015, regardless of manufacture date, no rich burn engine greater than or equal to 240 hp authorized by this permit shall emit NOx in excess of 0.5 g/bhp-hr. After January 1, 2018, regardless of manufacture date, no rich burn engine greater than or equal to 100 hp authorized by this permit shall emit NOx in excess of 0.5 g/bhp-hr. If an authorization or authorizations is issued for a spark ignited rich burn engine under this standard permit after the applicable date of January 1, 2015 or January 1, 2018, NOx emissions from that engine shall not exceed 0.5 g/bhp-hr, except that the standard permit holder shall have a one year grace period from the date of the initial authorization under this standard permit to comply with the limit of 0.5 g/bhp-hr for NOx. The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engines.				
Lean Burn, 2SLB Non-emergency, Spark-ignited	less than 500 hp	All dates	no standard	no standard	no standard
	greater than or equal to 500 hp	Before September 23, 1982	8	3	no standard
		Before June 18, 1992 and rated less than 825 hp	8	3	no standard
		After September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		After June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1
Lean Burn, 4SLB, Non-emergency, Spark-ignited, and Dual-fuel	less than 500 hp	Before July 1, 2008	no standard	no standard	no standard
		On or after July 1, 2008	2	3	1
	greater than or equal to 500 hp	Before September 23, 1982	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		Before June 18, 1992 and rated less than 825 hp	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		After September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		After June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions, may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1
	After January 1, 2020, no spark ignited 4-stroke lean burn engine authorized by this standard permit that existed on-site on January 1, 2012, shall emit NOx in excess of 2.0 g/bhp-hr. If an oil and gas standard permit authorization or authorizations are is issued for a spark ignited 4-stroke lean burn engine after January 1, 2012, NOx emissions from that engine shall not exceed 2.0 g/bhp-hr after January 1, 2015. However, if the date of the initial authorization is after January 1, 2015, the standard permit holder shall have a three year grace period from the date of the initial authorization under the oil and gas standard permit to comply with the limit of 2.0 g/bhp-hr for NOx. The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engine				
Turbines	Turbines shall not emit greater than 25 ppmvd @ 15% O2 for NOX and 50 ppmvd @ 15% O2 for CO.				

Table 7 Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Exclusions	Control Systems	Control device monitoring and records are required only where the device is necessary for the site to meet emission rate limits
Sampling General	When Applicable Ports & Platforms, Methods, Notifications and Timing	(A)If necessary, sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in "Chapter 2, Stack Sampling Facilities." Engines and other facilities which are physically incapable of having platforms are excluded from this requirement. For control devices with effectiveness requirements only, appropriate sampling ports shall also be installed upstream of the inlet to control devices or controlled recovery systems with control efficiency requirements. Alternate sampling facility designs may be submitted for written approval by the Texas Commission on Environmental Quality (TCEQ) Regional Director or his designee. (B) Where stack testing is required, Sampling shall be conducted within 180 days of the change that required the registration, in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods. Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. Where appropriate, sampling shall occur as three one-hour test runs and then averaged to demonstrate compliance with the limits of this authorization. Any deviations from those procedures must be approved in writing by the TCEQ Regional Director or his designee prior to sampling. (C) The Regional Office shall be afforded the opportunity to observe all such sampling. (D) The holder of this authorization is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. (E) The TCEQ Regional Office that has jurisdiction over the site shall be contacted as soon as any testing is scheduled, but not less than 30 days prior to sampling. The region shall have discretion to amend the 30 day prior notification. Except for engine testing and liquid/gas analysis sampling, all other sampling shall include an opportunity for the appropriate regional office to schedule a pretest meeting. The notice shall include: (i) Date for pretest meeting, if required; (ii)Date sampling will occur; (iii) Name of firm conducting sampling; (iv)Type of sampling equipment to be used; (v) Method or procedure to be used in sampling; (vi)Procedure used to determine operating rates or other relevant parameters during the sampling period; (vii) parameters to be documented during the sampling event; (viii) any proposed deviations to the prescribed sampling methods. If held, the purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. (F) Within 60 days after the completion of the testing and sampling required herein, one original and one copy of the sampling reports shall be sent to the Regional Office. (G) When sampling is required, all Quality Assurance/Quality Control shall follow 30 TAC Ch 25 National Environmental Laboratory Accreditation Conference accreditation requirements.
Fugitive monitoring and LDAR	Analyzers	An approved gas analyzer or other approved detection monitoring device used for the volatile organic compound fugitive inspection and repair requirement is a device that conforms to the requirements listed in Title 40 CFR •60.485(a) and (b), or is otherwise approved by the Environmental Protection Agency as a device to monitor for VOC fugitive emission leaks. Approved gas analyzers 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 Standard permit 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. 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. In lieu of using a hydrocarbon gas analyzer and EPA Method 21, the owner or operator may use the Alternative Work Practice in 40 CFR Part 60, §60.18(g) - (i). The optical gas imaging instrument must meet all requirements specified in 40 CFR §60.18(g) - (i), except the annual Test Method 21 requirement in 40 CFR §60.18(h)(7) and the reporting requirement in 40 CFR §60.18(i)(5) do not apply.

Table 7 Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Verify composition of materials	All site-specific gas or liquid analyses	Reports necessary to verify composition (including hydrogen sulfide (H_2S) at any point in the process. All analyses shall be site specific or a representative sample may be used to estimate emissions if all of the parameters in the gas and liquid analysis protocol provided by the commission are met. A site-specific or define representative analysis shall be performed within 90 days of initial start of operation or implementation of a change which requires registration. When new streams are added to the site and the character or composition of the streams change and cause an increase in authorized emissions, or upon request of the appropriate Regional office or local air pollution control program with jurisdiction, a new analysis will need to be performed. Analysis techniques may include, but are not limited to, Gas Chromatography (GC), Tutweiler, stain tube analysis, and sales oil/condensate reports. These records will document the following: (A) H_2S content; (B) flow rate; (C) heat content; or (D) other characteristic including, but not limited to: (i) American Petroleum Institute gravity and Reid vapor pressure (RVP);(ii) sales oil throughput; or (iii) condensate throughput. Laboratory extended VOC GC analysis at a minimum to C10+ and H_2S analysis for gas and liquids for the following shall be performed and used for emission compliance demonstrations:(A) Separator at the inlet; (B) Dehydration Unit / Glycol Contactor prior to dehydrator;(C) Amine Unit prior to sweetening unit; (D) Separator dumping to gunbarrel or storage tank; (E) Tanks for liquids and vapors; or (F) P
Engines & Turbines	Initial Sampling of (i)Any engine greater than 500 horsepower; (ii) Any turbine	Perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere (including but not limited to nitrogen oxide (NO_X), carbon monoxide (CO), and oxygen (O2). Each combustion facility shall be tested at a minimum of 50% of the design maximum firing rate of the facility. Each tested firing rate shall be identified in the sampling report. Sampling shall occur within 180 days after initial start-up of each unit. Additional sampling shall occur as requested by the TCEQ Regional Director. If there are multiple engines at an oil and gas sites (OGS) of identical model, year, and control system, sampling may be performed on 50% of the units and used for compliance demonstration of all identical units at the OGS. The remaining 50% of the units not initially tested must be tested during the next biennial testing period. This sampling is not required upon initial installation at any location if the engine or turbine was previously installed and tested at any location in the United States and the test conformed with EPA Reference Methods. Regardless of engine location, records of performance testing, or relied upon sampling reports, must remain with each specific engine for a minimum of five years unless records are unavailable and the permit holder performs the initial sampling on-site. No one may claim records are unavailable for the time period in which an engine is at the site which is authorized by this standard permit. This testing is not required for emergency engines unless requested by the TCEQ Regional Director. Idle engines do not need to be re-started only for the purpose of completing required testing. If biennial testing is required for an engine that is re-started for production purposes, the biennial testing is required within 30 days after re-starting the engine.
Engines	Periodic Evaluation	The following is applicable to sites with federal operating permits only: (A) For any engine with a NOx standard under Table 6, conduct evaluations of each engine performance quarterly after initial compliance testing by measuring the NO_x and CO content of the exhaust. Tests shall occur more than 30 days apart. Individual engines shall be subject to the quarterly performance evaluation if they were in operation for 1000 hours or more during the quarter period. If an engine is not operating, the permit holder may delay the test until such time as the engine is expected to run for more than fourteen days. Idled engines do not need to be re-started only for the purpose of completing required testing.

Table 7 Sampling and Demonstrations of Compliance *(continued)*		
Category	**Description**	**Specifications and Expectations**
Engines ***(continued)***	Periodic Evaluation ***(continued)***	(B) The use of portable analyzers specifically designed for measuring the concentration of each contaminant in parts per million by volume is acceptable for these evaluations. The portable analyzer shall be operated at minimum in accordance with the manufacturer's instructions. The operator may modify the procedure if it does not negatively alter the accuracy of the analyzer. Also, colorimetric testing (stain tubes) maybe used in these periodic evaluations. The NO_x and CO emissions then shall be converted into units of grams per horsepower-hour and pounds per hour. (C) Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during start-up, shutdown, or under breakdown conditions. (D) In lieu of the above mentioned periodic monitoring for engines and biennial testing, the holder of this permit may install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the concentrations of NO_x and CO from any engine, turbine, or other external combustion facility. Diluents to be measured include O_2 or CO_2. Except for system breakdowns, repairs, calibration checks, zero and span adjustments, and other quality assurance tests, the Continuous Emission Monitoring Systems (CEMS) shall be in continuous operation and shall record a minimum of four, and normally 60, approximately equally spaced data points for each full hour. The NO_x and diluents CEMS shall be operated according to the methods and procedures as set out in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The CO CEMS shall be operated according to the methods and procedures as set out in 40 CFR Part 60, Appendix B, Performance Specifications 4, 4A, or 4B. CEMS shall follow the quality assurance requirements of Appendix F except that Cylinder Gas Audits may be conducted in all four calendar quarters in lieu of the annual Relative Accuracy Test Audit. A CEMS with downtime due to breakdown or repair of more than 10% of the facility operating time for any calendar shall be considered as a defective CEMS and the CEMS shall be replaced within 2 weeks.
Engines & Turbines	Biennial Testing Any engine greater than 500 horsepower or any turbine	Every two years starting from the completion date of the Initial Compliance Testing, any engine greater than 500 horsepower or any turbine shall be retested according to the procedures of the Initial Compliance Testing. Retesting shall occur within 90 days of the two year anniversary date. If a facility has been operated for less than 2000 hours during the two year period, it may skip the retesting requirement for that period. After biennial testing, any engine retested under the above requirements shall resume periodic evaluations within the next 6 calendar months (January to June or July to December). If biennial testing is required for an engine that is re-started for production purposes, the biennial testing shall be performed within 45 days after re-starting the engine.
Oxidation or Combustion Control Device	Initial Sampling and Monitoring for performance for VOC, Benzene, and H_2S	Stack testing, when a company wants to establish efficiencies of 99% or greater, must be coordinated and approved. Sampling is required for VOC, benzene and H_2S at Region's discretion. The thermal oxidizer (TO) must have proper monitoring and sampling ports installed in the vent stream and the exit to the combustion chamber, to monitor and test the unit simultaneously. The temperature and oxygen measurement devices shall reduce the temperature and oxygen concentration readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75% of the temperature being measured expressed in degrees Celsius or ±2.5°C. The oxygen or carbon monoxide analyzer shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified Performance Specification No. 3 or 4A, 40 CFR Part 60, Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days. The oxygen or carbon monoxide analyzer shall be quality-assured at least semiannually using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, §5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarters (i.e., two successive semiannual CGAs may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive semiannual audits shall occur no closer than four months. Necessary corrective action shall be taken for all CGA exceedances of ±15 percent accuracy and any continuous emissions monitoring system downtime in excess of 5% of the incinerator operating time.

Table 7 Sampling and Demonstrations of Compliance *(continued)*		
Category	**Description**	**Specifications and Expectations**
Oxidation or Combustion Control Device ***(continued)***	Initial Sampling and Monitoring for performance for VOC, Benzene, and H_2S ***(continued)***	***(continued)*** These occurrences and corrective actions shall be reported to the appropriate TCEQ Regional Director on a quarterly basis. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director. Quality assured or valid data of oxygen or carbon monoxide analyzer must be generated when the TO is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, inaccurate data, repair, maintenance, or calibration may be exempted provided it does not exceed 5% of the time (in minutes) that the oxidizer operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Table 8 Monitoring and Records Demonstrations		
Category	**Description**	**Record Information**
Site Production or Collection	natural gas, oil, condensate, and water production records	Site inlet and outlet gas volume and sulfur concentration, daily gas/liquid production and load-out from tanks
Equipment and facility summary	Current process description	Accurate and detailed plot plan with property line, off-site receptors, and all equipment on-site or drawings with sufficient detail to confirm all authorized facilities to confirm emission estimates, impact review, and registration scope
Equipment specifications	Process units, tanks, vapor recovery systems; flares; thermal oxidizers; and reboiler control devices	A copy of the registration and emission calculations including the fixed equipment sizes or capacities and manufacturer's specifications and programs to maintain performance, with the plan and records for routine inspection, cleaning, repair and replacement.
	Leaks in piping, fugitive components and process vessels	If a leak has been found and determined that there would be less emissions from the repair by delaying repair until the next shutdown, then a record of the calculation showing that the emissions would be less shall be kept.
Physical Inspection	Fugitive Component Check	A record of the component count shall be maintained. A record of the date each quarterly inspection was made and the date components found leaking were repaired or the date of the planned shutdown.
Voluntary LDAR Program	Details of fugitive component monitoring plan, and LDAR results, including QA, QC	The following records are required where a company uses an LDAR program to reduce the potential fugitive emissions from the site to meet emission limitations or certify fugitive emissions. (A) A monitoring program plan must be maintained that contains, at a minimum, the following information: (i) an accounting of all the fugitive components by type and service at the site with the total uncontrolled fugitive potential to emit estimate; (ii) identification of the components at the site that are required to be monitored with an instrument or are exempt with the justification, note the following can be used for this purpose: (a) piping and instrumentation diagram (PID); or (b) a written or electronic database.; (iii) the monitoring schedule for each component at the site with difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), identified and justified, note 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 and a record of the plan to monitor shall be maintained; and (iv) the monitoring method that will be used (audio, visual, or olfactory (AVO) means; Method 21; the Alternative Work Practice in 40 CFR §60.18(g) - (i)); (v) for components where instrument monitoring is used, information clarifying the adequacy of the instrument response; (vi) the plan for hydraulic or pressure testing or instrument monitoring new and reworked components. (B) Records must be maintained of all monitoring instrument calibrations. (C) Records must be maintained for all monitoring and inspection data collected for each component required to be monitored with a Method 21 portable analyzer that include the type of component and the monitoring results in ppmv regardless if the screening value is above or below the leak definition.. (D) Leaking components must be tagged and a leaking-components monitoring log must be maintained for all leaks greater than the applicable leak definition (i.e.10,000 ppmv, 2000 ppmv, or 500 ppmv) of VOC detected using Method 21, all leaks detected by AVO inspection, and all leaks found using Alternative Work Practice specified in 40 CFR §60.18(g)-(i). The log must contain, at a minimum, the following: (i) the method used to monitor the leaking component (audio, visual, or olfactory inspection; Method 21; or the Alternative Work Practice in 40 CFR §60.18(g) - (i)); (ii) the name of the process unit or other appropriate identifier where the component is located; (iii) the type (e.g., valve or seal) and tag identification of component; (iv) the results of the monitoring (in ppmv if a Method 21 portable analyzer was used); (v) the date the leaking component was discovered;(vi) the date that a first attempt at repair was made to a leaking component; (vii) the date that a leaking component is repaired; (viii) the date and instrument reading of the recheck procedure after a leaking component is repaired; and (ix) the leaks that cannot be repaired until turnaround and the date that the leaking component is placed on the shutdown list. (E) If the owner or operator is using the Alternative Work Practice specified in 40 CFR §60.18(g) - (i), the records required by 40 CFR §60.18(i)(4).

Table 8 Monitoring and Records Demonstrations *(continued)*		
Category	**Description**	**Record Information**
Voluntary LDAR Program ***(continued)***	Details of fugitive component monitoring plan, and LDAR results, including QA, QC ***(continued)***	(F) A record of the monitored value any open-ended line or valve for which is a repair or replacement is not completed within 72 hours and monitoring in lieu of covering is chosen. (G) Any open-ended line or valve caused by a repair or replacement not completed within 72 hours shall be monitored as specified in table 10 and the checks and any corrective actions taken shall be recorded. (H) Weekly audio, visual and olfactory inspections shall be noted in a log (I) A check of the reading for any pressure-sensing device to verify rupture disc integrity shall be performed weekly and noted in a log.
Minor Changes	Additions, changes or replacement	Records showing all replacements and additions, including summary of emission type and quantities, for a rolling 6-month period of time.
Equipment Replacement	Like-Kind replacement	Records on equipment specifications and operations, including summary of emissions type and quantity.
Process Units	Glycol Dehydration Units	For emission estimates, the worst-case combination of parameters resulting in the greatest emission rates must be used. If worst-case parameters are not used, then glycol dehydrator unit monitoring records include dry gas flow rate, absorber pressure and temperature, glycol type, and circulation rate recorded weekly. If worst-case parameters are not used, then in addition to weekly unit monitoring, where control of flash tank or reboiler emissions are required to meet the emission limitations of the section and emissions are certified, the following control monitoring requirements apply weekly: flash tank temperature and pressure, any reboiler stripping gas flow rate, and condenser outlet temperature. VRU, flare, or thermal oxidizer control or reboiler fire box used for control must comply with the monitoring and recordkeeping for those devices. Where all emissions from the flash tank and the reboiler or reboiler condenser vent are directed to a VRU, flare, or thermal oxidizer designed to be on-line at all times the glycol dehydrator is in operation, the control system monitoring for the glycol dehydrator is not required.
	Amine Units	Amine units may simply retain site production or inlet gas records if all sulfur compounds in the inlet are assumed to be emitted. Where only partial removal of the inlet sulfur is assumed, for emission estimates, the worst-case combination of parameters resulting in the greatest emission rates must be used. If worst-case parameters are not used, then records of the amine solution, contactor pressure, temperature and pump rate shall be maintained. Where the waste gas is vented to combustion control, the requirements of the control device utilized should be noted.
Boilers, Reboilers, Heater-Treaters, and and Process Heaters	Combustion	Records of Operational Monitoring and Testing Records Records of the hours of operation of every combustion device of any size by the use of a process monitor such as a run time meter, fuel flow meter, or other process variable that indicates a unit is running unless, in the registration for the facility, the emissions from the facility were calculated using full year operation at maximum design capacity in which case no hours of operation records must be kept.
Internal Combustion Engines	Combustion	Records of Appropriate Operational Monitoring and Testing Records Records of the hours of operation of every combustion device and engine of any size by the use of a process monitor such as a run time meter, fuel flow meter, or other process variable that indicates a unit is running. The owner or operator may test and retest at the most frequent intervals identified in Table 7 in lieu of installing a process monitor and recording the hours of operation. If an engine has no testing requirements in Table 7, no records of the hours of operation must be kept. See fuel records below
Gas Fired Turbines	Combustion	Records of Appropriate Operational Monitoring and Testing Records Records of the hours of operation of every turbine greater than 500 hp by the use of a process monitor such as a run time meter, fuel flow meter, or other process variable that indicates a unit is running unless the permit holder determined emissions from the facility assuming full year operation at maximum design capacity in which case no hours of operation records must be kept.
Fuel Records	VOC and Sulfur Content	A fuel flow meter is not required if emissions are based on maximum fuel usage for 8,760 hr/yr. There are no specific requirements for allowable VOC content of fuel. If field gas contains more than 1.5 grains (24 ppmv) of H_2S or 30 grains total sulfur compounds per 100 dry standard cubic feet, the operator shall maintain records, including at least quarterly measurements of fuel H_2S and total sulfur content, which demonstrate that the annual SO_2 emissions do not exceed limitations
Tanks/Vessels	Color/Exterior	Records demonstrating design, inspection, and maintenance of paint color and vessel integrity.

Table 8 Monitoring and Records Demonstrations *(continued)*		
Category	**Description**	**Record Information**
Tanks/Vessels	Emission and emission potential	Maintain a record of the material stored in each tank/vessel that vents to the atmosphere and the maximum vapor pressure used to establish the maximum potential short-term emission rate. Where pressurized liquids can flash in the tank/vessel monitor and record weekly the maximum fluid pressure that can enter the tank / vessel. Records that tank / vessel hatches and relief valves are properly sealed when tank /vessel is directed to control and after loading events (as needed).
Truck Loading	All Types	Records indicating type of material loaded, amount transferred, method of transfer, condition of tank truck before loading.
	Vacuum Trucks	Note loading with an air mover or vacuum. No additional record is needed where a vacuum truck uses only an on-board or portable pump to push material into the truck.
	Controlled Loading	Where control is required note the control that is utilized.
Control Devices	Vapor Capture and Recovery	Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated. mVRU Basic Design Function Record: Record demonstrating the unit captures vapor and includes a sensing device set to capture this vapor at peak intervals. Additional Design Parameter Record: Record demonstrating additional design parameters are utilized such as additional sensing equipment, a properly designed bypass system, an appropriate gas blanket, an adequate compressor selection, and the ability to vary the drive speed for units utilizing electric driven compressors mVRUs that are used at oil and gas sites to control emissions may claim up to 100% control efficiency provided records of basic and additional design functions and parameters of a VRU along with appropriate records listed in Table 8 are satisfied. mVRUs may claim up to 99% control efficiency for units where records of basic and additional design functions are satisfied and parameters listed in Table 8 are not satisfied. mVRUs may claim up to 95% control efficiency for units where records listed in Table 8 are not satisfied. lVRU The record of proper design must be kept to demonstrate how the unit was designed and for what capacity. The record of liquid replacement must be kept, along with the calculations for demonstrating that the VOC to liquid ratio has been maintained. Additionally, the system must be tested to demonstrate the efficiency. This testing needs to be performed and results recorded to receive 95% control efficiency no longer than: vacuum truck emissions: after 20 loads have been pulled through the lVRU, for tanks: Produced Water – Monthly, Crude – Bi-Monthly, Condensate – Weekly. This testing needs to be performed and results recorded to receive 98% control efficiency no longer than: vacuum truck emissions: after 15 loads have been pulled through the lVRU, for tanks: Produced Water – 3 weeks, Crude – 10 days, Condensate – 5 days. All valves must be designed and maintained to prevent leaks. All hatches and openings must be properly gasketed and sealed with the unit properly connected. Downtime is limited to a rolling 12 month average of 5% or 432 hr/per rolling 12 months and waste vents shall be redirected to an appropriate control device if possible during down time unless otherwise registered for alternate operating hours.
Cooling Tower	Design data	Records shall be kept of maximum cooling water circulation rate and basis, maximum total dissolved solids allowed as maintained through blowdown, and towers design drift rate. These records are only required if the cooling system is used to cool process VOC streams or control from drift eliminators or minimizing solids content is needed to meet particulate matter emission limits.

Table 8 Monitoring and Records Demonstrations *(continued)*		
Category	**Description**	**Record Information**
	Particulate Monitoring, Maintenance and Repair.	Inspect and record integrity of drift eliminators annually, repairing as necessary. If a maximum solids content must be maintained through blowdowns to meet particulate emission rate limits, cooling water shall be sampled for total dissolved solids (TDS) once a month at prior to any periodic blow downs and maintain records of the monitoring results and all corrective actions.
		Cooling water VOC concentrations above 0.08 parts per million by volume (ppmv) indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs. Records must be maintained of all monitoring data and equipment repairs.
Planned Maintenance, Start-up, and Shutdown (MSS)	Alternate Operational Scenarios and Redirection of Vent Streams	Records of redirection of vent streams during primary operational unit or control downtime, including associated alternate controls, releases and compliance with emission limitations.
Planned MSS	Pigging, Purging and Blowdowns	Pigging records, including catcher design, date, emission estimate to atmosphere and to control, and when controlled, the control device. Note where a control device is necessary to meet emission limitations the device is subject to the requirements of standard permit (e) and record requirements of this table. Purging and blowdown records, including the volume and pressure and a description of the piping and equipment involved, the date, emission estimate to atmosphere and to control, and when controlled, the control device. Where purging to control to meet a lower concentration before purging to atmosphere is conducted the concentrations of VOC, BTEX or H2S as appropriate must be measured and recorded prior to purging to atmosphere. Note where a control device is necessary to meet emission limitations the device is subject to the requirements of standard permit (e) and record requirements of this table.
Planned MSS	Temporary Facilities for Bypass, and Degassing and Purging	Temporary facility records, including a description and estimate of potential fugitive emissions from temporary piping, size and design of facilities (eg. tanks or pan volume, fill method, and throughput; engine horse power, fuel and usage time, flare tip area, ignition method, and heating value assurance method; etc.) and the date and emission estimate to atmosphere and to control for their use
Planned MSS	Management of Sludge from Pits, Ponds, Sumps and Water Conveyances	Records including the source identification, removal plan, emission estimate direct to atmosphere and through control. Note where a control device is necessary to meet emission limitations the device is subject to the requirements of standard permit (e) and record requirements of this table.
Planned MSS	Degassing or Purging of Tanks, Vessels, or Other Facilities	Records including: a) the EPN and description of vessels and equipment degassed or purged; b) the material, volume and pressure (if applicable); c) the volume of purge gas used; d) a description of the piping and equipment involved; e) clarifying estimates for a coated surface or heel; f) the date; g) emission estimate to atmosphere and to control; h) when controlled, the control device; and i) where purging to a control device to reduce concentrations before purging to atmosphere, the concentrations of VOC, BTEX or H_2S as appropriate must be measured and recorded prior to purging to atmosphere.
Planned MSS	Records	Records or copies of work orders, contracts, or billing by contractors for the following activities shall be kept at the site, or nearest manned site, and made available upon request: • Routine engine component maintenance including filter changes, oxygen sensor replacements, compression checks, overhauls, lubricant changes, spark plug changes, and emission control system maintenance; • Boiler refractory replacements and cleanings; • Heater and heat exchanger cleanings; • Turbine hot standard permit swaps; • Pressure relief valve testing, calibration of analytical equipment; instrumentation/analyzer maintenance; replacement of analyzer filters and screens.

Table 8 Monitoring and Records Demonstrations *(continued)*		
Category	**Description**	**Record Information**
Control Devices	Flare Monitoring	Basic monitoring requires the flare and pilot flame to be continuously monitored by a thermocouple or an infrared monitor. Where an automatic ignition system is employed, the system shall ensure ignition when waste gas is present. The time, date, and duration of any loss of flare, pilot flame, or auto-ignition shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications. A temporary, portable or backup flare used less than 480 hours per year is not required to be monitored. Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated.
Control Devices	Thermal Oxidation and Vapor Combustion Performance Monitoring Basic	Control device monitoring and records are required only where the device is necessary for the site to meet emission rate limits. Basic monitoring is a thermocouple or infrared monitor that indicates the device is working. Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated.
	Intermediate	Intermediate monitoring and records include continuously monitoring and recording temperature to insure the control device is working when waste gas can be directed to the device and showing compliance with the 1400 degrees Fahrenheit if applicable.
	Enhanced	Enhanced monitoring requires continuous temperature and oxygen or carbon monoxide monitoring on the exhaust with six minute averages recorded to show compliance with the temperature requirement and the design oxygen range or a CO limit of 100 ppmv. Some indication of waste gas flow to the control device, like a differential pressure, flow monitoring or valve position indicator, must also be continuously recorded, if the flow to the control device can be intermittent.
	Alternate Monitoring	Records of stack testing and the monitored parameters during the testing shall be maintained to allow alternate monitoring parameters and limits.
Control Devices	Control with process combustion or heating devices (e.g. reboilers, heaters & furnaces)	Basic monitoring is any continuous monitor that indicates when the flame in the device is on or off (other than partial operational use). The following are effective basic options: a fire box temperature monitor, rising or steady process temperature monitor, CO monitor, primary fuel flow monitor, fire box pressure monitor or equivalent. Enhanced monitoring for 91 to 99% control, where waste gas is not introduced as the primary fuel, must include the following monitors: continuous fire box or fire box exhaust temperature, and CO and O_2 monitoring, with at least 6 minute averages recorded. Additionally, enhanced monitoring where the waste gas may be flowing when the control device is not firing must show continuous disposition of the waste gas streams, including continuous monitoring of flow or valve position through any potential by-pass to the control where more than 50% run time of control is claimed. [Basic monitoring is any continuous monitor that indicates when the flame in the device is on or off (other than partial operational use). The following are effective basic options: a fire box temperature monitor, rising or steady process temperature monitor, CO monitor, primary fuel flow monitor, fire box pressure monitor or equivalent. Enhanced monitoring for 91 to 99% control, where waste gas is not the primary fuel, must include the following monitors: continuous fire box or fire box exhaust temperature monitoring; and CO and O_2 monitoring, with at least 6 minute averages recorded. Additionally, enhanced monitoring where the waste gas may be flowing when the control device is not firing must show continuous disposition of the waste gas streams. This includes continuous monitoring of flow or valve position through any potential by-pass to the control where more than 50% run time of the control is claimed.]

Table 9 Fugitive Component LDAR BACT Table	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table	
Exceptions *All fugitive components must meet the minimum design, monitoring, control and other emissions techniques listed in this Table unless the component's service meets one of the following exceptions:*	**Additional Details** *Compliance with these requirements does not assure compliance with requirements of NSPS, NESHAPS or MACT, and does not constitute approval of alternate standards for these regulations.*
Total uncontrolled potential to emit from all components ≤ 10 tpy	
Nitrogen lines	No expectation to estimate emissions. Note this exemption does not include lines with nitrogen that has been used as a sweep gas.
Steam lines (non contact)	No expectation to estimate emissions.
Flexible plastic tubing ≤ 0.5 inches in diameter, unless it is subject to monitoring by other state or federal regulations.	No expectation to estimate emissions, unless it is subject to monitoring by other state or federal regulations.
The operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure	No expectation to estimate emissions.
Mixtures in streams where the VOC has an aggregate partial pressure of less than 0.002 psia at 68°F.	No expectation to estimate emissions.
Components containing only noble gases, inserts such as CO_2 and water or air contaminants not typically listed on a MAERT such as methane, ethane, and Freon.	No expectation to estimate emissions.
Instrument monitoring is not required for pipeline quality sweet natural gas	Uncontrolled Emissions should be estimated. Must meet pipeline quality specifications
Instrument monitoring is not required when the aggregate partial pressure or vapor pressure is less than 0.044 psia at 68 °F or at maximum process operating temperature.	Uncontrolled Emissions should be estimated. This applies at all times, unless a control efficiency is being claimed for instrument monitoring, in which case there must be a record supporting that the instrument could detect a leak.
Instrument monitoring is not required for waste water lines containing less than 1% VOC by weight and operated at ≤ 1 psig	Uncontrolled Emissions should be estimated.
Instrument monitoring is not required for cooling water line components	Emissions are estimated and associated with the cooling tower

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Instrument monitoring is not required for CO_2 lines after VOC is removed. This is referred to as Dry Gas lines in 40 CFR Part 60 Subpart KKK, and defined as a stream having a VOC weight percentage less than 4 %; a weighted average Effects Screening Level (ESL) of the combined VOC stream is > 3,500 Φg/m³; and total uncontrolled emissions for all such sources is < 1 ton per year at any OGS.	Uncontrolled Emissions should be estimated. The weighted average ESL_x for process stream, X, with multiple VOC species will be determined by: $ESL_x = fa/ESL_a + f_b/ESL_b + f_c/ESL_c + . + fn/ESL_n$ Where: n =total number of VOC species in process stream; ESL_n the effects screening level in μg/m³ for the contaminant being evaluated (published in the most recent edition of the TCEQ ESL list); f_n=the weight fraction of the appropriate VOC species in relation to all other VOC in process stream.
At OGS sites where the total uncontrolled potential to emit from all components < 25 tpy, instrument monitoring is not required on components where the aggregate partial pressure or vapor pressure is less than 0.5 psia at 100 F or at maximum process operating temperature, unless the components are subject to monitoring by other state or federal regulations.	Uncontrolled Emissions should be estimated.
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 10 tpy VOC or ≥ 1 tpy H_2S	
Requirements	**Additional Details**
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.	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.

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 10 tpy VOC or ≥ 1 tpy H_2S	
Requirements	**Additional Details**
New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. 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. Where technically feasible new and reworked components may be screened for leaks with a soap bubble test within 8 hours of being returned to service in lieu of instrument testing. Adjustments shall be made as necessary to obtain leak-free performance.	
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 so that no leakage occurs. Except during sampling, both valves shall be closed.	If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period: the line or valve must have a cap, blind flange, plug, or second valve installed; or the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 20 ppmv above background

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 10 tpy VOC or ≥ 1 tpy H_2S	
Requirements	**Additional Details**
	and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
Components shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.	
Accessible valves shall be monitored by leak-checking for fugitive emissions 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 an unsafe-to-monitor valve 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.	Sealless/leakless valves and relief valves equipped with rupture disc or venting to a control device and exempted from instrument monitoring are not counted in the fugitive emissions estimates. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements. See Table 8, Monitoring and Records Demonstrations to identify Difficult-to-monitor and unsafe-to-monitor valves.
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.
All pump, compressor and agitator seals shall be monitored quarterly with an approved gas analyzer 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 instrument monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order. 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.	Pumps compressor and agitator seals that prevent leaks or direct emissions from the seals to control and are exempt from instrument monitoring are not counted in the fugitive emissions estimates. Equipment equipped with alarms would still be counted. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 10 tpy VOC or ≥ 1 tpy H2S	
Requirements	**Additional Details**
For a site where the total uncontrolled potential to emit from all components is **< 25 tpy**; Components found to be emitting VOC in excess of 10,000 parts per million by volume (ppmv) using EPA Method 21, found by visual inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) or found leaking using the Alternative Work Practice in 40 CFR §60.18(g) - (i) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified. A first attempt to repair the leak must be made within 5 days. 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.	Components subject to routine instrument monitoring with an approved gas analyzer under this leak definition my claim a 75% emission reduction credit when evaluating controlled fugitive emission estimates. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly, but is allowed for all components monitored by the Alternative Work Practice. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements
Components **not** subject to an instrument monitoring program but found to be emitting VOC in excess of 10,000 ppmv using EPA Method 21, found by audio, visual or olfactory inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified. All components are subject to monitoring when using the Alternative Work Practice in 40 CFR §60.18(g) - (i).	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.

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 25 tpy or ≥ 5 tpy H_2S	
For a site where the total uncontrolled potential to emit from all components is **≥ 25 tpy**; All the requirements for < 25tpy VOC above apply, except valves found to be emitting VOC in excess of 500 ppmv using EPA Method 21, found by audio, visual or olfactory inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) or found leaking using the Alternative Work Practice in 40 CFR §60.18(g) - (i) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified and Pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv using EPA Method 21, found by audio, visual or olfactory inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) or found leaking using the Alternative Work Practice in 40 CFR §60.18(g) - (i) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified.	Components subject to routine instrument monitoring under this leak definition my claim a 97% emission reduction credit for valves and an 85% emission reduction credit for pump, compressor and agitator seals when evaluating controlled fugitive emission estimates. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.
LDAR Monitoring Options	
Any site may reduce the controlled fugitive emission estimates by including components not required to be monitored in the quarterly instrument monitoring program or applying the lower leak definition of the more stringent program as appropriate.	Quarterly monitoring at a leak definition of 10,000 ppmv would equate to a 75% emission reduction credit when evaluating controlled fugitive emission estimates for the component. Quarterly monitoring at a leak definition of 500 ppmv would equate to a 97% emission reduction credit for valves, flanges and connectors, a 93% emission reduction credit for pumps, and a 95% emission reduction credit for compressor, agitator seals and other component groups when evaluating controlled fugitive emission estimates. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.

Table 9 Fugitive Component LDAR BACT Table *(continued)*	
Fugitive component Leak Detection and Repair (LDAR) Best Available Control Technology (BACT) Requirements Table (continued)	
Minimum Design, Monitoring, Technique or Control for all fugitive components with uncontrolled potential to emit of ≥ 25 tpy or ≥ 5 tpy H_2S	
Requirements	**Additional Details**
LDAR Monitoring Options	
After completion of the required quarterly inspections for a period of at least two years, the operator of the OGS facility may change the monitoring schedule as follows:(i)After two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.(ii)After five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. If the owner or operator is using the Alternative Work Practice in 40 CFR §60.18(g) - (i), the alternative frequencies specified in this standard permit are not allowed.	
Shutdown prior to Maintenance of Fugitive Components	**Start-up after Maintenance of components**
All components shall be kept in good repair. During repair or replacement, emission releases from the emptying of associated piping, equipment, and vessels must meet the emission limits and control requirements listed under pipeline or compressor blowdowns.	When returning associated equipment and piping to service after repair or replacement of fugitive components, appropriate leak detection shall occur and correction, maintenance or repair shall be immediately performed if fugitive components are not in good working order.

Table 10 Best Available Control Technology Requirements		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
Combined Control Requirements	< 25 tpy VOC	No add on control is required if the continuous and periodic vents from all units, vessels and equipment (including normal operation process blow downs) is less than 25 tons of VOC per year.
	≥ 25 tpy VOC	All continuous and periodic vents on process vessels and equipment with potential emissions containing ≥ 1% VOC at any time must be captured and directed to a control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%, if the sum of the uncontrolled PTE of the vents at the site will equal or exceed 25 tons of VOC per year. A site total potential to emit of 1 tpy of VOC from vent gas streams may be exempted from this control requirement.
Glycol Dehydration Unit	Uncontrolled PTE < 10 tpy VOC VOC, BTEX, H_2S	No control is required. Condensers included in the equipment constructed must be maintained and operated as specified by the manufacturer or design engineering.
	Uncontrolled PTE ≥ 10 tpy and < 50 tpy VOC VOC, BTEX, H_2S	All non-combustion VOC emissions shall be routed to a vapor recovery unit (VRU), the unit reboiler, or to an appropriate control device listed in the Control Device BACT Table. This includes the emissions from the condenser vent. Liquid waste or product material captured by a condenser must be enclosed and transferred to a unit compliant with the requirements of this table and the condenser must meet the requirements listed in the Control Device BACT Table with a minimum design control efficiency of 80%. For condensers, greater efficiencies may be claimed where enhanced monitoring and testing are applied following Table 7. If the unit reboiler is used to control the VOC emissions from the dehydrator (e.g. to control the condenser vent and the flash tank if one is present) the unit must be designed to efficiently combust those vented VOCs at least 50% of the time the unit is operated.

Table 10 Best Available Control Technology Requirements		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
	Uncontrolled PTE ≥ 50 tpy VOC VOC, BTEX, H_2S	All non-combustion VOC emissions shall be captured and directed to an appropriate control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%.
Atmospheric Oil/Water separators	VOC with partial pressure < 0.5 psia at maximum liquid temperature or 95 F whichever is greater. VOC, BTEX, H_2S	May vent to atmosphere through vent no larger than 3 inch diameter. If H_2S can exceed 24 ppmv in the vapor space the separator vent shall be captured and directed to a control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%.
	VOC with partial pressure ≥ 0.5 psia at maximum liquid surface temperature or 95 F whichever is greater, VOC, BTEX, H_2S	The oil layer must have a floating cover over the entire liquid surface with a conservation vent to atmosphere or the vents must be captured and directed to a control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%. If H_2S can exceed 24 ppmv in the vapor space the separator vent shall be captured and directed to a control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%. If the separator operates with more than 25,000 gallons (595 barrels) of liquid contained or is used as an oil storage tank, it shall be treated as a storage tank and meet those requirements.
	Oil water separators where the material entering the separator may flash. VOC, BTEX, H_2S	These separators must be treated as process separators with a gas stream and follow those requirements.

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
Fuel Combustion Units including auxiliary fuel for combustion control devices	H_2S	Fuel for all combustion units at the site shall be sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains of total sulfur per 100 dry standard cubic feet (dscf), or field gas.
Boilers, Reboilers, Heater-Treaters, and Process Heaters	NOx, CO, $PM_{10/2.5}$, VOC, HCHO, SO_2	If any unit has a designed maximum firing rate of < 40 MMBTU/hr and greater than 10 MMBtu/hr, it must be designed and operated for good combustion and meet 0.10 lb/MMBtu for NO_X. For boilers and reboilers greater than or equal to 40 MMBtu/hr, emission shall not exceed 0.036 lb/MMBtu for NOx. For heaters and heater treaters greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr, emissions shall not exceed 0.06 lb/MMBtu for NOx. Heaters and heater treaters greater than or equal to 100 MMBtu/hr shall not exceed 0.036 lb/MMBtu for NOx. For boilers, reboilers, process heaters, and heater treaters with heat inputs equal to or greater than 10 MMBtu/hr, the emission limit for CO is 0.074 lb CO/MMBtu
GasFired Turbines	NOx, CO, $PM_{10/2.5}$, VOC, HCHO, SO_2	Units shall be designed and operate with low NOx combustors and meet 25 ppmvd @ 15% O_2 for NO_X and 50 ppmvd @ 15% O_2 for CO.
All Tanks	Uncontrolled PTE of < 1.0 tpy VOC or < 0.1 tpy H2S	Open-topped tanks or ponds containing VOCs or H_2S are allowed
All Tanks	Uncontrolled PTE of ≥ 1.0 tpy VOC or ≥ 0.1 tpy H2S	Open-topped tanks or ponds containing VOCs or H_2S are not allowed. Tank hatches and valves, which emit to the atmosphere, shall remain closed except for sampling or planned maintenance activities. All pressure relief devices (PRD) shall be designed and operated to ensure that proper pressure in the vessel is maintained and shall stay closed except in upset or malfunction conditions. If the PRD does not automatically reset, it must be reset within 24 hours at a manned site and within one week if located at an unmanned site.

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
Process Separators, Crude oil, Condensate, Treatment chemicals, Produced water, Fuel, Slop/Sump Oil and any other storage tanks or vessels that contain a VOC or a film of VOC on the surface of water.	VOC with partial pressure < 0.5 psia at maximum liquid surface temperature or 95 F whichever is greater, or with uncontrolled PTE of < 5 tpy VOC from working and breathing losses, including flash emissions VOC, BTEX, H_2S	All storage tanks with a storage capacity greater than 500 gallons must be submerged fill. Existing tanks and vessels (including temporary liquid storage tanks) which are not increasing emissions at an OGS shall also meet this requirement no later than 180 days after a registration renewal as of January 1, 2016
	VOC with partial pressure ≥ 0.5 psia at maximum liquid surface temperature or 95 F (whichever is greater), and with uncontrolled PTE of < 5 tpy from working and breathing losses, including flash emissions	All storage tanks with a storage capacity greater than 500 gallons must be submerged fill. Un-insulated tank exterior surfaces exposed to the sun shall be of a color that minimizes the effects of solar heating (including, but not limited to, white or aluminum). To meet this requirement the solar absorptance should be 0.43 or less, as referenced in Table 7.1-6 in AP-42. Paint shall be maintained in good condition. If a new or modified tank cannot be painted white or other reflective color, then another control device may be used to control emissions. Exceptions to the color requirement include the following: (A) Up to 10% of the external surface area of the roof or walls of the tank or vessel may be painted with other colors to allow for identifying information or aesthetic purposes; and

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
(continued)	*(continued)* VOC with partial pressure ≥ 0.5 psia at maximum liquid surface temperature or 95 F (whichever is greater), and with uncontrolled PTE of < 5 tpy from working and breathing losses, including flash emissions VOC, BTEX, H_2S	*(continued)* (B) If a local, state or federal law or ordinance or private contract which predates this standard permit's effective date establishes in writing tank and vessel colors other than white. If applicable, a copy of this documentation must be provided to the commission upon registration. (C) Tanks and vessels purposefully darkened to create the process reaction and help condense liquids from being entrained in the vapor. Existing tanks and vessels (including temporary liquid storage tanks) which are not increasing emissions at an OGS using shall also meet this requirement no later than 180 days after a registration renewal as of January 1, 2016.

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
(continued)	VOC with uncontrolled PTE of ≥ 5 tpy	Vents shall be captured and directed to an appropriate control device as listed in standard permit (e) BMP and BACT. Un-insulated tank exterior surfaces exposed to the sun shall be of a color that minimizes the effects of solar heating (including, but not limited to, white or aluminum). To meet this requirement the solar absorptance should be 0.43 or less, as referenced in Table 7.1-6 in AP-42. Paint shall be maintained in good condition. Exceptions to the color requirement include the following: (A) Up to 10% of the external surface area of the roof or walls of the tank or vessel may be painted with other colors to allow for identifying information or aesthetic purposes; and (B) If a local, state or federal law or ordinance or private contract which predates this standard permit's effective date establishes in writing tank and vessel colors other than white. If applicable, a copy of this documentation must be provided to the commission upon registration. (C) Tanks and vessels purposefully darkened to create the process reaction and help condense liquids from being entrained in the vapor. Existing tanks and vessels (including temporary liquid storage tanks) which are not increasing emissions at an OGS using shall also meet this requirement no later than 180 days after a registration renewal as of January 1, 2016.
Truck Loading	VOC with partial pressure < 0.5 psia at maximum liquid surface temperature or 95 F whichever is greater, or with uncontrolled PTE of < 5 tpy VOC VOC, BTEX, H_2S	Loading is recommended to be performed with submerged filling, or vapor balancing back to the tank and any subsequent recovery or control device.

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
	VOC with partial pressure ≥ 0.5 psia at maximum liquid surface temperature or 95 F whichever is greater VOC, BTEX, H_2S	Splash loading and uncontrolled vacuum truck loading is not allowed. Loading shall be performed with a control effectiveness of at least 42% as compared to splash loading. Loading may occur by submerged filling or equivalent prevention or recovery technique as listed in Table 10.
	VOC with uncontrolled PTE of ≥ 5 tpy VOC VOC, BTEX, H_2S	Loading vapors shall be captured and directed to an appropriate control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 98%, routed to a vapor recovery unit (VRU) with a control effectiveness of at least 95%, or vapor balanced back to the delivering storage tank equipped with a VRU, or connected to a control device listed in the Control Device BACT Table with a minimum design control efficiency of at least 95%.
	Controlled Loading	Where loading control is required, the collection or capture system must be connected to the tank truck so all displaced vapors are directed to the control device and the control device is operational before loading is commenced. When properly connected the capture efficiency will be assumed to be 70% efficient at capturing the displaced truck vapors. The capture efficiency may be assumed to be 98.7 percent efficient when the tanker truck has certification that the tank has passed vapor-tightness testing within the last 12 months using the methods described in 40 CFR 60, Subpart XX. The capture efficiency may be assumed to be 99.2 percent efficient when the tanker truck has certification that the tank has passed vapor-tightness testing within the last 12 months using the methods described in 40 CFR 63, Subpart R. Loading shall be discontinued when liquid or gas leaks from the loading or collection system are observed.

Table 10 Best Available Control Technology Requirements *(continued)*		
Source or Facility	**Air Contaminant**	**Minimum Acceptable Design, Control or Technique, Control Efficiencies, and Other Details during Production Operations**
Cooling Tower Heat Exchange System	VOC, BTEX, $PM_{10/2.5}$	Heat exchange systems must be non-contact design (i.e. designed and operated to avoid direct contact with gaseous or liquid process streams containing VOC, H2S, halogens or halogen compounds, cyanide compounds, inorganic acids, or acid gases). Systems with heat exchangers that cool a fluid with VOC shall meet the following: The cooling water must be at a higher pressure than the process fluid in the heat exchangers or the cooling tower water must be monitored monthly for VOC emissions using TCEQ Sampling Procedures Manual, Appendix P dated January 2003 or a later edition. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Cooling water VOC concentrations greater than 0.08 ppmw indicate faulty equipment. If the repair of a heat exchanger would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next planned shutdown or 180 days if no shutdowns are scheduled. Cooling towers shall be designed and operated with properly functioning drift eliminators. New cooling towers shall be designed with drift eliminators designed to meet ≤ 0.001% drift.

List of Acronyms

°C	Degrees Celsius
°F	Degrees Fahrenheit
$\mu g/m^3$	Micrograms per cubic meter
acfm	Actual cubic feet per minute
ADMT	Air Dispersion Modeling Team
AMINECalc	Amine Unit Air Emissions Model Ver 1.0
AP-42	Air Pollutant Emission Factors, 5th ed
APD	Air Permits Division
API	American Petroleum Institute
APWL	Air Pollutant Watch List
AREACIRC	Co-located circular area source from the EPA
AERMOD	Modeling System
AWP	Alternative Work Practices
BACT	Best Available Control Technology
bbl	Barrel
bbl/day	Barrels per day
BMP	Best Management Practices (includes equipment manufacturer's guidelines and specifications)
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Btu/scf	British thermal units per standard cubic feet
CEMS	Continuous Emissions Monitoring System
cf/day	Cubic feet per day
cfm	Cubic feet per minute
CFR	Code of Federal Regulations
CO_2	Carbon dioxide
COS	Carbonyl sulfide
CPR	Considerable personnel and resources
CS_2	Carbon disulfide
CT	Cooling towers
DEA	Diethanolamine
DGA	Diglycolamine
DIPA	Di-isopropylamine
DOT	Department of Transportation
DRE	Destruction rate efficiency
dscf	Dry standard cubic feet
DV	Designated value
E	Maximum acceptable emission rate (lb/hr)
EF	Emission factor
EFR	External floating roof tank
E_{max}	Maximum acceptable emission rate (lb/hr)
EPA	Environmental Protection Agency
EPN	Emission point number
ESL	Effects screening level
FR	Federal Register
ft	Feet
ft/sec	Feet per second
gal/wk	Gallons per week
gal/yr	Gallons per year
GLC_{max}	Max predicted ground-level concentration
GOP	General Operating Permit
H_2S	Hydrogen sulfide
HAP	Hazardous air pollutant
HB	House Bill
HCl	Hydrogen chloride
hp	Horsepower
hr	Hour
HRVOC	Highly reactive volatile organic compounds
HYSIM®	Hydrologic Simulation Model computer program
HYSIS®	Process simulator computer program
ICE	Internal combustion engine
IFR	Internal floating roof tank
IR	Infrared
ISCST3	Industrial Source Complex Short-term Model V02035
LACT	Lease automatic custody transfer unit
lb	Pound
lb/hr	Pounds per hour
lb/MMBtu	Pounds per million British thermal units
lbs/day	Pounds per day
LDAR	Leak detection and repair
L_L	Loading losses
LPG	Liquid petroleum gas
LT/D	Long ton per day
m/sec	Meters per second
MACT	Maximum Available Control Technology
MDEA	Methyl-diethanolamine
MEA	Monoethanol amine

MERA	Modeling and Effects Review Applicability
MMBtu	Million British thermal units
MMBtu/hr	Million British thermal units per hour
MMCFD	Million cubic feet per day
MSS	Maintenance, start-up, and shutdown
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGL	Natural gas liquids
NNSR	Nonattainment New Source Review
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	Oxygen (molecular form)
OGS	Oil and gas site
PBR	Permit by Rule
PM_{10}	Particulate matter less than or equal to 10 microns
POC	Products of combustion
ppm	Parts per million
Ppmvd	Parts per million by volume, dry
PROSIM®	DOS based process simulator computer program
PSD	Prevention of Significant Deterioration
psi	Pounds per square inch
psia	Pounds per square inch, absolute
psig	Pounds per square inch, gage
RICE	Reciprocating internal combustion engine
RVP	Reid vapor pressure
scfh	Standard cubic feet per hour
scfm	Standard cubic feet per minute
scmd	Standard cubic feet per day
SCREEN3	Air dispersion modeling computer program for windows, Version 5.0. BEE-line Software c1998-2002
SE	Standard Exemption
SIC	Standard Industrial Classification System
SO_2	Sulfur dioxide
SOP	Site Operating Permit
Standard permit	Standard Permit
SRU	Sulfur recovery unit
T&S	Transfer and storage
TAC	Texas Administrative Code
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality
TEA	Triethanolamine
THSC	Texas Health and Safety Code
tpy	Tons per year
V-B	Vasquez-Beggs correlation equation
VOC	Volatile organic compounds
VRU	Vapor recovery unit or system
WINSIM®	Windows process simulator computer program

Appendix D
Title 5 Permit December 20, 2023

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Enterprise Navitas Midstream Midland Basin LLC

AUTHORIZING THE OPERATION OF
Newberry Gas Plant
Natural Gas Liquid Extraction

LOCATED AT
Midland County, Texas
Latitude 31° 51′ 10″   Longitude 101° 46′ 40″
Regulated Entity Number: RN109272526

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O3959 Issuance Date: December 20, 2023

K Keel

For the Commission

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Section **Page**

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

   A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

   B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

   C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

   D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

   E. Emission units subject to 40 CFR Part 63, Subparts HH and ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §§ 113.390 and 113.1090, respectively, which incorporate the 40 CFR Part 63 Subparts by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

   A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

   B. Title 30 TAC § 101.3 (relating to Circumvention)

   C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

   D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

   E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

   F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

   G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

   H. Title 30 TAC § 101.221 (relating to Operational Requirements)

   I. Title 30 TAC § 101.222 (relating to Demonstrations)

   J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

   A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

      (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

      (ii) Title 30 TAC § 111.111(a)(1)(E)

      (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

      (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

C. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:

(i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)

(ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)

(iii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)

(iv) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)

4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

6. For oil and natural gas production facilities as specified in 40 CFR Part 63, Subpart HH, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.390 incorporated by reference):

    A. Title 40 CFR § 63.760(c) (relating to Applicability and Designation of Affected Source)

7. For each gasoline dispensing facility, with a throughput of less than 10,000 gallons per month as specified in 40 CFR Part 63, Subpart CCCCCC, the permit holder shall comply with the following requirements (Title 30 TAC, Subchapter C, § 113.1380 incorporated by reference):

    A. Title 40 CFR § 63.11111(e), for records of monthly throughput

    B. Title 40 CFR § 63.11111(i), for compliance due to increase of throughput

    C. Title 40 CFR § 63.11111(j), for dispensing from fixed tank into portable tank for on-site delivery

    D. Title 40 CFR § 63.11113(c), for compliance due to increase of throughput

    E. Title 40 CFR § 63.11115(a), for operation of the source

    F. Title 40 CFR § 63.11116(a) and (a)(1) - (4), for work practices

    G. Title 40 CFR § 63.11116(b), for records availability

    H. Title 40 CFR § 63.11116(d), for portable gasoline containers

Additional Monitoring Requirements

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

    A. Are incorporated by reference into this permit as applicable requirements

    B. Shall be located with this operating permit

    C. Are not eligible for a permit shield

10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

12. The permit holder shall comply with the following requirements for Air Quality Standard Permits:

    A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit

    B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit

    C. Requirements of the Air Quality Standard Permit for Oil and Gas Handling and Production Facilities

Compliance Requirements

13. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

14. Use of Discrete Emission Credits to comply with the applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Permit Location

15. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

16. A permit shield is granted for the emission units, groups, or processes specified in the attached “Permit Shield.” Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment “Permit Shield.” Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
AMINE	GAS SWEETENING/SULFUR RECOVERY UNITS	N/A	60OOOOa-5365	40 CFR Part 60, Subpart OOOOa	No changing attributes.
AMINE-2	GAS SWEETENING/SULFUR RECOVERY UNITS	N/A	60OOOOa-5365	40 CFR Part 60, Subpart OOOOa	No changing attributes.
COMB-1	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
COMB-1	FLARES	N/A	60A	40 CFR Part 60, Subpart A	No changing attributes.
DEHY1	GLYCOL DEHYDRATION	N/A	63HH-764	40 CFR Part 63, Subpart HH	No changing attributes.
FLARE-1	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-1	FLARES	N/A	60A	40 CFR Part 60, Subpart A	No changing attributes.
FLARE-2	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-2	FLARES	N/A	60A	40 CFR Part 60, Subpart A	No changing attributes.
FUG-2	FUGITIVE EMISSION UNITS	N/A	60OOOOa-5400	40 CFR Part 60, Subpart OOOOa	No changing attributes.
GRP-ENG1	SRIC ENGINES	C-1680, C-1690, C-1710, C-1720, C-1730, C-1740, C-1750, C-1760, C-1770, C-1780, C-181, C-182, C-183	60JJJJ-4230	40 CFR Part 60, Subpart JJJJ	No changing attributes.
GRP-ENG1	SRIC ENGINES	C-1680, C-1690, C-1710, C-1720, C-1730, C-1740, C-1750, C-1760, C-1770, C-1780, C-	63ZZZZ-6590	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

		181, C-182, C-183			
GRP-ENG2	SRIC ENGINES	C-171N, C-172N, C-173N, C-174N	60JJJJ-4230	40 CFR Part 60, Subpart JJJJ	No changing attributes.
GRP-ENG2	SRIC ENGINES	C-171N, C-172N, C-173N, C-174N	63ZZZZ-6590	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-TANKS1	STORAGE TANKS/VESSELS	TK-1, TK-2	60Kb-110b	40 CFR Part 60, Subpart Kb	No changing attributes.
GRP-TANKS2	STORAGE TANKS/VESSELS	TK-3, TK-4	60Kb-110b	40 CFR Part 60, Subpart Kb	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
AMINE	EU	60OOOOa-5365	SO_2	40 CFR Part 60, Subpart OOOOa	§ 60.5365a(g)(3) § 60.5370a(b)	Owners or operators of facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H2S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423a(c), but are not required to comply with §§60.5405a through 60.5407a and §§60.5410a(g) and 60.5415a(g).	None	§ 60.5423a(c)	§ 60.5420a(a) § 60.5420a(a)(1) § 60.5420a(b) [G]§ 60.5420a(b)(1) § 60.5420a(b)(11) [G]§ 60.5420a(b)(13) [G]§ 60.5420a(b)(14)
AMINE-2	EU	60OOOOa-5365	SO_2	40 CFR Part 60, Subpart OOOOa	§ 60.5365a(g)(3) § 60.5370a(b)	Owners or operators of facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H2S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423a(c), but are not required to comply with §§60.5405a through 60.5407a and §§60.5410a(g) and 60.5415a(g).	None	§ 60.5423a(c)	§ 60.5420a(a) § 60.5420a(a)(1) § 60.5420a(b) [G]§ 60.5420a(b)(1) § 60.5420a(b)(11) [G]§ 60.5420a(b)(13) [G]§ 60.5420a(b)(14)
COMB-1	CD	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None

COMB-1	CD	60A	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
DEHY1	EU	63HH-764	112(B) HAPS	40 CFR Part 63, Subpart HH	§ 63.764(e)(1)(ii) § 63.764(a) § 63.764(e)(1) § 63.764(j) § 63.775(c)(8)	The owner or operator of an area source is exempt from the requirements of §63.764(d) when the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere < 0.90 megagram/yr, as determined by the procedures specified in §63.772(b)(2) of this subpart.	[G]§ 63.772(b)(2)	§ 63.774(d)(1) § 63.774(d)(1)(ii)	None
FLARE-1	CD	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FLARE-1	CD	60A	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
FLARE-2	CD	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FLARE-2	CD	60A	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3)	None	None

					§ 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)		§ 60.18(f)(4)		
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-2a(a)(1) § 60.482-2a(a)(2) § 60.482-2a(b)(1) § 60.482-2a(b)(1)(i) § 60.482-2a(b)(1)(ii) § 60.482-2a(b)(2) § 60.482-2a(b)(2)(ii) § 60.482-2a(c)(1) [G]§ 60.482-2a(c)(2) § 60.482-2a(d) [G]§ 60.482-2a(d)(1) § 60.482-2a(d)(2) § 60.482-2a(d)(3) [G]§ 60.482-2a(d)(6) [G]§ 60.482-2a(e) § 60.482-2a(f) [G]§ 60.482-2a(g) § 60.482-2a(h) § 60.482-9a(a) § 60.482-9a(b) [G]§ 60.482-9a(d) § 60.482-9a(f) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5401a(d) § 60.5410a § 60.5410a(f) § 60.5415a(f)	Except as provided in §60.5401 pumps in light liquid service must comply with the requirements of §60.482-2a. The instrument reading that defines a leak in a pump in light liquid service is 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers or 2,000 ppm or greater for all other pumps, as specified in paragraphs 60.482-2a(b)(1)(i) and 60.482-2a(b)(1)(ii).	§ 60.482-1a(f)(1) § 60.482-1a(f)(2) [G]§ 60.482-1a(f)(3) § 60.482-2a(b)(2)(i) [G]§ 60.482-2a(d)(4) [G]§ 60.482-2a(d)(5) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.485a(e) [G]§ 60.5401a(f) § 60.5401a(g)	§ 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(2) [G]§ 60.486a(e)(4) § 60.486a(e)(7) [G]§ 60.486a(e)(8) [G]§ 60.486a(h)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(3) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(i) § 60.487a(c)(2)(iii) § 60.487a(c)(2)(iv) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)

FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5385a(a)(1) § 60.5370a(a) § 60.5370a(b) § 60.5385a § 60.5385a(a) § 60.5385a(b) § 60.5385a(c) § 60.5385a(d) § 60.5410a § 60.5415a(c) § 60.5415a(c)(2) § 60.5415a(c)(3)	For each reciprocating compressor, the owner or operator must replace the rod packing on or before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, August 2, 2016, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.	§ 60.5410a(c)(1) § 60.5415a(c)(1)	§ 60.5410a(c)(4) § 60.5420a(c) [G]§ 60.5420a(c)(3)	§ 60.5410a(c)(3) § 60.5420a(a) § 60.5420a(a)(1) § 60.5420a(b) [G]§ 60.5420a(b)(1) § 60.5420a(b)(11) [G]§ 60.5420a(b)(13) [G]§ 60.5420a(b)(14) [G]§ 60.5420a(b)(4)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-11a(b)(2) § 60.482-11a(b)(3) § 60.482-11a(d) [G]§ 60.482-11a(e) [G]§ 60.482-11a(f)(1) § 60.482-11a(f)(2) § 60.482-11a(g) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5401a(d) § 60.5410a § 60.5410a(f) § 60.5415a(f)	Except as provided in §60.5401 connectors in gas and vapor and light liquid service must comply with the requirements of §60.482-11a. If an instrument reading greater than or equal to 500 ppm is measured in connectors in gas and vapor and light liquid service, a leak is detected.	§ 60.482-11a(a) § 60.482-11a(b) § 60.482-11a(b)(1) § 60.482-11a(b)(3) § 60.482-11a(b)(3)(i) § 60.482-11a(b)(3)(ii) [G]§ 60.482-11a(b)(3)(iii) § 60.482-11a(b)(3)(iv) § 60.482-11a(c) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.485a(e) [G]§ 60.5401a(f) § 60.5401a(g)	§ 60.482-11a(b)(3)(v) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8) § 60.486a(e)(9) § 60.486a(f) § 60.486a(f)(1)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(5) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(vii) § 60.487a(c)(2)(viii) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-10a(a) [G]§ 60.482-10a(f) [G]§ 60.482-10a(g) § 60.482-10a(h) § 60.482-10a(i) [G]§ 60.482-10a(j)	Except as provided in §60.5401 closed vent systems leaks must comply with the requirements of §60.482-10a. Closed vent system leaks, as indicated by an instrument reading greater than 500 ppmv	§ 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.5401a(f)	[G]§ 60.482-10a(l) § 60.485a(b)(2) [G]§ 60.486a(d) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(xi)

					[G]§ 60.482-10a(k) § 60.482-10a(m) § 60.482-1a(a) § 60.482-1a(b) § 60.485a(b) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5410a § 60.5410a(f) § 60.5415a(f)	above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.	§ 60.5401a(g)		§ 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.18(b) § 60.482-10a(a) § 60.482-10a(d) § 60.482-10a(m) § 60.482-1a(a) § 60.482-1a(b) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5410a § 60.5410a(f) § 60.5415a(f)	Except as provided in §60.5401 flares must comply with the requirements of §60.482-10a. Flares used to comply with this subpart shall comply with the requirements of §60.18.	§ 60.482-10a(e) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.485a(g) [G]§ 60.5401a(f) § 60.5401a(g)	§ 60.485a(b)(2) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-10a(a) § 60.482-10a(c) § 60.482-10a(m) § 60.482-1a(a) § 60.482-1a(b) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1)	Except as provided in §60.5401 enclosed combustion devices must comply with the requirements of §60.482-10a. Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of	§ 60.482-10a(e) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.5401a(f)	§ 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4)

					§ 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5410a § 60.5410a(f) § 60.5415a(f)	95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 degrees.	§ 60.5401a(g)		§ 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-1a(a) § 60.482-1a(b) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) § 60.482-8a(b) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5410a § 60.5410a(f) § 60.5415a(f)	Except as provided in §60.5401 pressure relief devices in light liquid or heavy liquid service must comply with the requirements of §60.482-8a. At a pressure relief device in light liquid or heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.5401a(f) § 60.5401a(g)	§ 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
FUG-2	EU	60OOOOa-5400	VOC	40 CFR Part 60, Subpart OOOOa	§ 60.5400a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-6a(a)(1) § 60.482-6a(a)(2) § 60.482-6a(b) § 60.482-6a(c) § 60.482-6a(d) § 60.482-6a(e)	Except as provided in §60.5401 open-ended valves or lines must comply with the requirements of §60.482-6a. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and	§ 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(d) § 60.485a(d)(2) § 60.485a(d)(3) [G]§ 60.5401a(f) § 60.5401a(g)	§ 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(xi) § 60.487a(c)(3) § 60.487a(c)(4)

					§ 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k) § 60.5370a(a) § 60.5370a(b) § 60.5400a(a) § 60.5400a(d) § 60.5400a(e) § 60.5400a(f) § 60.5410a § 60.5410a(f) § 60.5415a(f)	paragraphs §60.482-6a(d) and §60.482-6a(e) of this section.			§ 60.487a(e) § 60.5420a(a) § 60.5420a(a)(1) § 60.5422a(a)
GRP-ENG1	EU	60JJJJ-4230	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a CO emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(e)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG1	EU	60JJJJ-4230	NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a NOx emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(d)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG1	EU	60JJJJ-4230	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a VOC emission limit of 0.7 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(f) § 60.4244(g)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG1	EU	63ZZZZ-6590	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source	None	None	None

						that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.			
GRP-ENG2	EU	60JJJJ-4230	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a CO emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(e)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG2	EU	60JJJJ-4230	NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a NOx emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(d)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG2	EU	60JJJJ-4230	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4243(g) § 60.4246	Owners and operators of stationary non-emergency natural gas engines with a maximum engine power greater than or equal to 500 HP and were manufactured on or after 07/01/2010 must comply with a VOC emission limit of 0.7 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(f) § 60.4244(g)	§ 60.4243(b)(2) § 60.4243(b)(2)(ii) § 60.4243(e) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4)	[G]§ 60.4245(c) § 60.4245(d)
GRP-ENG2	EU	63ZZZZ-6590	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source	None	None	None

						that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.			
GRP-TANKS1	EU	60Kb-110b	VOC	40 CFR Part 60, Subpart Kb	[G]§ 60.112b(a)(3) § 60.18	Storage vessels specified in §60.112b(a) and equipped with a closed vent system/control device are to meet the specifications of §60.112b(a)(3)(i)-(ii).	§ 60.113b(d) § 60.116b(a) § 60.116b(b) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3) [G]§ 60.485(b) ** See Periodic Monitoring Summary	§ 60.115b § 60.115b(d)(2) § 60.116b(a) § 60.116b(b)	§ 60.115b § 60.115b(d)(1) § 60.115b(d)(3)
GRP-TANKS2	EU	60Kb-110b	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(A) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.113b(a)(1) § 60.113b(a)(2) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b) § 60.116b(c) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(a)(2) § 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(3)

Additional Monitoring Requirements

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: CVS	Control Device Type: Vapor collection system (closed vent system)
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-110b
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: VOC Concentration	
Minimum Frequency: Once per year	
Averaging Period: N/A	
Deviation Limit: The closed vent system shall be operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.	
Periodic Monitoring Text: Measure and record fugitive emissions from the vapor collection system in accordance with part 60, appendix A, method 21.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: CVS	Control Device Type: Vapor collection system (closed vent system)
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-110b
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Once per year	
Averaging Period: N/A	
Deviation Limit: It shall be considered a deviation if any defects found are not repaired.	
Periodic Monitoring Text: Visually inspect all components of the vapor collection system for defects, such as cracks, holes, gaps, loose connections, or broken or missing covers or other closure devices, that could result in air emissions.	

Permit Shield

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
AMINE	N/A	40 CFR Part 60, Subpart OOOO	The components were constructed after 09/18/2015.
AMINE-2	N/A	40 CFR Part 60, Subpart OOOO	The components were constructed after 09/18/2015.
FUG-1	N/A	40 CFR Part 60, Subpart OOOO	The components were constructed after 09/18/2015.
FUG-2	N/A	40 CFR Part 60, Subpart OOOO	The components were constructed after 09/18/2015
GRP-TANKS1	TK-1, TK-2	40 CFR Part 60, Subpart K	The storage tanks were constructed/reconstructed/modified after July 23, 1984.
GRP-TANKS1	TK-1, TK-2	40 CFR Part 60, Subpart OOOOa	The storage tanks emit less than 6 TPY VOC per tank and were constructed after 09/18/2015.
GRP-TANKS2	TK-3, TK-4	40 CFR Part 60, Subpart K	The storage tanks were constructed/reconstructed/modified after July 23, 1984.
GRP-TANKS2	TK-3, TK-4	40 CFR Part 60, Subpart OOOOa	The storage tanks emit less than 6 TPY VOC per tank and were constructed after 09/18/2015.
GRP-TANKS3	TK-10, TK-11, TK-12, TK-13, TK-14, TK-15, TK-16, TK-17, TK-5, TK-6, TK-7, TK-8, TK-9	40 CFR Part 60, Subpart K	The storage tanks were constructed/reconstructed/modified after July 23, 1984.
GRP-TANKS3	TK-10, TK-11, TK-12, TK-13, TK-14, TK-15, TK-16, TK-17, TK-5, TK-6, TK-7, TK-8, TK-9	40 CFR Part 60, Subpart OOOOa	The storage tanks emit less than 6 TPY VOC per tank and were constructed after 09/18/2015.

New Source Review Authorization References

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 141647	Issuance Date: 05/31/2023

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
AMINE	AMINE UNIT VENT 1	141647
AMINE-2	AMINE UNIT VENT 2	141647
C-1680	COMPRESSOR ENGINE	141647
C-1690	COMPRESSOR ENGINE	141647
C-1710	COMPRESSOR ENGINE	141647
C-171N	COMPRESSOR ENGINE	141647
C-1720	COMPRESSOR ENGINE	141647
C-172N	COMPRESSOR ENGINE	141647
C-1730	COMPRESSOR ENGINE	141647
C-173N	COMPRESSOR ENGINE	141647
C-1740	COMPRESSOR ENGINE	141647
C-174N	COMPRESSOR ENGINE	141647
C-1750	COMPRESSOR ENGINE	141647
C-1760	COMPRESSOR ENGINE	141647
C-1770	COMPRESSOR ENGINE	141647
C-1780	COMPRESSOR ENGINE	141647
C-181	COMPRESSOR ENGINE	141647
C-182	COMPRESSOR ENGINE	141647
C-183	COMPRESSOR ENGINE	141647
COMB-1	TANK VENT FLARE	141647
DEHY1	DEHYDRATION UNIT	141647

FLARE-1	PLANT FLARE	141647
FLARE-2	PLANT FLARE 2	141647
FUG-1	NON-MONITORED FUGITIVES	141647
FUG-2	MONITORED FUGITIVES	141647
TK-1	CONDENSATE STORAGE TANK	141647
TK-10	OPEN DRAIN STORAGE TANK	141647
TK-11	OPEN DRAIN STORAGE TANK	141647
TK-12	OPEN DRAIN STORAGE TANK	141647
TK-13	OPEN DRAIN STORAGE TANK	141647
TK-14	OPEN DRAIN STORAGE TANK	141647
TK-15	OPEN DRAIN STORAGE TANK	141647
TK-16	OPEN DRAIN STORAGE TANK	141647
TK-17	OPEN DRAIN STORAGE TANK	141647
TK-2	CONDENSATE STORAGE TANK	141647
TK-3	IFR CONDENSATE STORAGE TANK	141647
TK-4	IFR CONDENSATE STORAGE TANK	141647
TK-5	SLOPE OIL STORAGE TANK	141647
TK-6	OPEN DRAIN STORAGE TANK	141647
TK-7	OPEN DRAIN STORAGE TANK	141647
TK-8	OPEN DRAIN STORAGE TANK	141647
TK-9	OPEN DRAIN STORAGE TANK	141647

Appendix A

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM.. actual cubic feet per minute
AMOC.. alternate means of control
ARP.. Acid Rain Program
ASTM.. American Society of Testing and Materials
B/PA.. Beaumont/Port Arthur (nonattainment area)
CAM.. Compliance Assurance Monitoring
CD.. control device
CEMS.. continuous emissions monitoring system
CFR.. Code of Federal Regulations
COMS.. continuous opacity monitoring system
CVS.. closed vent system
D/FW.. Dallas/Fort Worth (nonattainment area)
EP.. emission point
EPA.. U.S. Environmental Protection Agency
EU.. emission unit
FCAA Amendments.. Federal Clean Air Act Amendments
FOP.. federal operating permit
gr/100 scf.. grains per 100 standard cubic feet
HAP.. hazardous air pollutant
H/G/B.. Houston/Galveston/Brazoria (nonattainment area)
H_2S.. hydrogen sulfide
ID No.. identification number
lb/hr.. pound(s) per hour
MACT.. Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr.. Million British thermal units per hour
NA.. nonattainment
N/A.. not applicable
NADB.. National Allowance Data Base
NESHAP..................................National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x.. nitrogen oxides
NSPS.. New Source Performance Standard (40 CFR Part 60)
NSR.. New Source Review
ORIS.. Office of Regulatory Information Systems
Pb.. lead
PBR.. Permit By Rule
PEMS.. predictive emissions monitoring system
PM.. particulate matter
ppmv.. parts per million by volume
PRO.. process unit
PSD.. prevention of significant deterioration
psia.. pounds per square inch absolute
SIP.. state implementation plan
SO_2.. sulfur dioxide
TCEQ.. Texas Commission on Environmental Quality
TSP.. total suspended particulate
TVP.. true vapor pressure
U.S.C.. United States Code
VOC.. volatile organic compound